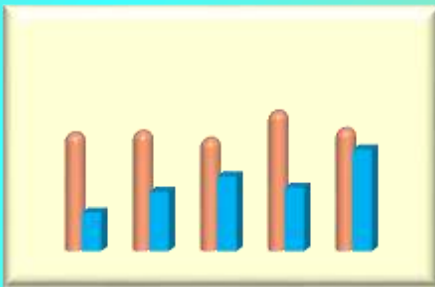




CHEMICAL AND PETROCHEMICAL STATISTICS AT A GLANCE - 2021



Government of India
Ministry of Chemicals and Fertilizers
Department of Chemicals and Petrochemicals
Statistics and Monitoring Division
New Delhi
Website: www.chemicals.nic.in



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सत्यमेव जयते
75
आज़ादी का
अमृत महोत्सव

स्वास्थ्य एवं परिवार कल्याण
व रसायन एवं उर्वरक मंत्री
भारत सरकार

Minister for Health & Family Welfare
and Chemicals & Fertilizers
Government of India



MESSAGE

Department of Chemicals & Petrochemicals under the Ministry of Chemicals & Fertilizers facilitated growth and development of Chemicals and Petrochemicals Industry by creation of knowledge products through studies, survey, promotional materials etc. and dissemination of knowledge through conduct of seminars, conferences, exhibitions, etc. This Sector in India is an integral component of the Indian economy and its share is quite significant in manufacturing. It has linkages with several downstream industries such as automotive, agriculture, consumer durables, engineering, food processing and many more.

It gives me the immense pleasure to message that a Publication '**Chemical & Petrochemical Statistics at a Glance-2021**' is being brought out by the Department providing the statistics on key indicators of chemical sector with detailed analysis. I hope this publication will be found useful to all the stakeholders including policy makers, data users, academicians and chemical business community associated for the development of chemical sector in the country.

I compliment the excellent work done by the Department under the guidance of Ms. Arti Ahuja, Secretary (C&PC) in bringing out this publication.

My best wishes to all.

(Dr. Mansukh Mandaviya)

भगवंत खुबा
ಭಗವಂತ ಖುಬಾ
BHAGWANTH KHUBA



रसायन एवं उर्वरक एवं
नवीन एवं नवीकरणीय ऊर्जा राज्य मंत्री
भारत सरकार
Minister of State
Chemicals & Fertilizers and
New & Renewable Energy
Government of India
28.06.2022



MESSAGE

Department of Chemicals and Petrochemicals is devoted to the service of the Chemicals and Petrochemical sector in the country. The department is pushing hard to provide more conducive atmosphere to the industry for achieving higher and sustainable growth in the sector. The efforts of the Department step further towards Hon'ble Prime Ministers' dream of 'Atmanirbhar Bharat' for better tomorrow. This sector has immense potential for trade, investment and helps realize our vision of the country for achieving a USD 5 trillion economy.

I am very happy to note that the Department of chemicals & Petrochemicals is bringing out the Annual Publication '**Chemical & Petrochemical Statistics at a Glance-2021**'. I hope this publication would be beneficial to research scholars, data users and all other stakeholders in the Chemicals and Petrochemicals Sector.

I appreciate the excellent work done by the Department of Chemicals & Petrochemicals.

With best wishes to all concerned.


(Bhagwanth Khuba)

आरती आहूजा, भा.प्र.से.
Arti Ahuja, IAS



सचिव
भारत सरकार
रसायन और उर्वरक मंत्रालय
रसायन और पेट्रोसायन विभाग
Secretary
Government of India
Ministry of Chemicals & Fertilizers
Department of Chemicals & Petrochemicals

30th June 2022

Message

The chemical and petrochemical industry provides building blocks and chemical products for diverse end-use sectors including textiles, agriculture, automotive, packing, pharmaceuticals, cosmetics, construction, electronics & electrical, etc. Indian Chemical and Petrochemical industry has a tremendous potential and thus, Government is providing supportive policy for sustainable growth in the sector which is expected to transform India into Global manufacturing hub for this sector. The annual publication of the Department 'Chemical & Petrochemical Statistics at a Glance' is one of the most reliable sources of information to gauge the performance of chemical and petrochemical sector in the country.

2. I am pleased to state that this year's publication 'Chemical & Petrochemical Statistics at a Glance-2021' is being brought out by the Statistics and Monitoring Division of the Department including statistical analysis on various key indicators of chemical sector such as Installed Capacity, Consumption, Production, Import & Export, Index of Industrial Production, GVA etc. I hope this publication would provide valuable insight to data users and all the stakeholders associated with the sector.

3. I convey the commendable effort done by the Statistics and Monitoring Division led by Shri N K Santoshi, Deputy Director General in bringing out this publication.



(Arti Ahuja)

नरेन्द्र कुमार सन्तोषी

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सत्यमेव जयते

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P R E F A C E

Statistics & Monitoring (S&M) Division, Department of Chemicals and Petrochemicals is mainly associated in collection, compilation and management of statistical data on Major Chemical & Petrochemical products from different manufacturing units of the country. The Annual publication “**Chemical & Petrochemical Statistics at a Glance-2021**” is being brought out by S&M Division. It provides the extensive and updated database on various facets of chemical sector includes *inter alia* group and product-wise glimpse of trends on installed capacity, production, consumption, trade across various countries and some other economic indicators like Index of Industrial Production (IIP), Wholesale Price Index, GVA, etc. of chemical and petrochemical sector.

2. The S&M division is continuously endeavored to enhance the relevance of this publication by adding information from emerging area of concern and enriched with the results of latest National Account Statistics, Annual Survey of Industry, Cefic reports and some other publications. I convey my sincere gratitude to various contributing Ministries / Departments/ Organizations viz. M/o Statistics & PI , M/o Commerce & Industry, M/o PNG , DGFT , DGCI&S and DIPP, etc. for providing updated inputs for this publication. I also acknowledge my gratitude to various Divisions of this Department for providing valuable inputs and support towards compilation of this publication.

3. I would like to express my appreciation for the commendable work rendered by the officers of S&M Division of the Department namely; Shri Ram Sajeevan, Joint Director, Shri Patil Naresh Dnyaneshwar, Research Officer, Shri Devendra Kumar Singh, Sr. Statistical Officer, Shri Rakesh Kumar, Jr. Statistical Officer and Shri Sunil Prajapat, Jr. Statistical Officer. This publication is also being released on the Department's website at <https://www.chemicals.nic.in/document-report/reports>. I hope this publication would be useful for policy makers, data users and other stakeholders involved in the development of chemical and petrochemical sector.

4. I look forward for comments and suggestions from users of this publication for further improvement.

June 30, 2022
New Delhi

(N. K. Santoshi)
Deputy Director General

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Introduction

Chemical and Petrochemical Sector is one of the pioneering sector having an impact on day to day needs of the society. Chemical Industry is playing a vital role in addressing our basic needs in the fields of food and water security, shelter, clothing and textiles, health care, information, communication and entertainment. In order to boost domestic production capacities as a part of Petroleum, Chemicals and Petrochemicals Investment Regions (PCPIRs) policy, a perspective planning for the chemical industry has been initiated to study demand supply scenario keeping in view the existing and under execution capacities. This will help to realize India's vision of becoming self-reliance and provide substantial employment to the youth in the Chemical Sector. The share of Gross Value Added (GVA) in the Manufacturing Sector during 2019-20 is about 8.97% at current prices. GVA of Chemical Sector has grown with CAGR of 12.57% during the period 2014-15 to 2019-20.

2. Statistics and Monitoring (S&M) Division under the Department of Chemicals & Petrochemicals (DCPC) compiles statistics on monthly production data and installed capacity of selected Chemicals and Petrochemicals products from Large and Medium Scale units. It also derives estimates of consumption of the chemicals products in the country. Data on Export and Import of Chemicals and Petrochemicals items are being maintained by the Department based on the data received from the Directorate General of Commercial Intelligence and Statistics (DGCIS), Ministry of Commerce and Industry.

3. This publication consists seven chapters, namely, Chapter-1: An overview of Chemical and Petrochemical Sector; Chapter-2: Global Scenario; Chapter-3: Important Economic Indicators; Chapter-4: India Trade classification (Harmonized System) [ITC (HS)]-2017-An Abstract; Chapter-5: National Industrial Classification (NIC)-A Digest. Chapter-6: Indices released by Government of India; Chapter-7: Glimpses of Important Trends during 2015-16 to 2019-20. Chapter-1 besides defining Basic Chemicals, Specialty Chemicals & Agro-chemicals, also presents the latest status of Chemical Sector in India. Chapter-2 presents the status of Indian Chemical Sector vis-a-vis other countries of the world. Chapter-3 provides important statistics like GVA, Index of Industrial production, Export and Import of Chemical sector. Chapter-6 describes important indices like Index of Industrial Production (IIP), Consumer Price Index (CPI) & Whole Sale Price Index (WPI). Chapter-7 provides graphical presentation of trends for the period 2016-17 to 2020-21 on Production, Installed Capacity, Import and Export for various groups under Major Chemicals and Major Petrochemicals along with brief analysis. At the end of the Appendices Section, Statistical tables presenting information inter-alia on Production, Installed Capacity, Capacity Utilization, Imports / Exports along with their growth

rates during 2013-14 to 2020-21 have also been provided. Detailed table on Foreign Trade, FDI, IIP, WPI etc. related to Chemical and Petrochemical Sector have been included in the Appendices Section.

4. The production of Selected Major Chemicals and selected Major Petrochemicals for each Group is generally found to be growing consistently over the years. The annual growth of production during 2020-21 over previous year was showing contraction of 5.86% with CAGR of 2.22% over a period of 8 years, in case of Major Chemicals. The annual growth of Basic Major Petrochemicals was contracted by 5.79% over preceding year with CAGR of 4.24% during the same period.

5. Installed Capacity utilization of basic Major Chemicals was 72% in 2020-21 as against 79% in 2019-20 while it was around 83.6% as against 89.5% in case of Basic Major Petrochemicals over last year. The utilization of installed capacity was hovered around 62-74% for the Alkali Chemicals and Dyes & Pigments, whereas it was in the range of 63-72% in case of Organic, Inorganic Chemicals, Pesticides (Technical Grade) in 2020-21. The utilization of installed capacity was 108.3% for the Synthetic Detergent Intermediates. Whereas, it was 70.3%, 94.9%, 87.1% and 49.9% for Synthetic Fibres/Yarn, Polymers, Synthetic Rubber and Performance Plastics respectively during 2020-21.

6. Among Selected Major Chemicals, there was a substantial import of Inorganic Chemicals and Organic Chemicals into the country during 2020-21. Amongst Inorganic Chemicals, three products, namely, Carbon Black (Rs.1,276/- crore), Calcium Carbonate (Rs.694/-crore) and Aluminium Fluoride (Rs.481/- crore) had been imported worth of more than Rs.2,450/- crores. (Table 17). Amongst Organic Chemicals, four products, namely, Methanol (Rs.4,348/- crore), Acetic Acid (Rs.2,757/- crore), Phenol (Rs.898/- crore), and Acetone (Rs.537/- crore) had approximately worth of Rs.8,500/- crore of imports into the country (Table 17).

7. Amongst Selected Basic Major Petrochemicals, substantial import was seen for Polymers, Synthetic Rubber and Synthetic Fibres/Yarn into the country during 2020-21. Amongst Polymers, three products, namely, Polypropylene (Inc. Co-Polymer) (Rs.7,465/-crore), High Density Polyethylene (Rs.6,484/-crore) and Poly Vinyl Chloride (Rs.3,010/-crore) had import of approximately Rs.17,000/-crore (Table 25). Amongst Synthetic Rubber, four products, namely, Ethyl Vinyl Acetate (Rs.2,125/-crore), Styrene Butadiene Rubber (SBR) (Rs.1,491/-crore), Butyl Rubber (Rs.1,388/-crore) and Poly Butadiene Rubber (Rs.1,135/-crore), was imported of approximately worth Rs.6,100/-crore into the country (Table 25). Amongst Synthetic Detergent Intermediates, one product, namely, Linear Alkyl Benzene was imported worth of more than Rs.2,150/- crore in the country (Table 25).

8. The trade deficit during 2020-21 (i.e. net import) in Chemicals and Petrochemicals Sector (comprising chapters 28, 29, 32, 38, 39,4002,54 and 55 of HS code) was Rs. 94,377/- crore as per information on DGCIS portal (as on 10.02.2021 (Table 12 A). The trade deficit of selected Major Chemicals and Petrochemical Products was around Rs.7,570/-crore as per figures received from DGCIS, Kolkata (Tables 15 & 23). The export / import monitored by DCPC are basically intermediate in nature.

9. In respect of Major Chemicals at group level, it is observed that Alkali Chemicals, Organic Chemicals and Inorganic Chemicals were in trade deficit, whereas Pesticides (Technical Grade and formulation both) and Dyes & Pigments were trade surplus, during 2020-21 (Table 18). However, in respect of Major Petrochemicals at group level Polymers, Fiber Intermediates, Synthetic rubber, Performance Plastics, Synthetic Detergent Intermediates and Other Petro-based Chemicals were in trade deficit, whereas Synthetic Fibre, Aromatics and Olefins were in trade surplus during the same period (Table 26). This aggregates to overall trade surplus in Major Chemicals and overall trade deficit in Major Petrochemicals which resulted into net trade deficit for Chemicals and Petrochemicals sector.

ACRONYMS

AF	Acrylic Fibre (including Dry Spun)
ASI	Annual Survey of Industries
ACN	Acrylonitrile
CAGR	Compound Annual Growth Rate
CEFIC	European Chemical Industry Council
NSO	National Statistical Office
CSO	Central Statistics Office
CPI	Consumer Price Index
DGCI&S	Directorate General of Commercial Intelligence & Statistics
DIPP	Department of Industrial Policy and Promotion
DMT	Dimethyl Terephthalate
EO	Ethylene Oxide
EPDM	Ethyl Propylene Dimers
EVA	Ethyl Vinyl Acetate
EX-PS	Expandable Polystyrene
FDI	Foreign Direct Investment
GVA	Gross Value Added
HBR	Halo Butyl Rubber
HDPE	High Density Polyethylene
IIP	Index of Industrial Production
IIR	Iso Butylene Isoprene Rubber
ISIC	International Standard Industrial Classification
ITC (HS)	Indian Trade Classification (Harmonized System)
KTPA	Thousand Tonnes Per Annum
LAB	Linear Alkyl Benzene
LDPE	Low Density Polyethylene
LLDPE	Linear Low Density Polyethylene
MEG	Mono Ethylene Glycol
MEK	Methyl Ethyl Ketone
MMA	Methyl Methacrylate
MMSCM	Million Standard Cubic Meters
MOSPI	Ministry of Statistics and Programme Implementation

MT	Metric Tonne
NBR	Nitrile Butadiene Rubber
NFY	Nylon Filament Yarn
NIC	National Industrial Clasification
NIY	Nylon Industrial Yarn
ONCB	Ortho Nitro Chloro Benezne
PAN	Phthalic Anhydride
PBR	Poly Butadiene Rubber
PBT	Polybutylene Terephthalate
PET	Polyethylene terephthalate
PIB	Poly Isobutylene
PFY	Polyester Filament Yarn
PG	Propylene Glycol
PMMA	Polymethyl Methacrylate
PNCB	Para Nitro Chloro Benzene
PO	Propylene Oxide
PP	Polypropylene
PPFY	Polypropylene Filament Yarn
PPSF	Polypropylene Staple Fibre
PS	Polystyrene
PSF	Polyester Staple Fibre
PSFF	Polyester Staple Fibrefil
PTA	Purified Terephthalic Acid
PVC	Poly Vinyl Chloride
SAN	Styrene Acrylonitrile
SBR	Styrene Butadiene Rubber
UNSC	United Nations Statistical Commission
VAM	Vinyl Acetate Monomer
WPI	Wholesale Price Index

COVERAGE

Major Chemicals			
Sl. No.	Group	Products	
I	Alkali Chemicals	Soda Ash	Caustic Soda
		Liquid Chlorine	
II	Inorganic Chemicals	Aluminium Fluoride	Calcium Carbide
		Carbon Black	Potassium Chlorate
		Sodium Chlorate	Titanium Dioxide
		Red Phosphorous	Hydrogen Peroxide
		Calcium Carbonate	
III	Organic Chemicals	Acetic Acid	Acetic Anhydride
		Acetone	Phenol
		Methanol	Formaldehyde
		Nitrobenzene	Citric Acid
		Maleic Anhydride	Pentaerythritol
		Aniline	Chloro Methanes
		ONCB	PNCB
		MEK	Acetaldehyde
		Ethanolamines	Ethyl Acetate
		Menthol	Ortho- Nitro Toluene
		Isobutyl Benzene	
IV	Pesticides (Technical Grade)	D.D.T.	Malathion
		Parathion(Methyl)	Dimethoate
		D.D.V.P.	Quinalphos
		Monocrotophos	Phosphamidon
		Phorate	Ethion
		Endosulphan	Fenvalerate
		Cypermethrin	Anilophos
		Acephate	Chlorpyrifos
		Phosalone	Metasystox
		Abate	Fenthion
		Triazophos	Lindane
		Temephos	Deltamethrin
		Alphamethrin	Profenofos Technical

Sl. No.	Group	Products	Sl. No.
		Pretilachlor Technical	Lambda Cyhalothrin
		Phenthoate	Permethrin Tech
		Imidacloprid Tech	Captan & Captafol
		Ziram(Thio Barbamate)	Carbendzim (Bavistin)
		Calixin	Mancozab
		Copper-Oxychloride	Hexaconazole
		Metconazole	2, 4-D
		Butachlor	Ethofumesate Technical
		Thiamethoxam Technical	Pendimethalin
		Metribuzin	Triclopyr Acid Tech
		Isoproturon	Basalin
		Glyphosate	Paraquat
		Diuron	Atrazin
		Fluchloralin	Zinc Phosphide
		Aluminium Phosphide	Methyl Bromide
		Dicofol	
V	Dyes and Pigments	Acid Direct Dyes (other than AZO)	Azo Dyes
		Basic Dyes	Disperse Dyes
		Oil soluble (Solvent Dyes)	Fast Colour Bases
		Ingrain Dyes	Solubilised Vat Dyes
		Optical Whitening Agents	Organic Pigments
		Inorganic Pigments	Pigment Emulsion
		Reactive Dyes	Sulphur Dyes
		Vat Dyes	Food Colours
		Naphthols	Other Dyes

Major Petrochemicals			
A. Basic Major Petrochemicals			
S. No.	Group	Products	
I	Synthetic Fibres	Acrylic Fibre	Polyester Staple Fibrefill
		Nylon Filament Yarn	Nylon Industrial Yarn/Tyre Cord
		Polyester Filament Yarn	Polyester Staple Fibre
		Polypropylene Filament Yarn	Polypropylene Staple Fibre
		Polyster Industrial Yarn	Elastomeric/Spandex Filament Yarn
II	Polymers	Low Density Polyethylene	High Density Polyethylene
		Polyestyrene	Polypropylene (Inc. Co-Polymer)
		Expandable Polyestyrene	Poly Vinyl Chloride
		Linear Low Density Polyethylene	PVC Compound
III	Synthetic Rubber (Elastomers)	Styrene Butadiene Rubber (SBR)	Poly Butadiene Rubber (PBR)
		Nitrile Butadiene Rubber (NBR)	Ethyl Propylene Dimers (EPDM)
		Ethyl Vinyl Acetate (EVA)	Butyl Rubber
IV	Synthetic Detergent Intermediates	Linear Alkyl Benzene (LAB)	Ethylene Oxide (EO)
V	Performance Plastics	Acrylonitrile Butadiene Styrene (ABS) Resin	Nylon-6
		Nylon 6,6	Polymethyl Methacrylate (PMMA)
		Styrene Acrylonitrile (SAN) Resin	Polytetrafluoroethylene (PTFE)
		Polyester Chips/PET Chips	
B. Intermediates			
I.	Fibre Intermediates	Acrylonitrile	Caprolactum
		Mono Ehylene Glycol (MEG)	Dimethyl Terephthalate (DMT)
		Purified Terephthalic Acid (PTA)	
II. Building Blocks			
I	Olefins	Ethylene	Propylene
		Butadiene	
II	Aromatics	Benzene	Toluene
		Orthoxylene	Paraxylene
		Mixed Xylene	

C. Other Petro-based Chemicals		
Diethylene Glycol	Diacetone Alcohol	Ethylene Dichloride
Butanol	Oxo Alcohol	2-Ethyl Hexanol
Vinyl Chloride Monomer	Epichlorhydrine	Iso Butylene
PET	PIB	Polycarbonate
Propylene Oxide	Propylene Glycol	Polyvinyl Acetate Resin
Unsaturated Polyester Resin	Methyl Methacrylate	Iso-Butanol
Ethyl Benzene	C4-Raffinate	Cellulose Acetate Butyrate
Polyacetal Resin	Phthalic Anhydride	Styrene
Vinyl Actate Monomer	Isopropanol	Polyol
Metaxylene	Methyl Isobutyl Ketone	PBT
Cellulose Acetate Sheet	Cellulose Nitrate Sheet	Melamine Moulding Powder

Data Sources & Definitions

The major sources of data presented in this publication are:

(i) Production & Installed capacities	Production of Major Chemicals and Petrochemicals and their installed capacities have been aggregated based on monthly returns received directly of Chemicals & Petrochemicals industries in the countries from the manufacturers under large and medium scale.
(ii) Imports & Exports	Directorate General of Commercial Intelligence & Statistics, Ministry of Commerce & Industry, Kolkata.
(iii) FDI	Ministry of Commerce & Industry, Department of Industrial Policy & Promotion.
(iv) Index of Industrial Production	Ministry of Statistics & Programme Implementation, National Statistical Office (NSO), New Delhi.
(v) Wholesale Price Index	Office of the Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry, New Delhi.
(vi) Chemical Industry (Broad definition)	The Chemical industry includes organic chemicals, inorganic chemicals, pharmaceuticals products, fertilizers, tanning or dyeing extracts, dyes pigments, paints and varnishes, putty and other mastics inks, essential oils, perfumery cosmetic, soap, organic surface, active agents, washing, lubricating, artificial waxes, dental waxes, polishing, albuminoidal substance, modified starches, glues, enzymes, explosive, pyrotechnic products, beverages, spirits and vinegar, matches, pyrophoric alloys, photographic or cinematographic goods, miscellaneous chemical products, petrochemicals, plastics synthetic, rubber, man-made filaments, manmade fibre.
(vii) Chemicals and Petrochemicals (Narrow definition)	The Chemicals and Petrochemical products monitored by the Department of Chemicals & Petrochemicals are selected major products and the list of these products is given in the tables 3 & 8 respectively. Unless contrary is mentioned, the terms 'Major Chemicals' and 'Major Petrochemicals' refer to the products or groups thereof as enumerated in the tables 3 & 8.

Chapter 1

An Overview of Chemical and Petrochemical Sector

The chemical industry is the backbone of industrial and agricultural development of the country and provides building blocks for several downstream industries, such as textiles, papers, paints, soaps, detergents, pharmaceuticals, varnish etc. It is one of the most diversified of all industrial sectors covering thousands of commercial products. Indian chemical industry comprises of both small scale as well as large scale units. With initiatives like "Make in India" program gaining steam, investments, innovation and infrastructure are going to be the major thrust areas for chemical industry players. The current per capita consumption of chemical products in India is about 1/10 of the world average, indicating that the demand potential is yet to be realized. The industry is important as it has several linkages with other sectors of an economy. Petrochemicals have backward linkages with other industries in petroleum refining, natural gas processing and forward linkages with industries dealing variety of downstream products. Also, the industry offers alternatives, which serve as substitutes for natural products and therefore, it has the capacity to meet the constantly growing demand that would otherwise strain the natural resources. The value additions in the petrochemicals chain offer immense possibilities and cater to the need of textiles and clothing, agriculture, packaging, infrastructure, healthcare, furniture, automobiles, information technology, power, electronics and telecommunication, irrigation, drinking water, construction needs and host of other articles of daily and specialized usage, amidst other emerging areas.

2. In Chemicals sector, 100% FDI in India is allowed under the automatic route (except in the case of certain hazardous chemicals). Manufacture of most chemical products, inter-alia, covering organic / inorganic, dyestuffs & pesticides is de-licensed. The entrepreneurs need to submit only Industries Entrepreneur Memorandum (IEM) with the Department of Industrial Policy & Promotion provided location of the project falls outside standard urban area limits of metropolitan cities and municipal cities. Only the following items are covered in the compulsory licensing list because of their hazardous nature as required by international conventions.

- Hydrocyanic acid & its derivatives
- Phosgene & its derivatives
- Isocyanates & di-isocyanates of hydrocarbons.

3. **Chemicals can be broadly divided into the following sub-groups:-**

i. Basic Chemicals

Chemicals, such as organic and inorganic chemicals, bulk petrochemicals, other chemical intermediates, plastic resins, synthetic rubber, man-made fibers, dyes and pigments, printing inks, are basic chemicals. These are also known as commodity chemicals.

ii. Specialty Chemicals

Specialty Chemicals, also known as performance chemicals, are low-volume but high-value compounds. These chemicals are derived from basic chemicals and are sold on the basis of their functions. For example, paints, adhesives, electronic chemicals, water management chemicals, oilfield chemicals, flavours and fragrances, rubber additives, paper additives, industrial cleaners and fine chemicals, sealants, coatings, catalysts etc. come under this category.

iii. Pesticides

Chemicals which essentially are meant for protecting agriculture crops against insects and pests are covered under this sub-group. Fertilizers and Pesticides played an important role in the "Green Revolution", during the 1960s and 1970s.

4. Based on composition, building blocks for petrochemicals are divided into two sub- groups:-

i. Olefins:

Olefin, also called as alkenes contains one or more pairs of carbon atoms linked by a double bond. Examples include ethylene, propylene and butadiene. Both ethylene and propylene are used in the industrial production of chemicals, plastics and plastics products while butadiene is used in the industrial production of synthetic rubber.

ii. Aromatics:

Aromatics are hydrocarbons derived from petroleum, characterized by a ring-like molecular structure. Examples include benzene, toluene, and xylene. Benzene is used in making dyes as well as in making synthetic detergents. A combination of benzene and toluene are used in making isocyanates which are required in making polyurethanes while xylenes are used in the industrial production of both plastics and synthetic fibres.

5. Growth Drivers for the Chemical Sector:

- A large population, huge domestic market, dependence on agriculture and strong export demand are the key growth drivers for this industry.
- A global shift towards Asia as the World's chemicals manufacturing hub.

- Per capita consumption of chemicals in India is lower compared to western countries, so immense scope for new investments.
- Rise in GDP and purchasing power generates huge growth potential for the domestic market.
- A focus on new segments such as specialty and knowledge chemicals.
- Skilled science professionals.
- World-class engineering and strong R&D capabilities.

6. Research & Development (R&D)

The Chemical sector is highly heterogeneous encompassing many segments like organic, in-organics, dyestuffs, pesticides, paints, soaps and petrochemicals etc. Research and Development is critical and of paramount importance for the growth & development of this sector. Continued R&D efforts in the part of the industry helps to improve the quality standards, obtain higher yields resulting reduction in cost of production and to earn competitive edge in the International Market. Indian Chemical Industry spends on R&D to the extent of 2-3% of their total turnover, as against 9-10% by the multi-national companies in overseas countries. The industry would, therefore, have to make large investments in R&D to successfully counter competition from the international chemicals industry. India has a number of scientific institutions and the country's strength lies in its large pool of highly trained scientific manpower. With the introduction of the Patent Act 2005, product innovation has assumed high importance.

7. Foreign Technology Agreements

Foreign Technology Agreements in India cater to the growth of the technology in the Indian industries. The foreign technology is transferred from foreign sources such as research and development agencies, foreign parent companies and other manufacturers to the Indian counterparts. The transfer of foreign technology takes place by the means of foreign direct investments and foreign technology collaboration agreements. Foreign Technology Agreements in India permit transfer of technology by the means of Government approval or through the automatic route delegated by the RBI.

8. The Chemical and Petrochemical Industries occupies a pivotal position in meeting some basic human needs and in improving the quality of life. It is extremely important to the economy and is an integral part of everyday life. India has a high population base and thus, faces formidable problems in providing sufficient food, medicines and adequate shelter. From a very

modest level of 52 million MT in 1951-52, food grain production increased to about 296.65 million MT during 2019-20 in the country. The chemical industry provides the vital inputs required, chemical fertilizers and pesticides, to augment food production and save crops from attack by a variety of pests in a safe and selective way. The marked improvements in the average life expectancy of our countrymen can be at-least partially attributed to the Chemical Industry which has provided lifesaving drugs and other chemicals required for managing public health care. The problem of housing can be tackled effectively with the assistance of the Chemicals Industry. It plays a crucial role in housing development.

9. The Chemical Industry converts raw materials like water, salt, crude oil, natural gas, air, metals minerals, etc. into other valuable products. It is involved in almost every industrial process and therefore plays a significant role in economic and social development. Without Chemical Industry, there would be no electronics or microelectronics, refrigerators, recording tapes, automobiles, laser discs, super magnets, processed foods and virtually all consumer products etc. Even the power industry depends on the Chemical Industry for its operations. The use of chemicals (ion exchange resins) becomes indispensable for removing dissolved salts needs in boilers and other applications. In gold mining, cyanide solution is used for extracting gold. The crude oil refining process uses chemicals, catalysts, heat and pressure to separate and combine the basic types of hydrocarbon molecules naturally found in crude oil into groups of similar molecules. Apart from providing a variety of drugs for alleviation of human sufferings, the chemical industry provides safe anaesthetic agents and high quality artificial aids including a hip joint made from ultra-low molecular weight polyethylene. Other health products including dental fills, contact lenses and dialyses also depend on the Chemicals Industry.

10. Some of the most useful materials, synthetic polymers, also known as plastics, have transformed our lives in the last few decades. The driving force for this development was provided by the need for conservation of natural resources and energy efficiency and inherent advantages of the material which created possibilities of innovative designs and cost savings. Its usefulness, adaptability and flexibility of usage have led to a shift in manufacturing from the conventional material based products to synthetic products. The production of polymers has increased from 7.88 million tonne in 2013-14 to 12.14 million ton in 2020-21 (CAGR of 6.38%) while its consumption has increased from 9.81 million ton to 13.30 million ton (CAGR of 5.81%) during the same period.

11. Chemicals from petroleum may range from basic petrochemicals such as ethylene, propylene, benzene, xylenes to finished end-products like plastics, rubbers, fibers, detergents, pesticides, dyes etc. These may be classified as (a) first generation, (b) second generation and (c) third generation petrochemicals. First generation petrochemicals are chemicals directly

available from basic inputs such as petroleum crude oil or natural gas, either by fractionation, isomerization, cracking etc. These can also be derived from coal gasification and bio mass. These generally represent the basic petrochemicals, which are the building blocks for various chemical syntheses. Examples of this class of chemicals are methane, ethane, propane, ethylene, propylene, toluene, xylenes etc. Second generation petrochemicals are the derivatives of the first generation petrochemicals. Example of such products are styrene (derived from benzene and ethylene), dimethyl terephthalate or terephthalic acid (derived from p-xylene), acrylonitrile (derived from propylene), ethylene glycol (derived from ethylene), vinyl chloride monomer (derived from acetylene or ethylene) etc. Second generation petrochemicals constitute the intermediate chemicals which serve as the raw materials for consumer industries like plastics, rubbers, fibres, dyes, detergents etc. Third Generation Petrochemicals are the consumer commodities derived generally from second generation petrochemicals and represent the most important commercial products such as plastics, rubbers, fibres, detergents etc. Examples are polystyrene (from vinyl chloride monomer), DDT from (chlorobenzene), azo dyes (from styrene), Polyvinyl chloride (from aniline) etc. However, some of the products may be directly synthesized from first generation petrochemicals. Polybutadiene rubber, for instance, is obtained by polymerizing butadiene. Since most of the plastics or rubbers are derived from second generation petrochemicals, polybutadiene rubber is regarded as a third generation petrochemical. #

12. Chemical sector is predominantly based on feedstock derived from crude oil, natural gas, salt and minerals. Naphtha (used for production of Urea, Aromatics and Olefins), Heavy Gas oil (propylene and ethylene) and Kerosene (Linear Alkyl Benzene) are derived from crude oil. Steam cracking/ Catalytic Reforming of low and high aromatic naphtha in oil refineries provide Olefins (Ethylene, Propylene and Butadiene) and Aromatics (benzene, toluene and xylenes). Natural gas contains Methane (CH₄), Ethane (C₂H₆), Propane (C₃H₈) and Butane (C₄H₁₀). Rich natural gas, which contains C₂ and C₃ in extractable quantity, is used in producing Ethylene and Propylene. Methane is converted into synthesis gas. Synthesis gas is a mixture of carbon monoxide & hydrogen which is used to make ammonia & methanol. Ammonia is used to make Urea and Methanol is used to make acetic acid and derivatives. Consumption of naphtha in petrochemical sector has increased from 10351 thousand ton in 2016-17 to 11339 (Provisional) thousand ton in 2020-21. The consumption of natural gas for petrochemical sector has increased from 4170 million.

13. Olefins and Fibre Intermediates (Acrylonitrile, Caprolactum, Mono Ethylene Glycol, Purified Terephthalic Acid, Dimethyl Terephthalate) form the basis of the petrochemical industries. Olefins and Aromatics are used in producing Fibre Intermediates. Salt is the feed stock for the chlor-alkali chemical industry, just as crude oil and Natural Gas for the

petrochemical industry. Salt, Aromatics, Minerals (Limestone, Bauxite ore (Aluminium), Rock Phosphate, Sulphur, Iron ore, Indium ore (Tin), Chromite ore, Mica, Silica, Manganese ore, etc) and Basic metals (Copper, Zinc, Titanium, Aluminium, Iron, Chromium, Tin, Nickel, etc) form the basis of chemical industries producing Chlor-Alkali, Organic Chemicals, Inorganic Chemicals, Pesticides and Dyes & Pigments. Dyes are organic compounds and are mainly based on Benzene, Toluene, Naphthalene (from petroleum fractions and coke oven batteries of steel plants), Anthracene and Cyanuric Chloride. Pesticides are mainly based on Benzene, Naphthalene, Phosphorous (produced from phosphate rock) and Sulphur. Pharmaceuticals are mainly based on Benzene, Toluene and Xylene.

14. Innovations in additives, alloys, blends, compounds, composites and high grade reinforcement materials such as glass, nano-clays, carbon nano-tubes and carbon fibres require attention for technology development. New developments in the field of bio and photodegradable plastics, are also taking place all over the world. The chemical and petrochemical industries face the challenge to operate in an environmentally acceptable manner. Chemicals are globally tradable and unless chemicals produced in India are cost effective, these cannot contribute usefully to the Nation's economy. With an eye on emerging usages, research and development efforts may focus on the need to modernize and upgrade the existing manufacturing processes, improve the quality of existing products and make them safe for environment and human health.

15. According to the National Sample Survey Office (NSSO)'s latest survey (July 2015-June 2016 NSS 73rd round), 3.72 lakh persons were engaged in Unincorporated Chemicals and Chemical Products Sector (Industry Division 20) while 3.6 crore persons engaged in Unincorporated Manufacturing sector. There is around 1.73 lakh Unincorporated Enterprises in Chemicals and Chemical Products Sector (Industry Division 20) industries while 1.97 crore Unincorporated Enterprises in manufacturing sector.

Dr. G.N.Sarkar, Advanced Petrochemicals, First Edition, Khanna Publishers, New Delhi

Chapter 2

Global Scenario

As per the Cefic Report 2022, the world chemicals (excluding pharmaceuticals) sales in 2020 are valued at €3,471 billion. India ranks 4th in Asia and 6th in world with chemicals sales valued at €92 billion in 2020. India's Capital spending in World Chemicals (excluding pharmaceuticals) is valued at €3.9 billion in 2020, as compared to €2.4 billion in 2010. India's R&I spending in the chemicals industry is valued at €1.8 billion in 2020, as compared to €0.8 billion in 2010. Top ten countries in World Chemical sales during 2020 are as under:

Rank	Country	Sales in 2020 (in Euro Billion)
1	China	1547
2	European Union (EU27)	499
3	USA	426
4	Japan	144
5	South Korea	102
6	India	92
7	Taiwan	66
8	Brazil	54
9	Russia	40
10.	UK	36

Source: Cefic Facts & Figures-2022

2. As per UN Comtrade Database for 2020, India ranks 12th in the world exports of chemicals (excluding pharmaceutical products) and ranks 5th in the world imports of chemicals (excluding pharmaceutical products). India's exports of chemicals (excluding pharmaceutical products) was 36.59 US\$ billion in 2020. India's share in World exports of chemicals (excluding pharmaceutical products) was 2.38% in 2020. India's imports of chemicals (excluding pharmaceutical products) was 53.10 US\$ billion in 2020. India's share in World imports of chemicals (excluding pharmaceutical products) was 3.42% in 2020.

3. The top five Chemical Products (in terms of value) exported to different countries during 2020-21 were Other Herbicides-anti Sprouting Products (Rs.8,578/-Cr.), Other Insecticides (Rs.8,337/-Cr.), Pigment Emulsion (Rs.5812/-Cr.), Other Fungicide NSE (Rs.4,967/-Cr.) and Reactive Dyes (Rs.4,265/-Cr.). Other Herbicides-anti Sprouting Products exported to USA, Brazil, Australia, France & Vietnam SOC REP; Other Insecticides exported to Brazil, USA, Bangladesh PR, Nigeria & Mexico; Pigment Emulsion exported to China P RP, USA,

Netherland, Brazil & Belgium; Other Fungicide NSE exported to Brazil, Bangladesh PR, USA, Costa Rica & France and Reactive Dyes exported to Bangladesh Pr, Turkey, Singapore Honduras, & Brazil.

4. During 2020-21, top five Chemical products (in terms of value) imported from different countries were Methanol (Rs.4,348/-Cr.), Other Insecticides (Rs.3,435/-Cr.), Acetic Acid (Rs.2,757/-Cr.), Other Pesticides (Rs.2,163/-Cr.) and Other Herbicides-Anti Sprouting Products (Rs.1,894/-Cr.). Methanol mainly imported from Saudi Arab, Qatar, Oman, Iran, & U Arab Emts; Other Insecticides imported from China P RP, USA, Israel, Netherland & Korea RP; Acetic Acid imported from Malaysia, Singapore, China P RP, Taiwan & Saudi Arab; Other Pesticides imported from China P RP, Taiwan, USA, Austria & Russia and Other Herbicides-Anti Sprouting Products imported from China P RP, Israel, Taiwan, Japan & UK.

5. Export of top five Petrochemical Products (in terms of value) to different countries during 2020-21 were Paraxylene (Rs.11,571/-Cr), Polypropylene (Inc. Co-Polymer) (Rs.5,618/-Cr), Benzene (Rs.5,596/-Cr), Polyester Filament Yarn (Rs.5,456/-Cr) and High Density Polyethylene (Rs.2,475/-Cr). Paraxylene was mainly exported to China P RP, Malaysia, Indonesia, USA & Thailand; Polypropylene (Inc. Co-Polymer) exported to China P RP, Turkey, Vietnam SOC REP, Bangladesh PR & Nepal; Benzene was exported to Saudi Arab, China P RP, Belgium, Spain, & U S A; Polyester Filament Yarn was exported to Turkey, Brazil, Egypt A RP, Bangladesh PR, & Argentina and High Density Polyethylene was exported to China P RP, Vietnam SOC REP, Nepal, Kenya & Bangladesh PR.

6. Top five Petrochemical products (in terms of value) imported from different countries during 2020-21 were Polypropylene (Inc. Co-polymer) (Rs.7,465/- Cr.), High Density Polyethylene (Rs.6,484/- Cr.), Styrene (Rs.4,594/-Cr.), Vinyl Chloride Monomer (Rs. 3,153/- Cr.) and Poly Vinyl Chloride (Rs.3,010/-Cr.). Polypropylene (Inc. Co-Polymer) mainly imported from Saudi Arab, U Arab Emts, Singapore, Korea RP & Thailand; High Density Polyethylene imported from U Arab Emts, USA, Qatar, Saudi Arab & Singapore; Styrene mainly imported from USA, Singapore, Kuwait, Saudi Arab & Korea RP; Vinyl Chloride Monomer imported from Qatar, Japan, France, Indonesia & China P RP and Poly Vinyl Chloride imported from Japan, Taiwan, Korea RP, Thailand & China P RP.

Chapter 3

Important Economic Indicators

According to the National Accounts Statistics 2021, brought out by the Central Statistics Office (CSO), Chemical and Chemical products sector, excluding pharmaceuticals (Industry Division 20 of NIC 2008), accounted for 1.32% of the GVA for All Economic Activity in 2019-20. The share of Gross Value Added (GVA) in the Manufacturing Sector during 2019-20 is about 8.97%. GVA of Chemical Sector has grown with CAGR of 12.57% during the period 2014-15 to 2019-20. The average Indices of Industrial Production (IIP) for the Chemical and Chemical products (Industry Division 20 of NIC 2008) for the year 2020- 21 stood at 116.0, which is 2.5% less as compared to the previous year. The size of the Indian Chemical industry, excluding Pharmaceuticals (Industry Division 20 of NIC 2008), in terms of Value of Output in the year 2019-20 was Rs.9,33,042/- crores and it was 8.08% of Value of Output of Manufacturing Sector. The size of Chemical industry, including Pharmaceuticals (i.e. Industry Division 20 and 21 of NIC 2008), in terms of Value of Output in the year 2019-20 was Rs.13,22,136/- crores and it was 11.45% of the Total Value of Output of Manufacturing sector. During last six years, i.e. within 2014-15 to 2019-20, real growth rate in Output of Chemical Industry excluding Pharmaceuticals Industry (i.e. Industry Division 20) was 8.10% which was 8.18% for Chemical Industry including Pharmaceutical Industry {i.e. Industry Division 20 &21}. Growth in Value of Output for Manufacturing Sector during the same period was 6.32%.

2. The exports and imports data of 2020-21 shows that in the Chemical Sector, comprising of chapters 28, 29, 30, 31, 32, 38, 39, 4002, 54 and 55 of HS code, India was net importer in all categories except of four categories, namely, Pharmaceuticals Products (Chapter 30 HS code), Man-made staple fibers (Chapter 55 HS code), Man-Made Filaments (Chapter 54 HS code) and Tanning or Dyeing (Chapter 32 HS code). Pharmaceuticals products accounted Rs.1,24,804/- crore, Man-made staple fibres accounted Rs.3,379/- crore, Man-Made Filaments accounted Rs.4,743/- crore and Tanning or Dyeing accounted Rs.8,624/- crore in net exports while Fertilizers (chapter 31 HS code) accounted Rs.50,255/- crore, Plastic and Articles thereof (Chapter 39 HS code) accounted Rs.47,388/- crore, Organic Chemicals (Chapter 29 HS code) accounted Rs.12,194/- crore, Inorganic Chemicals (Chapter 28 HS code) accounted Rs.38,654/- crore, Miscellaneous Chemical Products (Chapter 38 HS code) accounted Rs.7,438/- crore and Synthetic Rubber and Factice (4002 HS code) accounted Rs.5,448/- crores in the net imports during 2020-21. {Table No. 12A}

3. As per Annual Survey of Industries (Factory Sector), 2018-19, top seven States, namely, Gujarat (34.28%), Maharashtra (15.03%), Uttar Pradesh (5.52%), Uttarakhand (5.51%), Tamil Nadu (4.34%), Odisha (3.46%), and Himachal Pradesh(3.31), contributed around 71.5% in the

Gross Value Added (GVA) for the Chemical & Chemical products Sector (Industry Division 20 of NIC 2008) and seven States, namely, Gujarat (35.51%), Maharashtra (15.93%), Uttar Pradesh (6.15%), Tamil Nadu (4.36%), Rajasthan (4.19%), West Bengal (4.09%) and Dadra & N Haveli (3.85%), contributed around 74.1% in the Value of Output.

4. The exports of chemicals & petrochemicals (excluding pharmaceutical products and fertilizers) has increased from Rs.1,77,862/- crores in 2013-14 to Rs.2,79,337/-crore in 2020-21. The percentage share of the exports of chemicals & petrochemicals (excluding pharmaceutical products and fertilizers) in the total national exports increased from 9.3% to 12.9% during the same period.

At the product level, the following products accounted more than Rupees One Thousand crore in the exports during 2020-21:

Product	Export (Rs. Crore)	Product	Export (Rs. Crore)
Paraxylene	11571	High Density Polyethylene	2475
Other Herbicides-Anti Sprouting Products	8578	Menthol	2404
Other Insecticides	8337	Azo Dyes	1792
Pigment Emulsion	5812	Polyester Staple Fibre	1722
Polypropylene (Inc. Co-Polymer)	5618	Ortho-Xylene	1279
Benzene	5596	Food Colours	1183
Polyester Filament Yarn	5456	Polyester Chips/Pet Chips	1180
Other Fungicide Nes	4967	Cypermethrin	1063
Reactive Dyes	4265	Mono Ethylene Glycol	1057

5. The imports of Chemicals & Petrochemicals (excluding Pharmaceutical products and fertilizers) has increased from Rs.2,41,311/- crores in 2013-14 to Rs.3,73,714/- crores in 2020-21. The percentage share of the imports of Chemicals & Petrochemicals (excluding Pharmaceutical products and fertilizers) in the total national imports increased from 8.9% to 12.8% during the same period {Table 11, 17 & 25}.

At the product level, the following products accounted for more than Rs. One Thousand crores in the imports in 2020-21:

Product	Import (Rs. Crore)	Product	Import (Rs. Crore)
High Density Polyethylene	6484	Low Density Polyethylene	2085
Styrene	4594	Polyester Filament Yarn	1970
Methanol	4348	Other Herbicides-Anti Sprouting Products	1894
Other Insecticides	3435	Isopropanol	1647
Vinyl Chloride Monomer	3153	Linear Low Density Polyethylene	1517
Poly Vinyl Chloride	3010	Ethylene Dichloride	1505
Paraxylene	2839	Styrene Butadiene Rubber	1491
Acetic Acid	2757	Other Fungicide Nes	1457
Polycarbonate	2679	Butyl Rubber	1388
Purified Terephthalic Acid	2456	Abs Resin	1296
Toluene	2384	Carbon Black	1276
Polyol	2286	Acrylonitrile	1211
Mono Ehylene Glycol	2263	Soda Ash	1148
Other Pesticides	2163	Poly Butadiene Rubber	1135
Linear Alkyl Benzene	2159		

6. The net imports of Chemicals & Petrochemicals (excluding Pharmaceutical products and fertilizers) has increased from Rs.63,449/-crore in 2013-14 to Rs.94,377/-crore in 2020-21. The percentage share of the net imports of Chemicals & Petrochemicals (excluding Pharmaceutical products and fertilizers) in the total national net imports increased from 7.8% to 12.5% during the same period. At the product level, the following products accounted more than Rs. One Thousand crores in the net imports in 2020-21. {Table 12(a), 18 & 26}

Product	Net Import (Rs. crore)	Product	Net Import (Rs. crore)
Styrene	4523	Other Pesticides	1927
Methanol	4322	Polypropylene (Inc. Co-Polymer)	1847
High Density Polyethylene	4009	Low Density Polyethylene	1727
Vinyl Chloride Monomer	3153	Polyol	1685
Poly Vinyl Chloride	2925	Isopropanol	1552
Acetic Acid	2694	Ethylene Dichloride	1419
Polycarbonate	2622	Abs Resin	1289
Toluene	2286	Mono Ehylene Glycol	1206
Linear Alkyl Benzene	2150	Styrene Butadiene Rubber	1203
Ethyl Vinyl Acetate	2108	Acrylonitrile	1129
Purified Terephthalic Acid	2012	Butyl Rubber	1125

The following products accounted more than Rupees One Thousand crore in the total net exports in 2020-21: -

Product	Net Export (Rs. crore)	Product	Net Export (Rs. crore)
Benzene	5513	Reactive Dyes	4045
Polyester Filament Yarn	3485	Other Fungicide NES	3510
Ortho-Xylene	1166	Menthol	1952
Polyester Staple Fibre	1076	Azo Dyes	1753
Other Herbicides-Anti Sprouting Products	6684	Food Colours	1120
Pigment Emulsion	5278	Cypermethrin	1063

7. Chemical Sector (including Pharmaceutical) in India {i.e. 99.5% GVA of Chemical Sector (including Pharmaceutical) comes from the organized Sector. The estimates of the Total Output (Factory Sector) of at 4-digit Industry class in the Chemicals and Chemical Products (Division 20-NIC 2008) during the year 2017- 18 and 2018-19 are given in the table below:

Class	Description	Total Output (Rs. Crore)	
		2017-18	2018-19
2011	Manufacture of basic chemicals	175960	226165
2012	Manufacture of fertilizers and nitrogen compounds	120736	138193
2013	Manufacture of plastics and synthetic rubber in primary forms	103265	109899
2021	Manufacture of pesticides and other agrochemical products	43907	57753
2022	Manufacture of paints, varnishes and similar coatings, printing ink and mastics	44633	60905
2023	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations	81478	86521
2029	Manufacture of other chemical products n.e.c.	66814	77310
2030	Manufacture of man-made fibres	24706	64379
Total		661499	821125

Source: - Annual Survey of Industries, 2017-18 and 2018-19 (Factory sector), Ministry of Statistics & Programme Implementation

Chapter 4

Indian Trade Classification (Harmonised System)

[ITC (HS)] 2017- An Abstract

Indian Trade Classification (Harmonized System), 2017 was compiled and notified by the Directorate General of Foreign Trade, Ministry of Commerce and Industry, Government of India in January 2017. ITC-HS codes are divided into two schedules. ITC (HS) Import Schedule I describe the rules and guidelines related to import policies whereas Schedule II describes the rules and regulation related to export policies. Schedule I of the ITC-HS code is divided into 21 sections and each section is further divided into chapters. The total number of chapters in the schedule I is 98. The chapters are further divided into sub- heading under which different HS codes are mentioned. Export Policy Schedule II of the ITC-HS code contains 97 chapters giving all the details about the guidelines related to the export policies.

The Chapters dealing with Chemicals and Petrochemical products are falling under Section VI, VII & XI as depicted below:

Chapter	Description	Section
Chapter 28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare- earth metals, of radioactive elements or of; isotopes	SECTION VI
Chapter 29	Organic chemicals	
Chapter 38	Miscellaneous chemical products	
Chapter 39	Plastics and articles thereof	SECTION VII.
Chapter 40	Rubber and articles thereof	
EXIM Code 4002	Synthetic rubber and factice derived from oils, in primary Forms or in plates, sheets or strip; mixtures of any product of heading 4001 with any product of this heading, in primary forms or in plates, sheets or strip	
Chapter 54	Man-made filaments	SECTION XI
Chapter 55	Man-made staple fibres	

Illustration of 8 digit Product Code:

Chapter	Exim Code	Item Description
28		Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of; isotopes
	2801	Fluorine, Chlorine, Bromine And Iodine
	28011000	Chlorine
39		Plastics and articles thereof
	3902	Polymers Of Propylene Or Of Other Olefins, In Primary Forms
	39021000	Polypropylene

**Source: website of Directorate General Foreign trade (DGFT), Ministry of Commerce and Industry, Government of India. <http://dgft.gov.in/exim/2000/itchs2017/ITCHS2017.html> may be followed for further details.*

Chapter 5

National Industrial Classification (NIC) - A Digest

The Central Statistics Office (CSO), Ministry of Statistics & Programme Implementation being nodal Statistical Authority in the Country is vested with the responsibility of setting up Standards for collection, compilation and dissemination of Statistical data. The Official statistics is required to be collected and presented according to classification designed to facilitate its use for National Economic Policies and conform to International comparison. The need for comparability of Statistics available from various sources, on different aspects of the economy and usability of such data for economic analysis necessitated the need of standardization of a system of classification.

CSO being responsible for coordination of statistical activities in the country and with a view to evolve and maintain statistical standards initiated task of bringing out Standard Industrial Classification as early as in 1960 and evolved a Standard Industrial Classification (SIC) in 1962. To take care of emerging changes in organizations and structure of Industries, the need for revision of this document was felt from time to time. With this objective, the CSO revised SIC 1962 in 1970 (NIC-70), NIC-1970 in 1987 (NIC-87) and NIC-87 in 1998 (NIC-98). It is during 1998 that 4-digit system of International Standard Industrial Classification (ISIC- 3) was followed and these 4 digits were extended up to 5 digits based on national needs. Consequent upon release of United Nations International Standard Industrial Classification (ISIC) – 2002 Rev. 3.1, NIC- 1998 was updated to bring out NIC – 2004. After adoption of ISIC Revision-4 by the United Nations Statistical Commission (UNSC) in the year 2008, an expert committee under the chairmanship of DG, CSO deliberated on the issues and approved the draft NIC -2008 incorporating revision in NIC- 2004 consistent with ISIC revision 4.

Basic features of NIC 2008

All the activities are grouped into several “activity groups” or “tabulation categories” in a hierarchical manner. Activities are first grouped into ‘section’ alphabetically coded from A through U, every section is divided into ‘division’ with 2-digit numeric code, every division into ‘group’ with 3-digit numeric code, every group into ‘class’ with 4-digit numeric code and every 4-digit class into 5-digit ‘sub-class’. The structure is illustrated below.

Level		Description
Section		Manufacturing
Division 20		Manufacture of Chemicals and Chemical Products
Group	201	Manufacture of Basic Chemicals, Fertilizer and Nitrogen Compounds, Plastics and Synthetic Rubber in Primary Forms
	203	Manufacture of man-made fibres
Class	2011	Manufacture of Basic Chemicals
	2030	Manufacture of man-made fibres
Sub-Class	20111	Manufacture of liquefied or compressed inorganic industrial or medical gases (elemental gases, liquid or compressed air, refrigerant gases, mixed industrial gases etc.)
	20301	Manufacture of synthetic or artificial filament tow

The structure of NIC-2008 is identical to the structure of ISIC Revision up to 4-digit level 'class'. Classes were then divided into 5-digit 'sub classes' according to national requirements.

Salient features of NIC-2008

- The sections A to Q of NIC-2004 have been replaced by sections A to U in respect of NIC-2008. NIC-2008 has 21 sections, 88 divisions, 238 groups, 403 classes and 1304 sub-classes.
- NIC-2008 is comparable with ISIC Rev.4 till 4-digit classes in totality.
- The concept of shadow classes introduced in NIC-2004 has been done away with in NIC-2008 as the emphasis has been given on activity rather than type of operation and scale of operation.
- In NIC-2008 some of the 5-digit sub-classes of NIC-2004 have been made separate 4- digit classes e.g. 'Growing of Sugarcane (01115)', 'Growing of tobacco (01114)', 'Growing of fibre crops (01113)' 'Growing of flowers (01122)'.
- Repair and installation of machinery and equipment has been classified as separate division (Division-33) in NIC-2008.
- Repair of Personal Household goods (5260 of NIC-2004) has been removed from Section-G (wholesale and retail trade; repair of motor vehicles and motor cycles) and now included in Section-S (other service activities).
- Publishing activity which was included in division-22 of manufacturing section in NIC- 2004 is now included in division-58 (publishing activities) of NIC-2008 under Section-J (information and communication).
- Activity 'water supply' under division-41 (Electricity, Gas and Water Supply) of NIC- 2004 is now included in Section-E (water supply; sewerage, waste management and remediation activities).
- Explanatory notes of ISIC Rev.4 at 1/2/3-digit level have been incorporated in NIC- 2008 as Annexure for better understanding of the revised classification.

- Under 4-digit classes of NIC-2008, inclusion and exclusion statements have been included in the detailed structure itself to remove ambiguity in the scope of classification and to facilitate the classification of economic activity distinctly.

Division 20 and 21 of NIC -2008 relates to “Chemical and Chemical Products” and “Pharmaceutical, Medicinal and botanical products” respectively.

**Source: website of Ministry of Statistics and Programme Implementation, Government of India
http://mospi.nic.in/sites/default/files/main_menu/national_industrial_classification/nic_2008_17apr09.pdf
may be followed for further details.*

Chapter 6

Indices released by Government of India

Indices are important economic indicators to demonstrate the relative change in the parameters over a specified period of time. Some of the important indices compiled and released by different Departments under the Government of India along with their inception and uses in different sectors of economy are summarized below:

- A. Index of Industrial Production (IIP)
- B. Consumer Price Index (CPI)- Industrial Worker, Agricultural Labourer / Rural Labourer, Rural / Urban / Combined
- C. Wholesale Price Index (WPI)

A. Index of Industrial Production-(IIP)

1. The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation Compiles and brings out an index of Industrial Production. CSO revises the base year of the macroeconomic indicators, as a regular exercise, to capture structural changes in the economy and improve the quality and representativeness of the indices. In this direction, the base year of the all-India Index of Industrial Production (IIP) has also been revised from 2004-05 to 2011-12 to not only reflect the changes in the industrial sector but also to align it with the base year of other macroeconomic indicators like the Gross Domestic Product (GDP), Wholesale Price Index (WPI) etc.
2. IIP in the revised series is continued to represent the Mining, Manufacturing and Electricity sectors. The revised series uses the National Industrial Classification (NIC) 2008 for the purpose of classification of industrial production. 15 source agencies are providing production data for Index of Industrial Production (IIP) base year 2011-12.

Summary of Source Agencies of IIP in the new series with base 2011-12

SI No	Source	Weights (%)
1	Department of Industrial Policy and Promotion (DIPP)	47.54
2	Indian Bureau of Mines	14.37
3	Ministry of Petroleum & Natural Gas	11.29
4	Joint Plant Committee	10.52
5	Central Electricity Authority	7.99
6	Department of Chemicals and Petrochemicals	2.54
7	Office of Textile Commissioner	1.94

8	Department of Fertilizers	1.06
9	Directorate Of Sugar and Vegetable Oils (for Edible Oils only)	0.97
10	Directorate Of Sugar and Vegetable Oils (for Sugar only)	0.76
11	Office of Coal Controller	0.49
12	Tea Board	0.29
13	Railway Board	0.13
14	Office of Jute Commissioner	0.07
15	Coffee Board	0.04
	GENERAL	100.00

3. Highlights of the changes in New Series of Index of Industrial Production are summarized below:

- a. The selection of items in the new series has been done at the 3 digit level of NIC for better representation as compared to selection at 2 digit level done in 2004-05 series.
- b. At the broad level, the new series has a total of 809 items occurring in the manufacturing sector in the item basket (405 item groups), where 149 new items like Steroids and hormonal preparations, Cement clinkers, Medical/ surgical accessories, Pre-fabricated concrete blocks, refined Palm Oil have been added and 124 items such as Biaxially Oriented Polypropylene (BOPP) Films, Calculators, Colour TV picture tubes, Gutka have been deleted from the 2004-05 series in the manufacturing sector. The sectoral composition of the IIP is as follows:

Sector	Base year 2011-12		Base year 2004-05	
	Weights (%)	Item groups	Weights (%)	Item groups
Mining	14.373	1	14.157	1
Manufacturing	77.633	405	75.527	397
Electricity	7.994	1	10.316	1
Total	100	407	100	399

- c. To reflect the increasing significance of electricity generation from renewable sources, it was decided to include data on electricity generation figures from these sources in the new series. This inclusion was done from April, 2014 onwards as monthly data for electricity generation from renewable sources for earlier months were not available.
- d. For capital goods, data in the new series is captured in terms of 'work in progress' to better represent the growth of capital goods and to avoid reporting of production figures in bulk after the completion of production. Details on this methodology are available in the Report of the Working Group set up for the revision of base year, which may be accessed in the official website of this Ministry.

- e. The number of source agencies reporting data for compilation of IIP in the new series is 14 as compared to 15 in its previous. This is on account of the fact that data on 'Iodised Salt' in the new series is being provided by the Department of Industrial Policy and Promotion (DIPP) as O/o Salt Commissioner was not in a position to supply Salt production data after abolition of Salt Cess Act, 1953 in Finance Bill 2016.
- f. In the Mining Sector the coverage was undergone a change on account of the MCDR Amendment Rules, 2016 resulting in 27 non-metallic minerals being designated as minor minerals and which were no longer monitored by Indian Bureau of Mines.

B. Consumer Price Index (CPI)

1. A Consumer Price Index (CPI) is designed to measure the changes over time in general level of retail prices of selected goods and services that households purchase for the purpose of consumption. Such changes affect the real purchasing power of consumer's income and their welfare. CPI numbers are widely used as macroeconomic indicator of inflation, and also as a tool by government and central banks for targeting inflation and monitoring price stability. CPI is also used as deflators in the National Accounts. Therefore, CPI is considered as one of the most important economic indicators.

2. Different types of CPIs, namely, CPI (IW), CPI (AL/RL), CPI (UNME) and CPI (R/U/C) compiled by different agencies of Government of India, are available for users in our country. First three indices, including CPI (UNME), are specific to population segments. The price collection for CPI (UNME) was discontinued with effect from April 2008 and linked all India CPI (UNME) numbers were brought out from April 2008 to December 2010. The fourth one i.e. CPI (R/U/C) is for general population, sector-wise, to be explained in subsequent paragraphs.

3. Salient features of different types of CPIs:

Consumer Price Index for Industrial Workers - CPI (IW)

This index is compiled by the Labour Bureau, Ministry of Labour and Employment. The target population is working class family, defined as a family: (i) located within the centre for industrial worker, (ii) has at least one member working as manual worker in an establishment in any of the seven sectors of employment covered viz., factories, plantations, mining, ports and docks, public motor transport undertakings, electricity generating and distributing establishments, and railways; and (iii) derived 50 per cent or more of its income during the calendar month preceding the day of enquiry through any manual work.

The present series of CPI (IW) is on base 2016=100. The weighting diagrams for the purpose of compilation of index numbers had been derived on the basis of average monthly

family expenditure of the working class obtained from the Working Class Family Income Expenditure Survey conducted during 1999-2000.

The CPI (IW) is released every month (on the last working day of succeeding month) for each of the selected 88 centres as well at all India level. It is mainly used for the determination of Dearness Allowance (DA) being paid to Central/State Government employees and also to the workers in the industrial sectors, besides fixation and revision of minimum wages in scheduled employments. It is also used in moving the base year poverty lines for urban areas to the subsequent years.

Consumer Price Index for Agricultural/Rural Labourers - CPI (AL/RL)

These indices are compiled by the Labour Bureau, Ministry of Labour and Employment. The target populations are agricultural and rural labourers. A rural labour household is defined as one, which derives major income from manual employment (rural labour) during the last 365 days. From amongst the rural labour households, those households, which earn 50% or more of their total income from gainful employment as manual labour in agriculture during the last 365 days, are categorized as agricultural labour households. Agricultural labour households form a major subset of rural labour households. A person is considered engaged in agricultural labour if he/she follows one or more of the agricultural occupations in the capacity of wage paid manual labourer, whether paid in cash or kind (excluding exchange labour) or both. A person who does manual work in return for wages in cash or kind or partly in cash and partly in kind (excluding exchange labour) is a wage paid manual labourer. Persons who are self-employed doing manual work are not treated as wage paid manual labourers. People living in rural areas and engaged in manual labour by working in agricultural and/or non-agricultural occupations in return for wages paid either in cash or kind (excluding exchange labour) or both, are considered as rural labourers. Thus, rural labourers include both agricultural and other labourers.

The present series of CPI (AL/RL) is on base 1986-87=100. Estimates of average consumer expenditure per household generated from the results of the NSS 38th round (1983), CES formed the source of weights for different items of goods and services, used in compilation of CPI (AL) and CPI (RL).

For both the current series of CPI (AL) and CPI (RL), the retail prices in respect of goods and services are collected on monthly basis, from fixed markets in 600 sample villages in 20 states by the field workers of the Field Operations Division (FOD) of the National Sample Survey Office (NSSO). The various items (12) of goods and services are categorized into four main groups namely, (i) Food, (ii) Fuel and Light, (iii) Clothing, Bedding and Footwear; and (iv) Miscellaneous. The items of goods and services are common for the state as a whole but the

varieties of most of the items differ from village to village. The collection of retail prices is staggered over four weeks of a month with one-fourth of the sample covered every week.

The CPI (AL/RL) is released every month (20th or preceding working day of the following month) for each of the selected states as well at all India level. It is mainly used for the determination/ fixation and revision of minimum wages in agricultural sector. CPI (AL) is also used in moving the base year poverty lines for rural areas to the subsequent years.

Consumer Price Index for Rural, Urban and Combined - CPI (R/U/C)

The indices are compiled by the CSO on base 2010 = 100. The consumption patterns (weighting diagrams) for this series of CPI have been derived on the basis of average monthly consumer expenditure of an urban/rural household obtained from the results of the 61st Round of CES conducted by the National Sample Survey Office during 2004-05.

C. Wholesale Price Index (WPI)

WPI is an important measure to monitor the dynamic movement of prices at the wholesale level. In a dynamic world, prices keep on changing. WPI is used as a deflator of various nominal macroeconomic variables including Gross Domestic Product (GDP). The WPI based inflation estimates also serve as an important determinant, in formulation of trade, fiscal and other economic policies by the Government. WPI is also used for the purpose of escalation clauses in the supply of raw materials, machinery and construction work. Business firms in search of effective methods for coping with changes in prices often employ price adjustment (escalation) clauses in long-term sales and purchase contracts. WPI is widely recognized among business people, economists, statisticians and accountants as a useful objective indexing tool in price adjustment clauses.

The base year of All-India WPI has been revised from 2004-05 to 2011-12 by the Office of Economic Advisor (OEA), Department of Industrial Policy and Promotion, Ministry of Commerce and Industry to align it with the base year of other macroeconomic indicators like the Gross Domestic Product (GDP) and Index of Industrial Production (IIP). The Wholesale Price Index (WPI) series in India has undergone six revisions in 1952-53, 1961-62, 1970-71, 1981-82, 1993-94 and 2004-05 so far. The current series is the seventh revision.

Features of WPI

- In the current series of WPI, prices used for compilation do not include indirect taxes in order to remove impact of fiscal policy. This is in consonance with international practices and will make the current WPI conceptually closer to 'Producer Price Index'.
- A current "WPI Food Index" is compiled to capture the rate of inflation in food items.
- Seasonality of fruits and vegetables has been updated to account for more months as these are now available for longer duration.
- Item level aggregates for current WPI are compiled using Geometric Mean (GM) following international best practice and as is currently used for compilation of All India CPI.
- A high level Technical Review Committee was set up for the first time to carry out dynamic review process in order to keep pace with the changing structure of the economy.

Chapter 7

Glimpses of Important Trends during 2016-17 to 2020-21

This Chapter has been included in this publication to highlight important trends of chemicals and petrochemicals sector during the last five years i.e. 2016-17 to 2020-21, through graphical presentation with concise analysis. The graphical presentation contains tables alongside displays trend during the considered period in respect of Production, Installed Capacity, Export, Import and Net Export / Net Import relating to various groups of Major Chemicals and Major Petrochemicals with compound annual growth rate (CAGR) during the period 2016-17 to 2020-21. The Chapter also contains Pie Charts depicting share of Major groups under Major Chemicals and Major Petrochemicals in respect of Production, Installed Capacity, Export and Import along with Net Import / Net Export during 2020-21.

2. This Publication has also contained detailed tables in Appendices Section showing group-wise, product-wise, year-wise information to selected Major Chemicals and Major Petrochemicals along with top five import and export destinations. The information relating to exchange rates of Indian Rupees' vis-a-vis US\$, World export of Chemicals by top ten countries-2020, sector-wise FDI inflows etc. are also included in the Appendices Section.

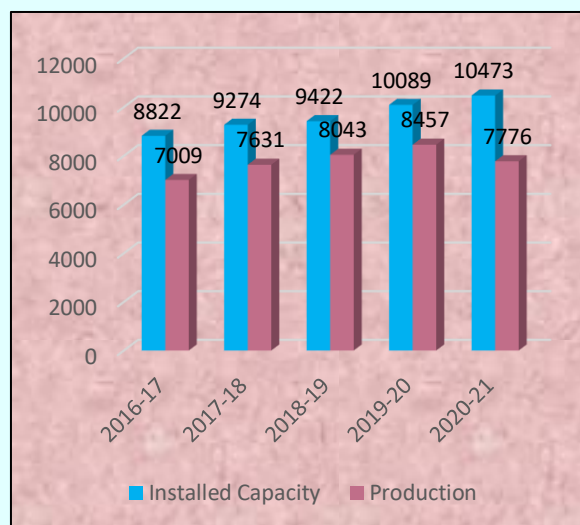
3. Many of statistical tables appended in the Publication present temporal data for the period 2013-14 to 2020-21. CAGR in these tables has also been reflected over the period of 8 years.

4. Hope trends indicated in this chapter and data contained in the publication would help users in understanding the emerging scenario in the sector with clarity and ease.

Alkali Chemicals

Installed Capacity-Production

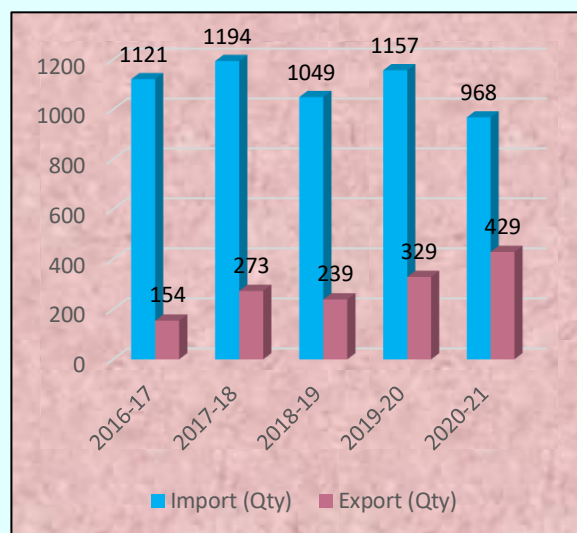
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	8422	6802
2017-18	8822	7009
2018-19	9274	7631
2019-20	9422	8043
2020-21	10089	8457
CAGR (%)	4.6	5.6



It is observed that installed capacity and production of Alkali Chemicals has shown increasing trend during 2016-17 to 2020-21. The actual production was always lower than the installed capacity during the period.

Quantity Imported-Quantity Exported of Alkali Chemicals

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	1121	154
2017-18	1194	273
2018-19	1049	239
2019-20	1157	329
2020-21	968	429
CAGR (%)	-3.6	29.1

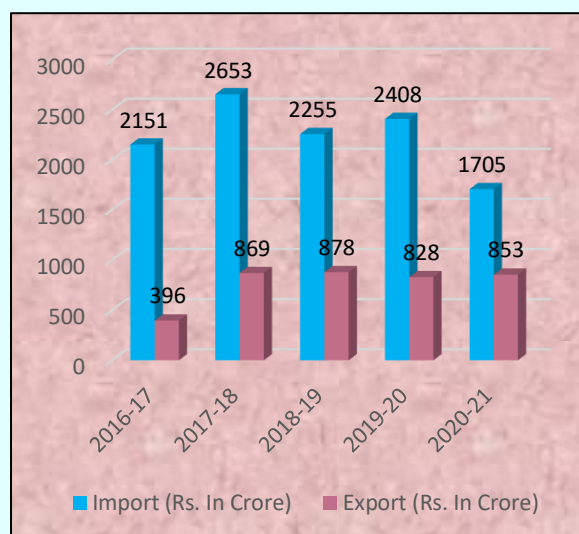


It is observed that the Export of Alkali Chemicals was much lower than its imports during the period 2016-17 to 2020-21. However, it is observed that the gap between import and Export of Alkali Chemicals was gradually narrowed over the period.

Alkali Chemicals

Value of Import- Value of Export

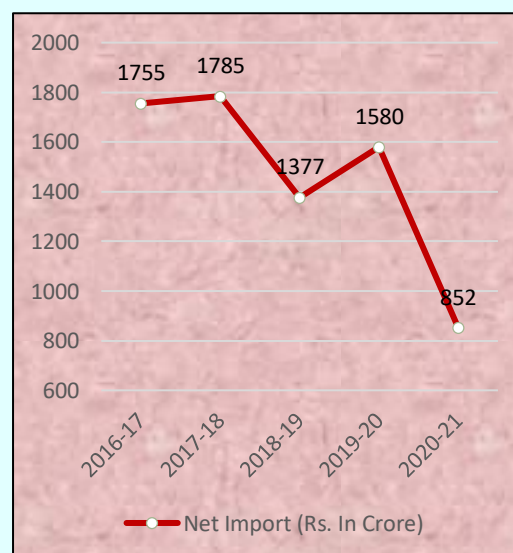
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	2151	396
2017-18	2653	869
2018-19	2255	878
2019-20	2408	828
2020-21	1705	853
CAGR (%)	-5.6	21.2



It is evident that the values of Export of Alkali Chemicals were significantly lower than the values of Import during 2016-17 to 2020-21. However, the gap between the values of Import and Export of Alkali Chemicals was least in 2020-21 over the previous years.

Net Import of Alkali Chemicals

Year	Net Import (Rs. In Crore)
2016-17	1755
2017-18	1785
2018-19	1377
2019-20	1580
2020-21	852
CAGR (%)	-16.5

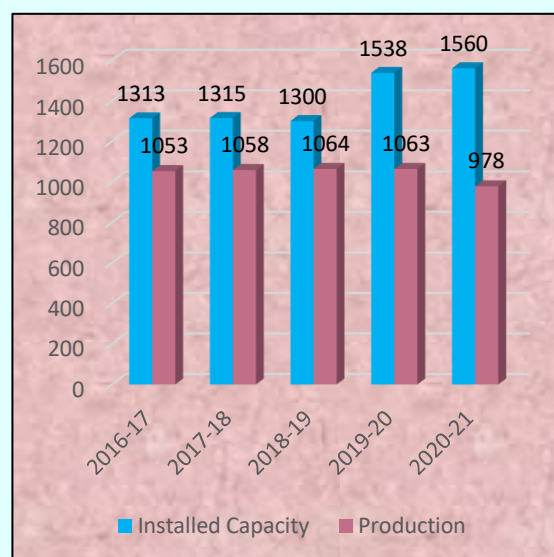


India is a **Net Importer** of Alkali Chemicals. However, its net Imports from Rs.1755 crore in 2016-17 have come down to Rs.852 crore in 2020-2021.

Inorganic Chemicals

Installed Capacity-Production

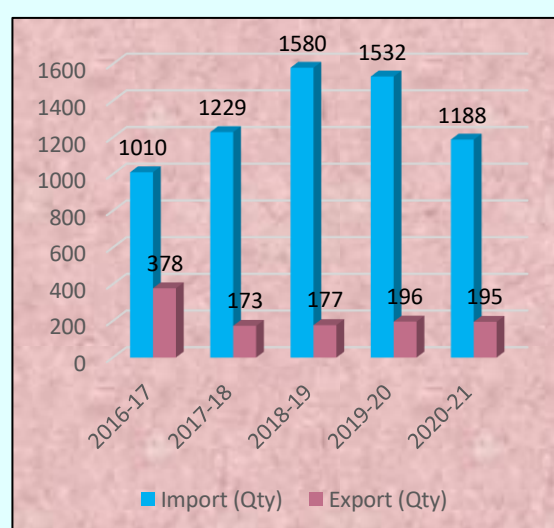
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	1313	1053
2017-18	1315	1058
2018-19	1300	1064
2019-20	1538	1063
2020-21	1560	978
CAGR (%)	4.4	-1.8



It is observed that the installed capacity of Inorganic Chemicals increased from 1313 thousand MT in 2016-17 to 1560 thousand MT in 2020-21, However, the production was almost stagnant during 2016-17 to 2020-21 (except in 2020-21). Also the actual production was always lower than the installed capacity during the same period.

Quantity Imported-Quantity Exported of Inorganic Chemicals

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	1010	378
2017-18	1229	173
2018-19	1580	177
2019-20	1532	196
2020-21	1188	195
CAGR (%)	4.1	-15.2

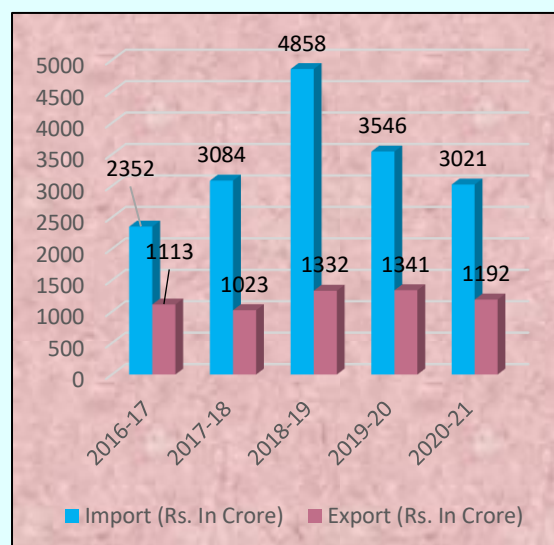


The Import of Inorganic Chemicals was significantly higher than its Export (during 2016-17 to 2020-21).

Inorganic Chemicals

Value of Import- Value of Export

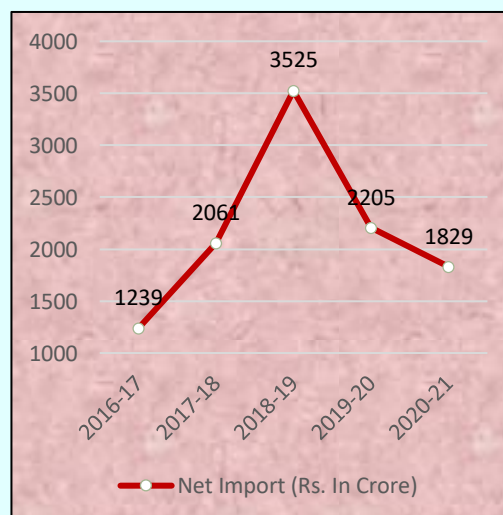
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	2352	1113
2017-18	3084	1023
2018-19	4858	1332
2019-20	3546	1341
2020-21	3021	1192
CAGR (%)	6.5	1.7



It is evident that the value of Exports of Inorganic Chemicals was significantly lower than the values of Import during 2016-17 to 2020-21. During the same, the maximum Export was seen during the year 2018-19.

Net Import of Inorganic Chemicals

Year	Net Import (Rs. In Crore)
2016-17	1239
2017-18	2061
2018-19	3525
2019-20	2205
2020-21	1829
CAGR (%)	10.2

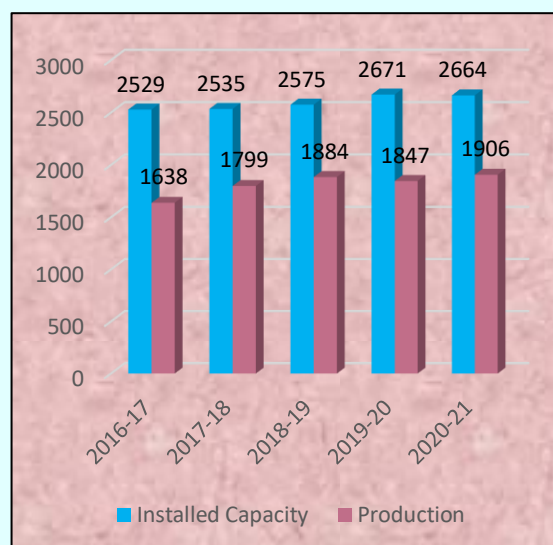


The **Net Imports** of Inorganic Chemicals increased from 2016-17 to 2018-19, but it was declined again in the next two consecutive financial years.

Organic Chemicals

Installed Capacity-Production

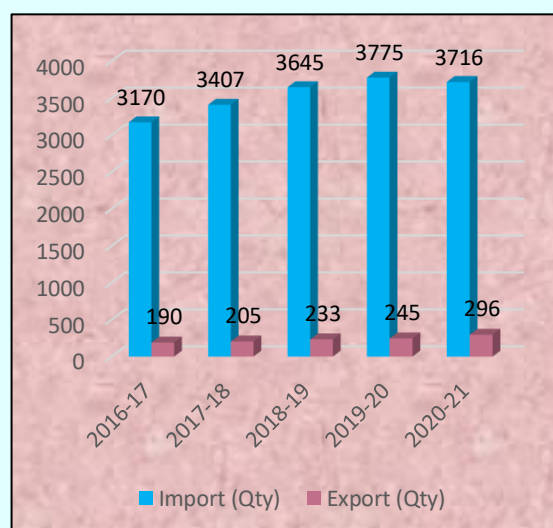
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	2529	1638
2017-18	2535	1799
2018-19	2575	1884
2019-20	2671	1847
2020-21	2664	1906
CAGR (%)	1.3	3.9



It is observed that the installed capacity and production of Organic Chemicals showed increasing trend during 2016-17 to 2020-21. Also, the actual production was always lower than the installed capacity during the period.

Quantity Imported-Quantity Exported of Organic Chemicals

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	3170	190
2017-18	3407	205
2018-19	3645	233
2019-20	3775	245
2020-21	3716	296
CAGR (%)	4.0	11.7

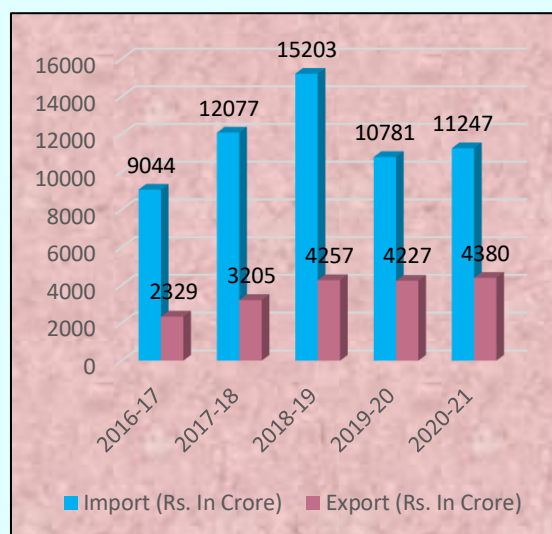


It is observed that the Exports of Organic Chemicals were very low as compared to its Import during the period 2016-17 to 2020-21.

Organic Chemicals

Value of Import- Value of Export

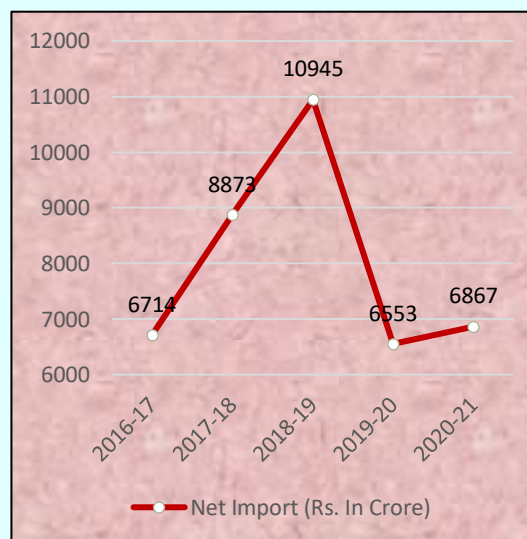
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	9044	2329
2017-18	12077	3205
2018-19	15203	4257
2019-20	10781	4227
2020-21	11247	4380
CAGR (%)	5.6	17.1



It is evident that the values of Export of Organic Chemicals were significantly lower than the values of Import during 2016-17 to 2020-21. During the period, the maximum Export was seen in 2020-21.

Net Import of Organic Chemicals

Year	Net Import (Rs. In Crore)
2016-17	6714
2017-18	8873
2018-19	10945
2019-20	6553
2020-21	6867
CAGR (%)	0.6

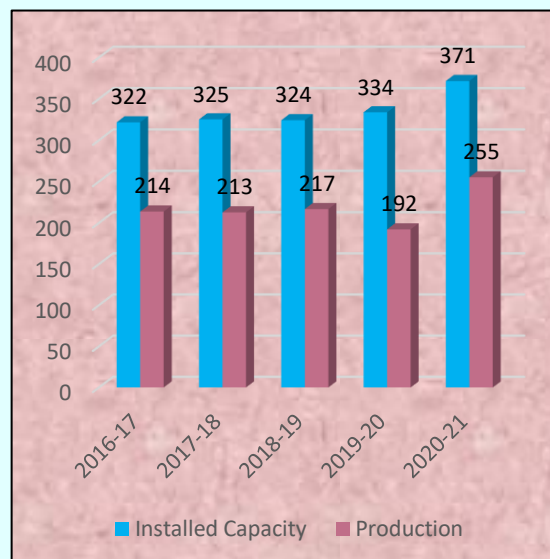


The net Imports of Organic Chemicals were increasing during 2016-17 to 2018-19, but it was significantly declined in 2019-20 and 2020-21.

Pesticides

Installed Capacity-Production (Technical Grades)

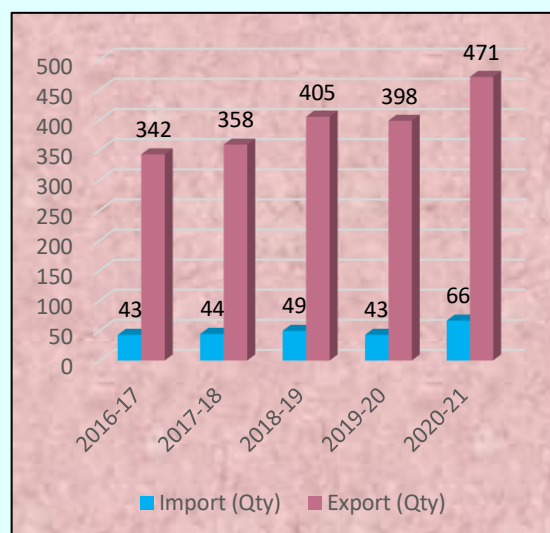
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	322	214
2017-18	325	213
2018-19	324	217
2019-20	334	192
2020-21	371	255
CAGR (%)	3.7	4.5



It is observed that the production of Pesticides was almost stagnant during 2016-17 to 2018-19 and decreased in 2019-20. Further, it was increased in 2020-21. Moreover, the actual production was always lower than the installed capacity during 2016-17 to 2020-21.

Quantity Imported-Quantity Exported (Technical Grades & Formulations) of Pesticides

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	43	342
2017-18	44	358
2018-19	49	405
2019-20	43	398
2020-21	66	471
CAGR (%)	11.7	8.3

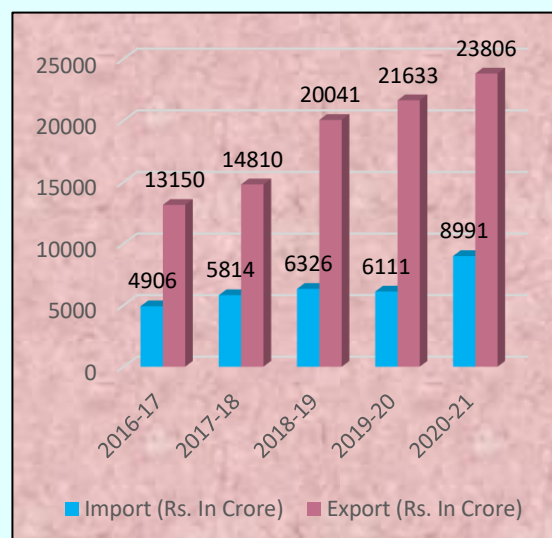


The quantity of Export of Pesticides was significantly large as compared to its Import during the period 2016-17 to 2020-21.

Pesticides

Value of Import- Value of Export (Technical Grades & Formulations)

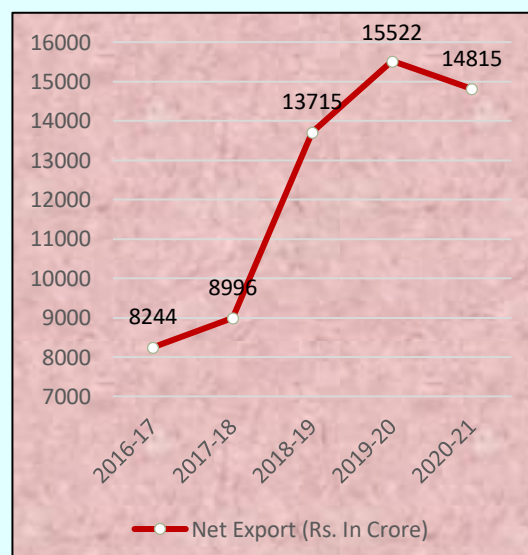
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	4906	13150
2017-18	5814	14810
2018-19	6326	20041
2019-20	6111	21633
2020-21	8991	23806
CAGR (%)	16.4	16.0



It is evident that the values of Export of Pesticides (Technical Grades & Formulations) were significantly higher than the values of Import during 2016-17 to 2020-21. Further, significant increasing trend of Exports was evident during the same period.

Net Export (Technical Grades & Formulations) of Pesticides

Year	Net Export (Rs. In Crore)
2016-17	8244
2017-18	8996
2018-19	13715
2019-20	15522
2020-21	14815
CAGR (%)	15.8

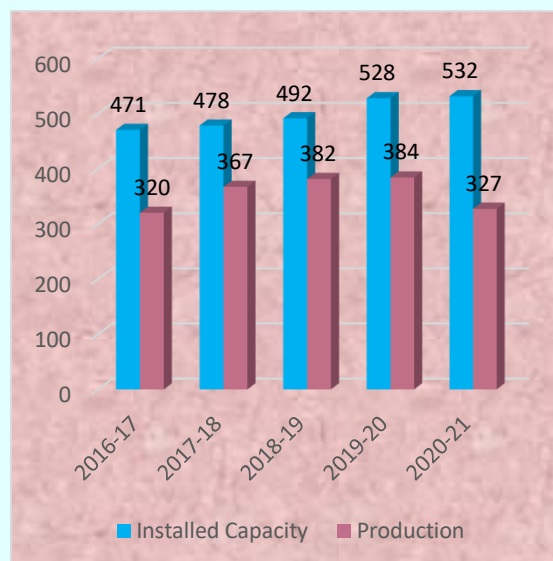


The net Exports of Pesticides (Technical Grades & Formulations) were significantly increased from 2016-17 to 2019-20. However, it was marginally decreased in 2020-21.

Dyes and Pigments

Installed Capacity-Production

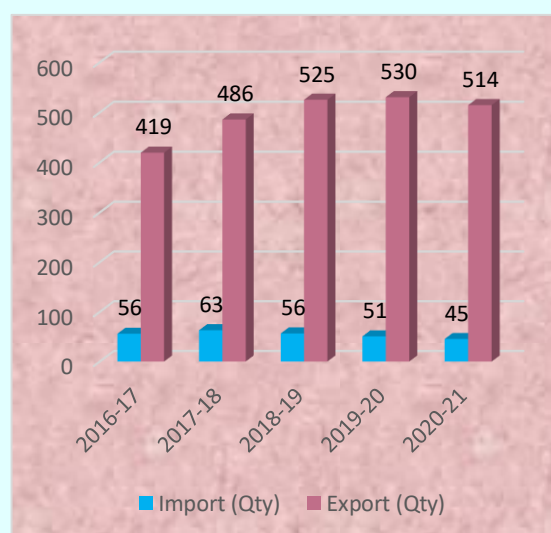
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	471	320
2017-18	478	367
2018-19	492	382
2019-20	528	384
2020-21	532	327
CAGR (%)	3.1	0.6



It is observed that the installed capacity of Dyes and Pigments enhanced during 2016-17 to 2020-21. However, the production increased from 2016-17 to 2019-20 and further decreased in 2020-21.

Quantity Imported-Quantity Exported of Dyes and Pigments

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	56	419
2017-18	63	486
2018-19	56	525
2019-20	51	530
2020-21	45	514
CAGR (%)	-5.1	5.2

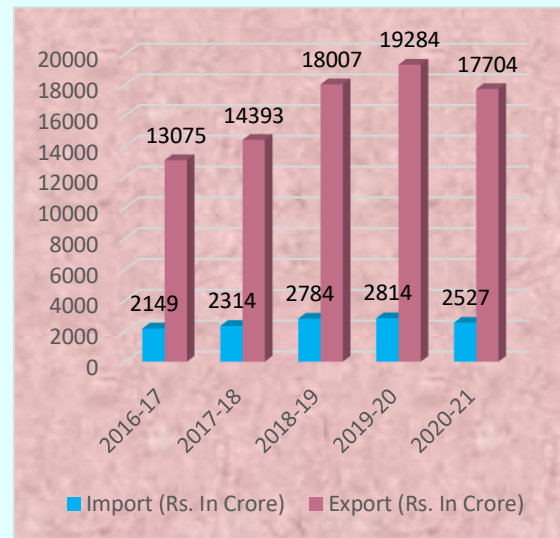


The Export of Pesticides (Technical Grades & Formulations) was significantly higher as compared to its Import during the period 2016-17 to 2020-21.

Dyes and Pigments

Value of Import- Value of Export

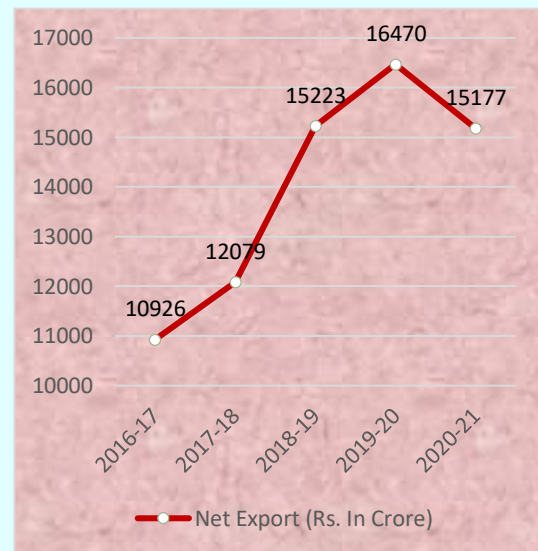
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	2149	13075
2017-18	2314	14393
2018-19	2784	18007
2019-20	2814	19284
2020-21	2527	17704
CAGR (%)	4.1	7.9



It is evident that the values of Export of Dyes and Pigments were significantly higher than the values of Import during 2016-17 to 2020-21. During the same, the maximum Export was seen during the year 2019-20.

Net Export of Dyes and Pigments

Year	Net Export (Rs. In Crore)
2016-17	10926
2017-18	12079
2018-19	15223
2019-20	16470
2020-21	15177
CAGR (%)	8.6

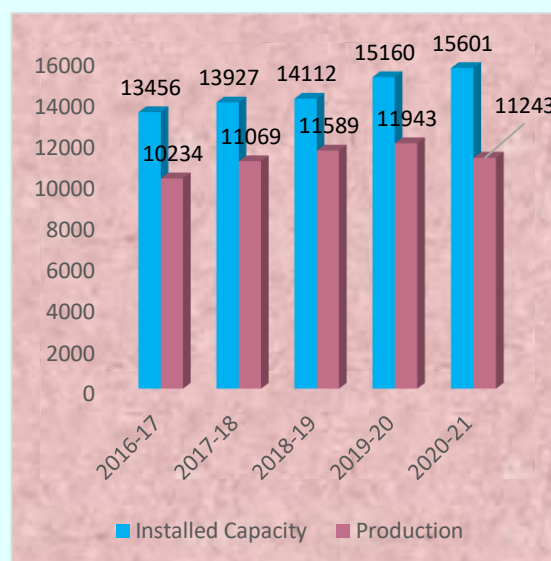


The Net Exports of Dyes and Pigments were significantly increased from 2016-17 to 2019-20, but it was marginally abated in 2020-21.

Total Major Chemicals

Installed Capacity-Production

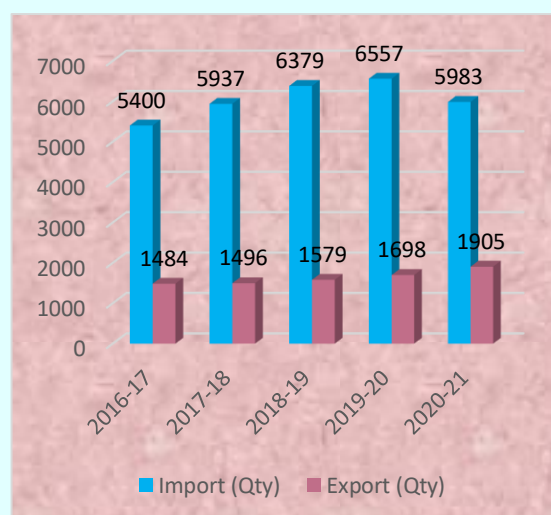
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	13456	10234
2017-18	13927	11069
2018-19	14112	11589
2019-20	15160	11943
2020-21	15601	11243
CAGR (%)	3.8	2.4



It is observed that the installed capacity and production of Total Major Chemicals showed an increasing trend during 2016-17 to 2020-21 except the marginally declined in its production during 2020-2021. Also the actual production was always lower than the installed capacity during 2016-17 to 2020-21.

Quantity Imported-Quantity Exported of Total Major Chemicals

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	5400	1484
2017-18	5937	1496
2018-19	6379	1579
2019-20	6557	1698
2020-21	5983	1905
CAGR (%)	2.6	6.4

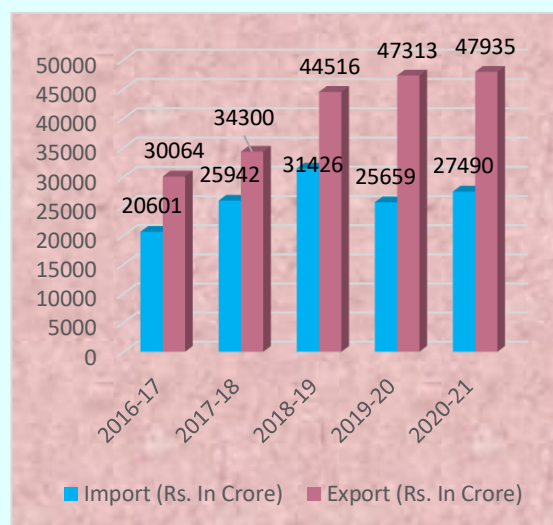


Import and Export in quantity terms of Total Major Chemicals showed an increasing trend during 2016-17 to 2020-21 except the marginally declined in its Import during 2020-21. Also, the Import quantities were around four times larger than its Export quantities during the period.

Total Major Chemicals

Value of Import- Value of Export

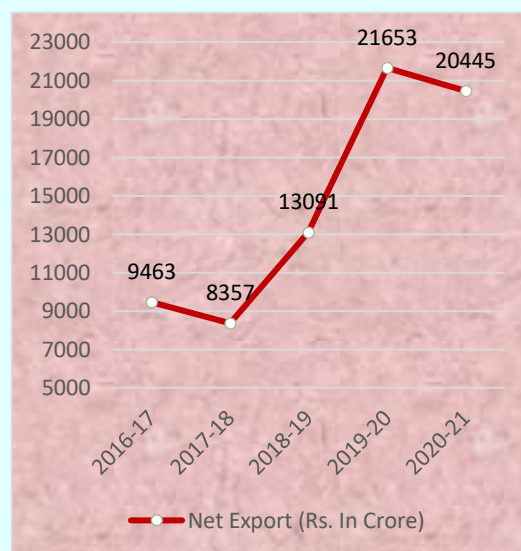
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	20601	30064
2017-18	25942	34300
2018-19	31426	44516
2019-20	25659	47313
2020-21	27490	47935
CAGR (%)	7.5	12.4



It is evident that the values of Export of Total Major Chemicals were significantly higher than the values of Import during 2016-17 to 2020-21. Even though, the imported quantities of Total Major Chemicals were approximately four times higher than its Export quantities.

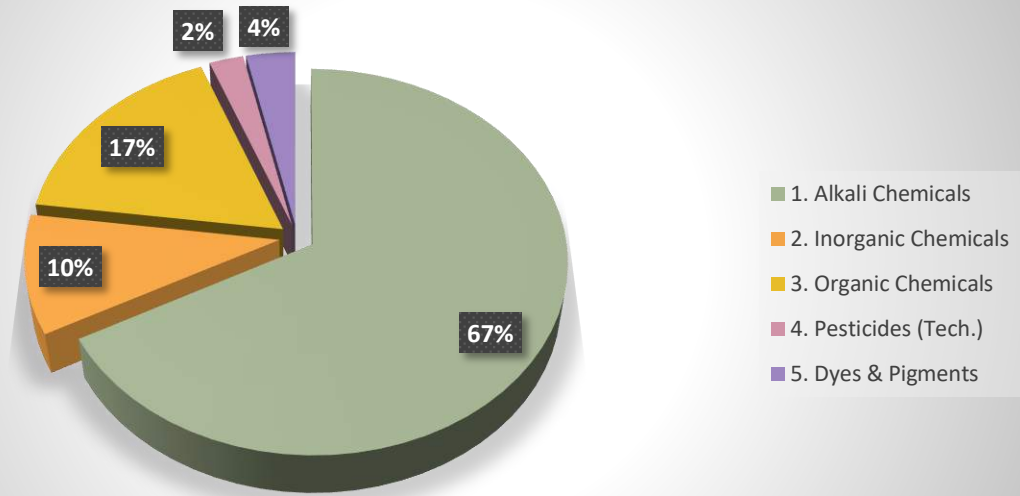
Net Export of Total Major Chemicals

Year	Net Export (Rs. In Crore)
2016-17	9463
2017-18	8357
2018-19	13091
2019-20	21653
2020-21	20445
CAGR (%)	21.2

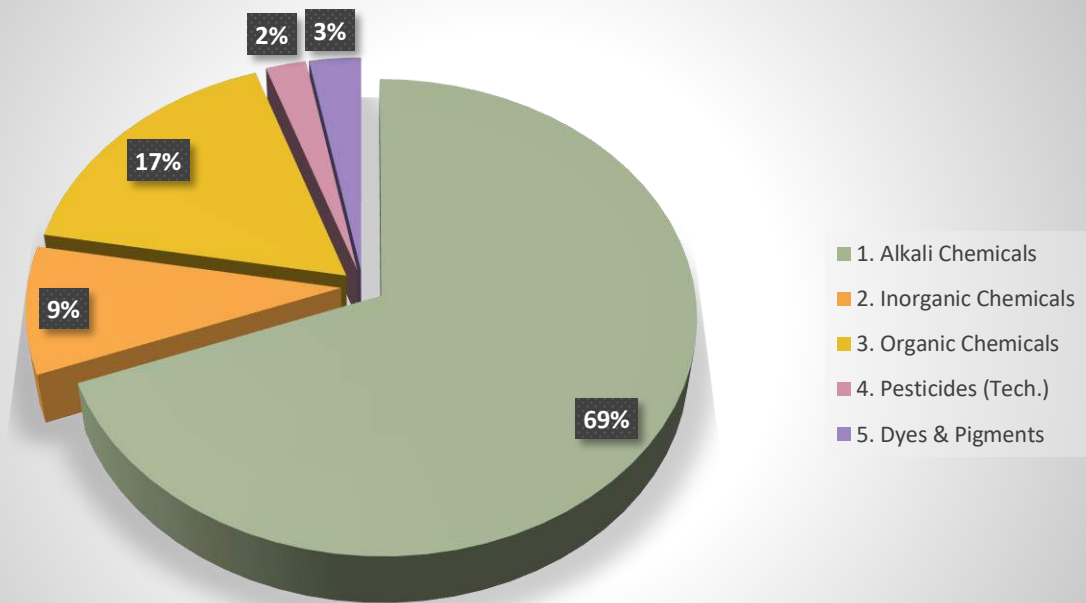


The net Exports of Total Major Chemicals were significantly increased from 2017-18 to 2019-20, but it was marginally abated in 2020-21.

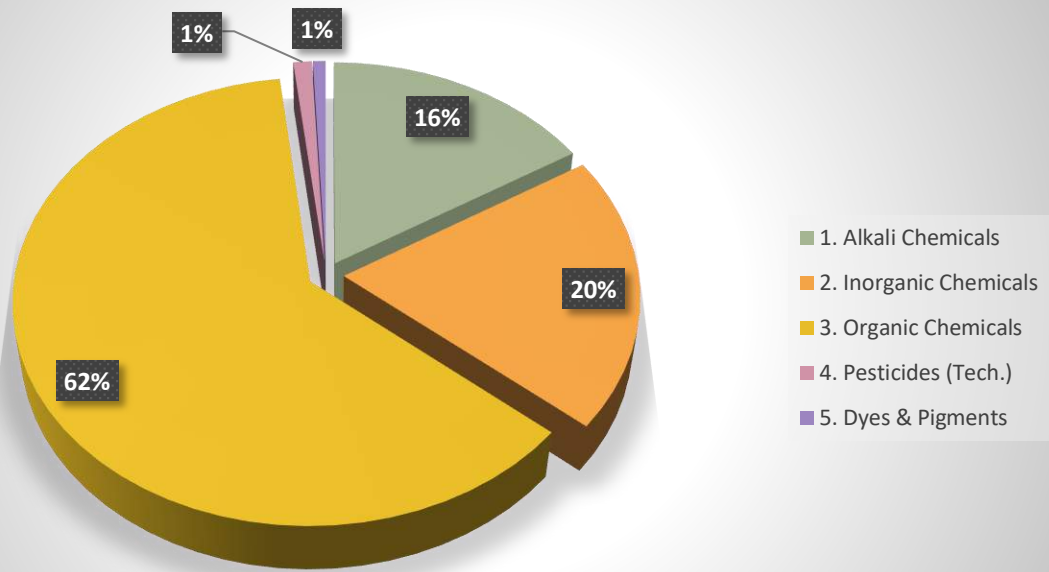
Share of different groups of Major Chemical in Installed Capacity during 2020-21



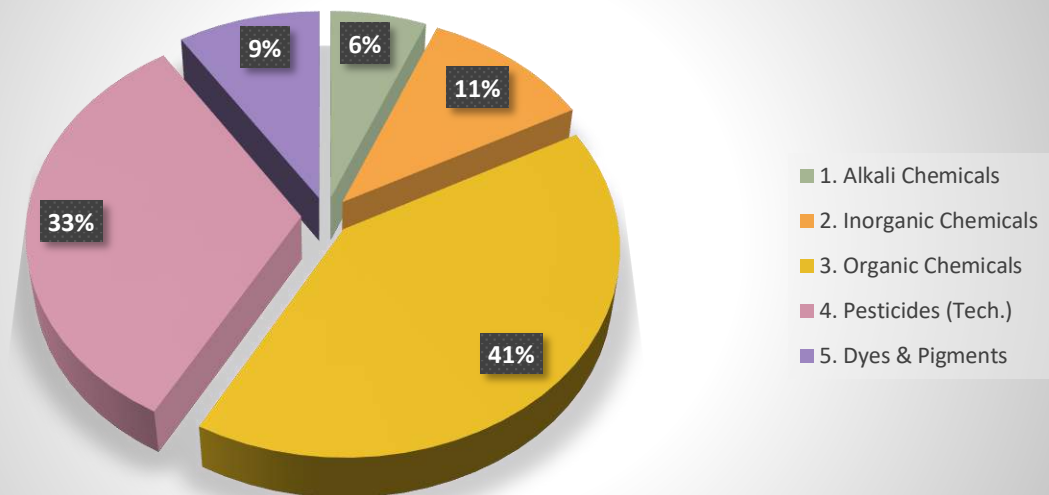
Share of different groups of Major Chemical in Production during 2020-21



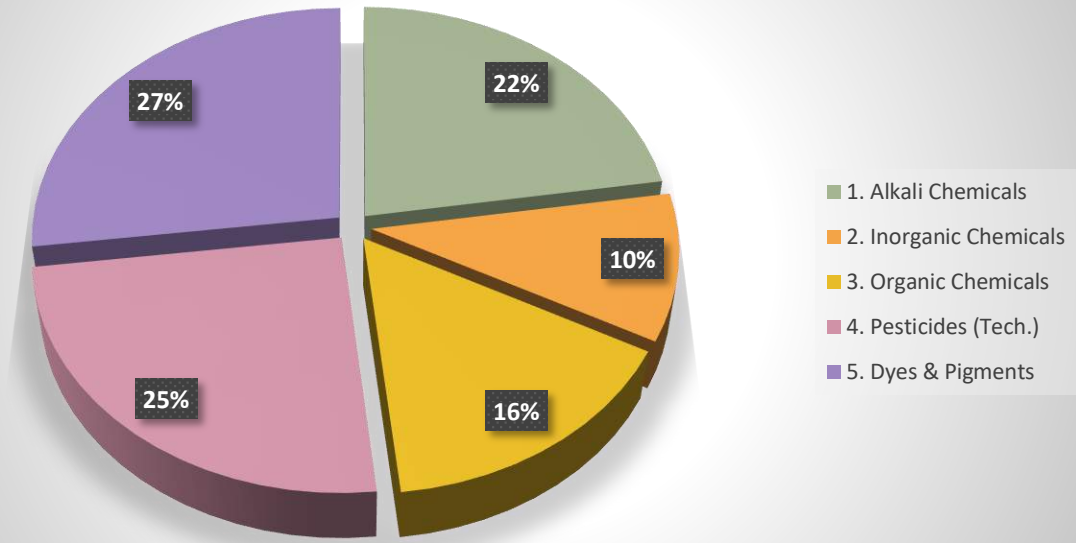
Share of different groups of Major Chemical in total Import (Qty.) during 2020-21



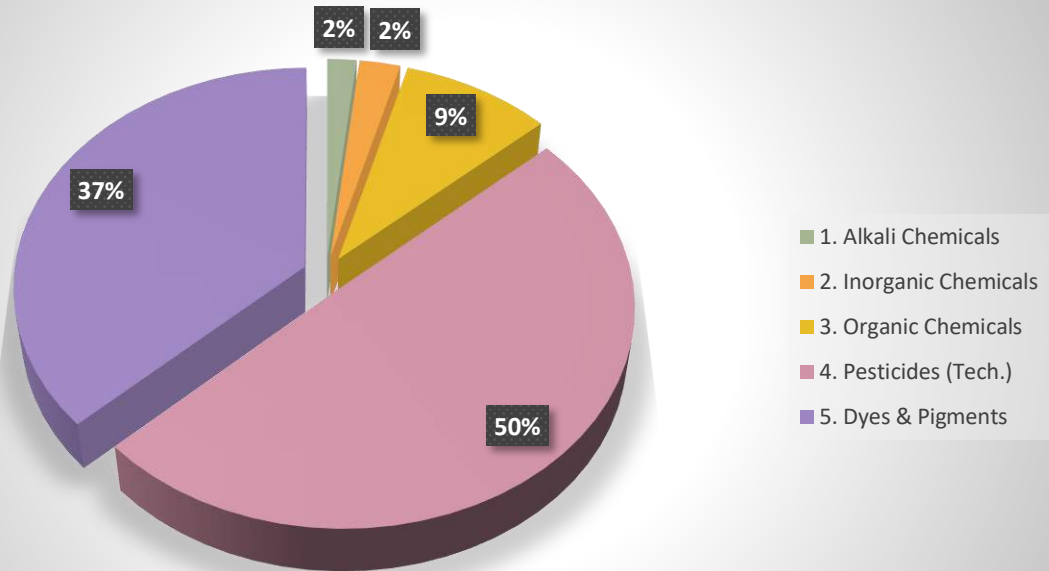
Share of different groups of Major Chemical in total Import (Value) during 2020-21



Share of different groups of Major Chemical in total Export (Qty.) during 2020-21



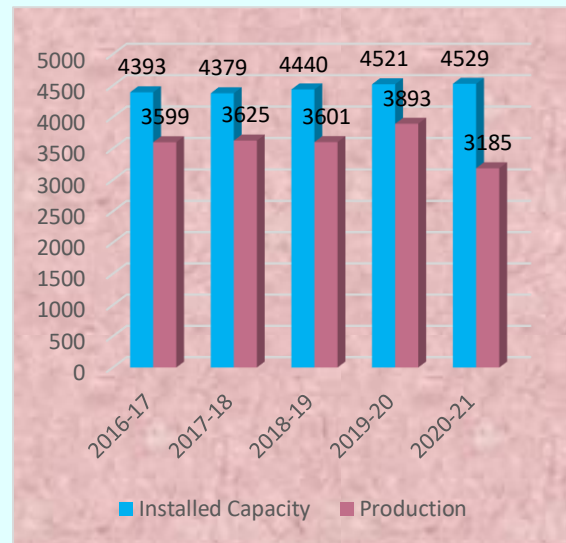
Share of different groups of Major Chemical in total Export (Value) during 2020-21



Synthetic Fibres/Yarn

Installed Capacity-Production

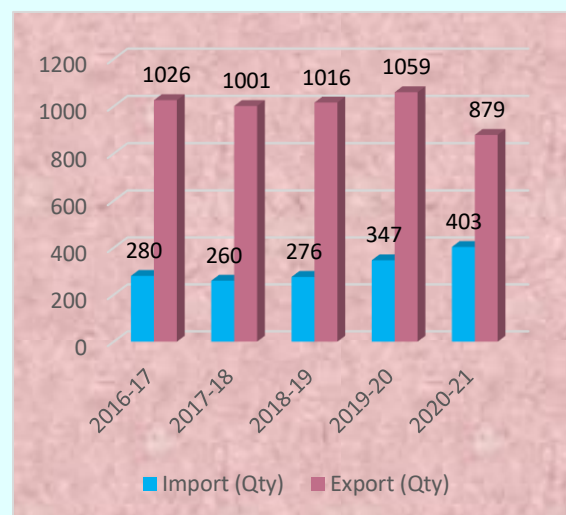
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	4393	3599
2017-18	4379	3625
2018-19	4440	3601
2019-20	4521	3893
2020-21	4529	3185
CAGR (%)	0.8	-3.0



It is observed that the installed capacity of Synthetic Fibres/Yarn increased during 2016-17 to 2020-21.

Quantity Imported-Quantity Exported of Synthetic Fibres/Yarn

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	280	1026
2017-18	260	1001
2018-19	276	1016
2019-20	347	1059
2020-21	403	879
CAGR (%)	9.6	-3.8

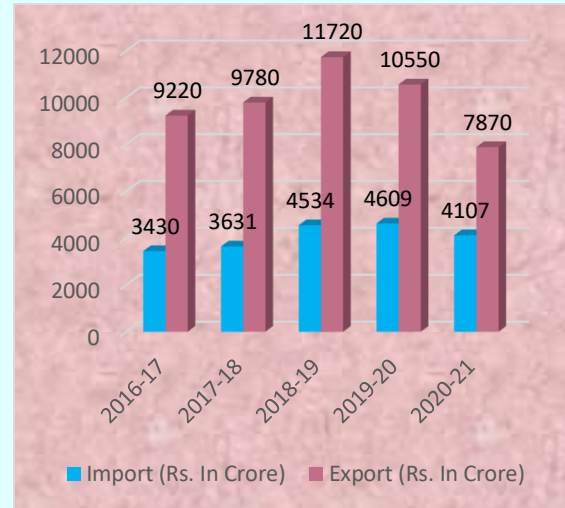


The Export quantities of Synthetic Fibres/Yarn were significantly higher as compared to its imported quantities during the period 2016-17 to 2020-21.

Synthetic Fibres/Yarn

Value of Import- Value of Export

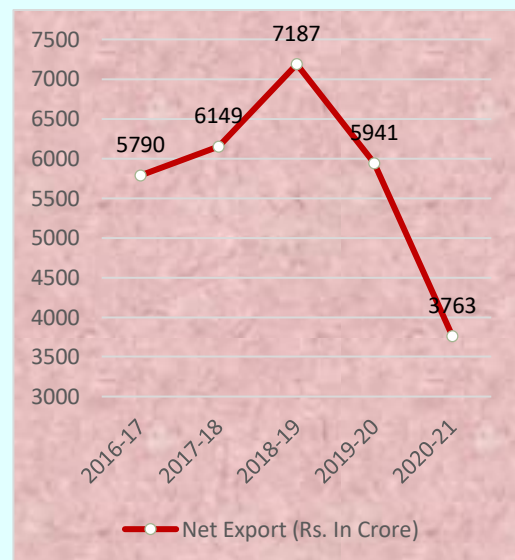
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	3430	9220
2017-18	3631	9780
2018-19	4534	11720
2019-20	4609	10550
2020-21	4107	7870
CAGR (%)	4.6	-3.9



It is evident that the values of Export of Synthetic Fibres/Yarn were significantly higher than the values of Import during 2016-17 to 2020-21. During the same, the maximum Export was seen in the year 2018-19.

Net Export of Synthetic Fibres/Yarn

Year	Net Export (Rs. In Crore)
2016-17	5790
2017-18	6149
2018-19	7187
2019-20	5941
2020-21	3763
CAGR (%)	-10.2

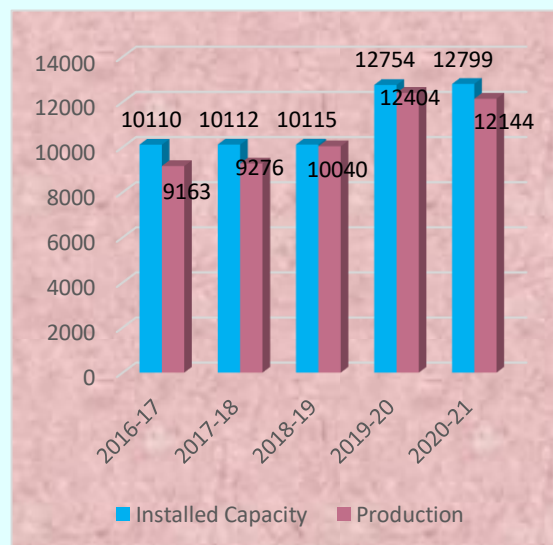


India is a net exporter of Synthetic Fibres/Yarn. Its net Export was Rs.7,187 crore in 2018-19, which was declined to Rs.5,941 crore in 2019-20 and further declined to Rs.3,763 in 2020-21.

Polymers

Installed Capacity-Production

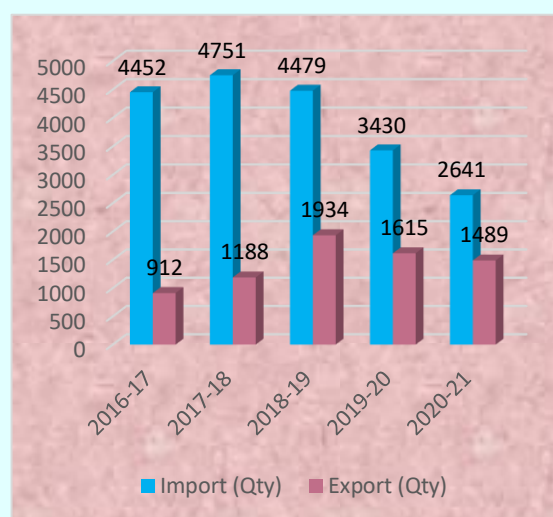
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	10110	9163
2017-18	10112	9276
2018-19	10115	10040
2019-20	12754	12404
2020-21	12799	12144
CAGR (%)	6.1	7.3



It is observed that installed capacity and production of Polymers shown increasing with the CAGR of 6.1% and 7.3% respectively during 2016-17 to 2020-21.

Quantity Imported-Quantity Exported of Polymers

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	4452	912
2017-18	4751	1188
2018-19	4479	1934
2019-20	3430	1615
2020-21	2641	1489
CAGR (%)	-12.2	13.0

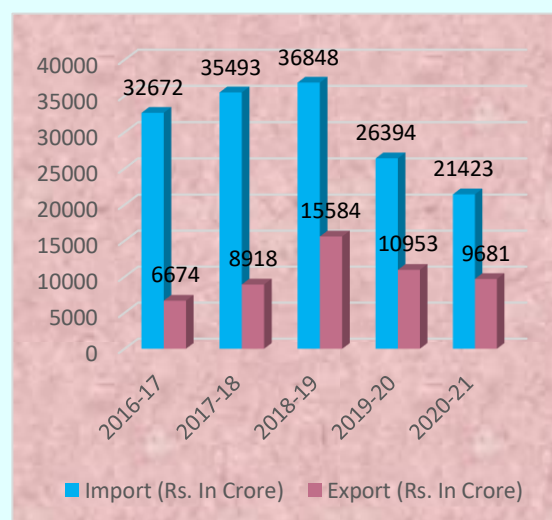


The imported quantities of Polymers shown decreasing trend and its Export increased with CAGR of 13.0% during the period 2016-17 to 2020-21.

Polymers

Value of Import- Value of Export

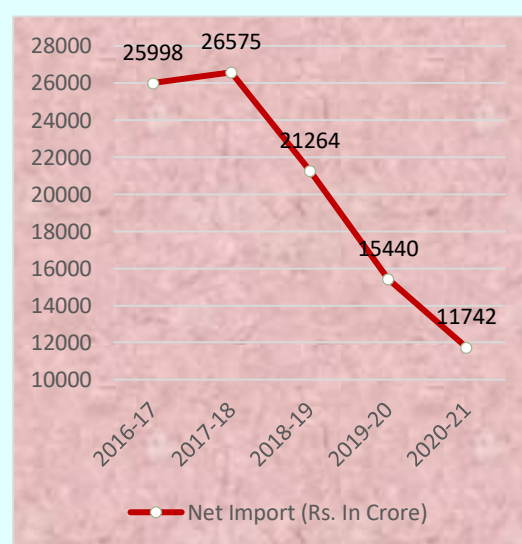
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	32672	6674
2017-18	35493	8918
2018-19	36848	15584
2019-20	26394	10953
2020-21	21423	9681
CAGR (%)	-10.0	9.7



Even though the Import values of Polymers always was being higher than its Export values, the gap between them decreased significantly from 2016-17 to 2020-21.

Net Import of Polymers

Year	Net Import (Rs. In Crore)
2016-17	25998
2017-18	26575
2018-19	21264
2019-20	15440
2020-21	11742
CAGR (%)	-18.0

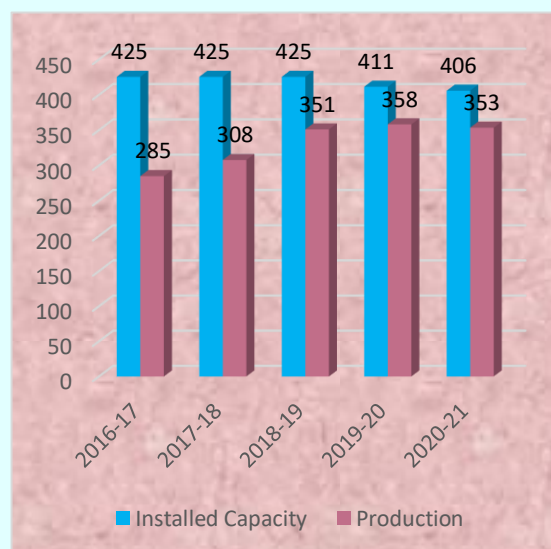


India is a net importer of Polymers. However, the trend of net Import was significantly decreased during the period 2016-17 to 2020-21.

Synthetic Rubber

Installed Capacity-Production

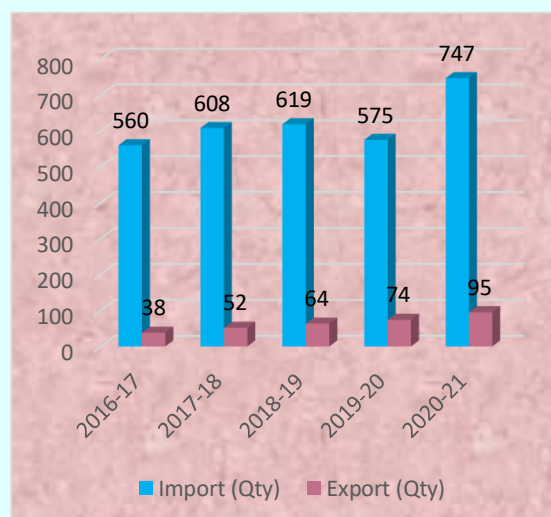
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	425	285
2017-18	425	308
2018-19	425	351
2019-20	411	358
2020-21	406	353
CAGR (%)	-1.2	5.5



Although the installed capacity of Synthetic Rubber was decreased with CAGR of 1.2%, its production was increased with the CAGR of 5.5%.

Quantity Imported-Quantity Exported of Synthetic Rubber

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	560	38
2017-18	608	52
2018-19	619	64
2019-20	575	74
2020-21	747	95
CAGR (%)	7.5	25.6

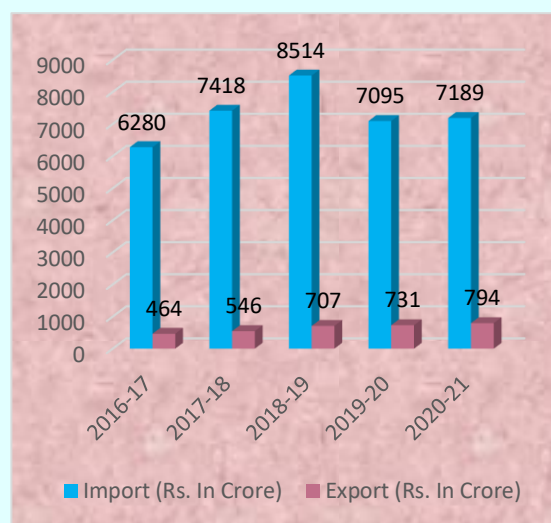


The imported quantities of Synthetic Rubber were significantly higher than its Export during the period 2016-17 to 2020-21.

Synthetic Rubber

Value of Import- Value of Export

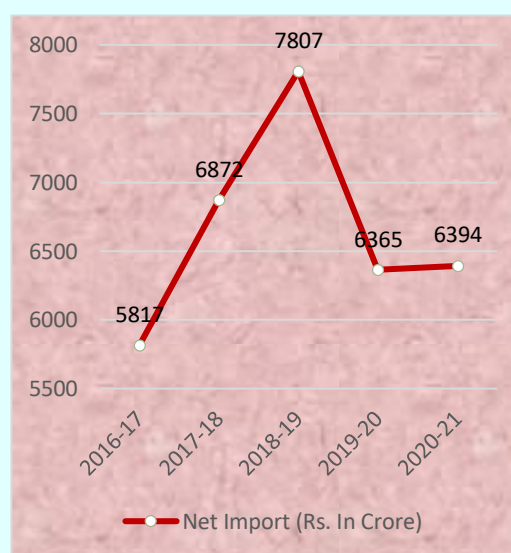
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	6280	464
2017-18	7418	546
2018-19	8514	707
2019-20	7095	731
2020-21	7189	794
CAGR (%)	3.4	14.4



The Import values of Synthetic Rubber were significantly higher than its Export during the period 2016-17 to 2020-21.

Net Import of Synthetic Rubber

Year	Net Import (Rs. In Crore)
2016-17	5817
2017-18	6872
2018-19	7807
2019-20	6365
2020-21	6394
CAGR (%)	2.4

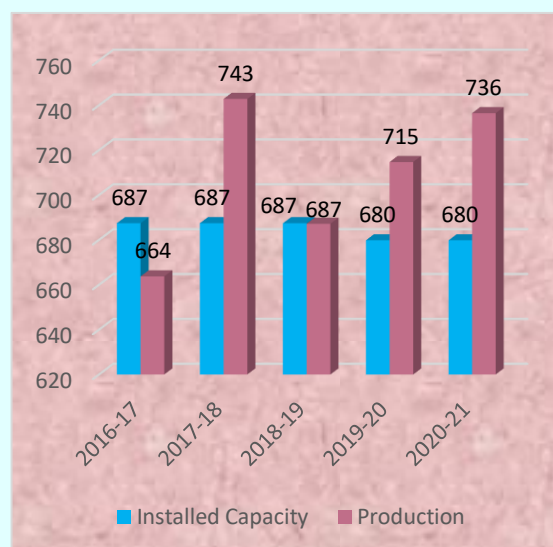


The net Imports of Synthetic Rubber increased from 2016-17 to 2018-19, but it was significantly declined again in 2019-20.

Synthetic Detergent Intermediates

Installed Capacity-Production

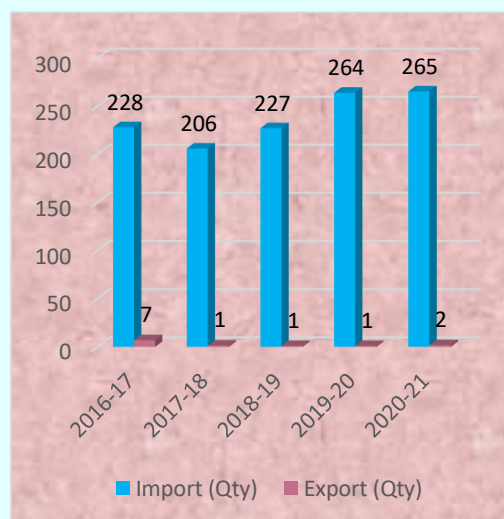
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	687	664
2017-18	687	743
2018-19	687	687
2019-20	680	715
2020-21	680	736
CAGR (%)	-0.3	2.6



The average production of Synthetic Detergent Intermediates was more than its installed capacity during 2016-17 to 2020-21.

Quantity Imported-Quantity Exported of Synthetic Detergent Intermediates

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	228	7
2017-18	206	1
2018-19	227	1
2019-20	264	1
2020-21	265	2
CAGR (%)	3.8	-28.2

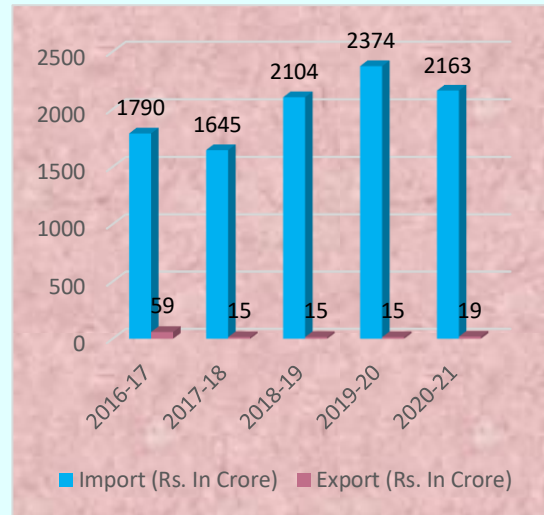


The imported quantities of Synthetic Detergent Intermediates was significantly higher than its Export during the period 2016-17 to 2020-21.

Synthetic Detergent Intermediates

Value of Import- Value of Export

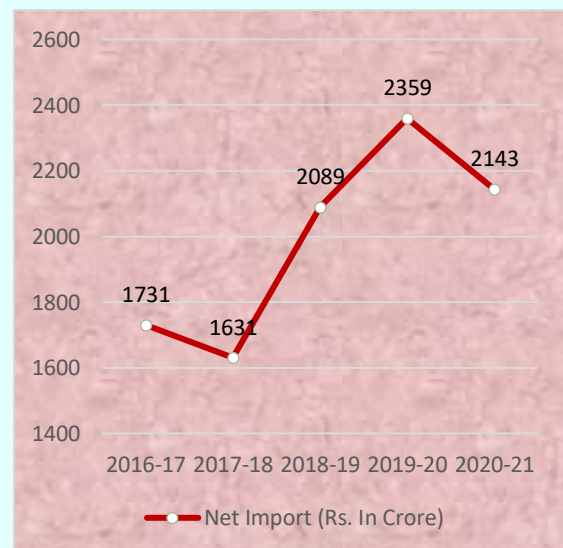
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	1790	59
2017-18	1645	15
2018-19	2104	15
2019-20	2374	15
2020-21	2163	19
CAGR (%)	4.8	-24.4



The Import values of Synthetic Detergent Intermediates were significantly higher than its Export during the period 2016-17 to 2020-21.

Net Import of Synthetic Detergent Intermediates

Year	Net Import (Rs. In Crore)
2016-17	1731
2017-18	1631
2018-19	2089
2019-20	2359
2020-21	2143
CAGR (%)	5.5



The net Imports of Synthetic Detergent Intermediates increased with CAGR of 5.5% during 2016-17 to 2018-19.

Performance Plastic

Installed Capacity-Production

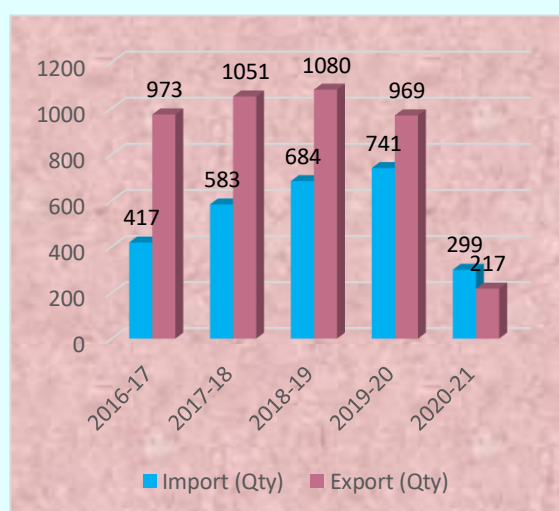
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	2945	1799
2017-18	2947	1719
2018-19	2963	1589
2019-20	2919	1672
2020-21	3046	1520
CAGR (%)	0.9	-4.1



It is observed that installed capacity of Performance Plastic increased gradually and its production decreased with CAGR of 4.1% during the period 2016-17 to 2020-21.

Quantity Imported-Quantity Exported of Performance Plastic

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	417	973
2017-18	583	1051
2018-19	684	1080
2019-20	741	969
2020-21	299	217
CAGR (%)	-8.0	-31.3

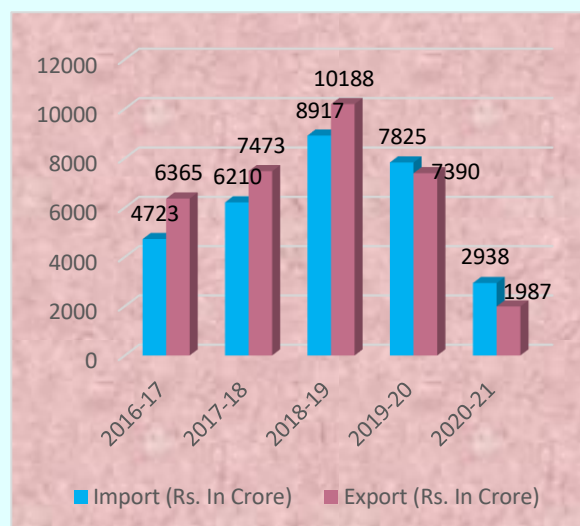


The exported quantities of Performance Plastic were higher than its Import during the period 2016-17 to 2019-20. However, the Export quantity was lower than Import in the year 2020-21.

Performance Plastic

Value of Import- Value of Export

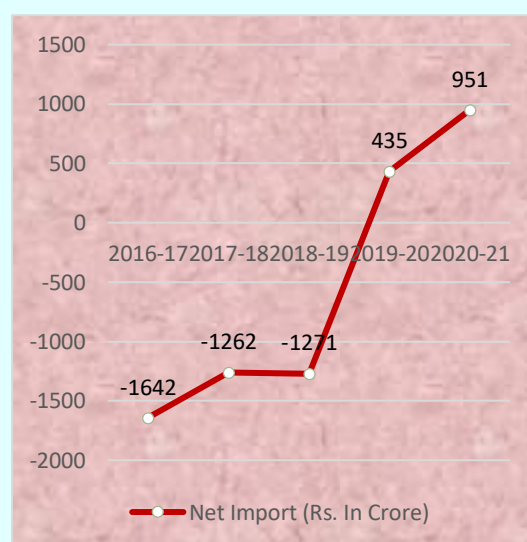
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	4723	6365
2017-18	6210	7473
2018-19	8917	10188
2019-20	7825	7390
2020-21	2938	1987
CAGR (%)	-11.2	-25.2



The import and Export values of Performance Plastic were significantly increased during the year 2016-17 to 2018-19. Whereas, they were significantly further decreased in the years 2019-20 and 2020-21.

Net Import of Performance Plastic

Year	Net Import (Rs. In Crore)
2016-17	-1642
2017-18	-1262
2018-19	-1271
2019-20	435
2020-21	951

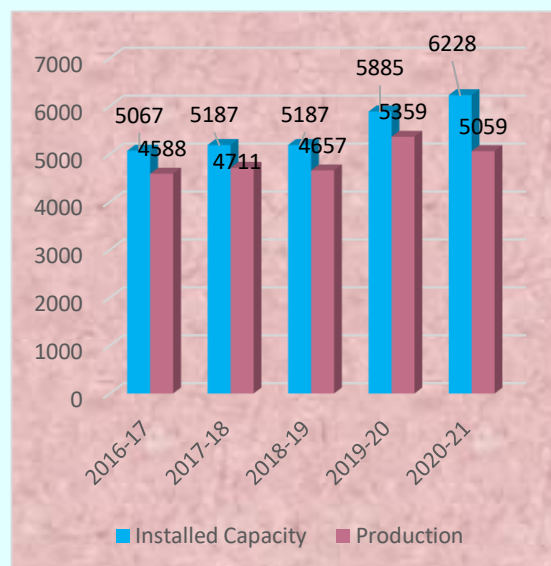


It is observed that India was net exporter of Performance Plastic during 2016-17 to 2018-19 and becomes net importer during 2019-20 and 2020-21.

Fibre Intermediates

Installed Capacity-Production

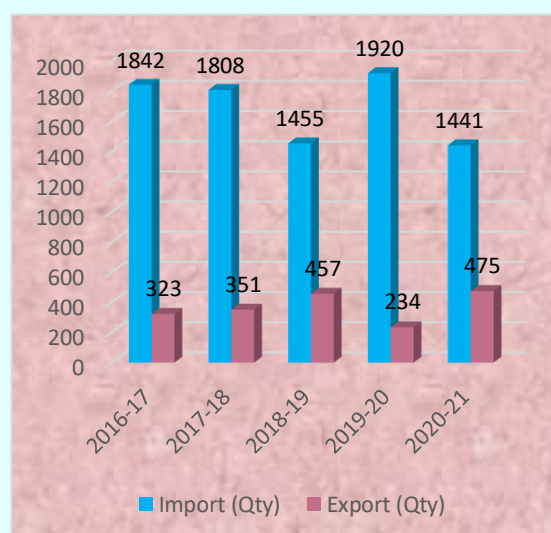
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	5067	4588
2017-18	5187	4711
2018-19	5187	4657
2019-20	5885	5359
2020-21	6228	5059
CAGR (%)	5.3	2.5



The installed capacity and production of Fibre Intermediates was increased with CAGR of 5.3% and 2.5% respectively during the period 2016-17 to 2020-21.

Quantity Imported-Quantity Exported of Fibre Intermediates

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	1842	323
2017-18	1808	351
2018-19	1455	457
2019-20	1920	234
2020-21	1441	475
CAGR (%)	-6.0	10.1

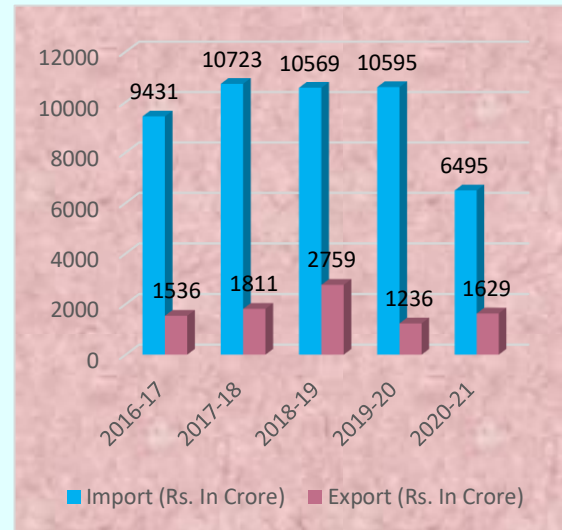


The Import quantities of Fibre Intermediates were significantly higher than its Export during the period 2016-17 to 2020-21. However, the Import was decreased with CGAR of 6.0% and Export was increased with CGAR of 10.1% during 2016-17 to 2020-21.

Fibre Intermediates

Value of Import- Value of Export

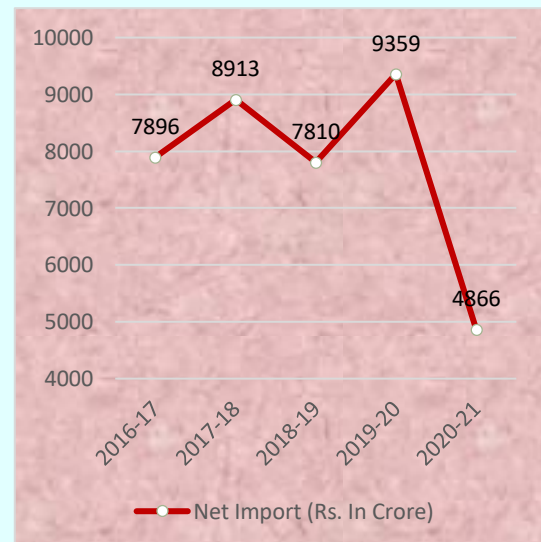
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	9431	1536
2017-18	10723	1811
2018-19	10569	2759
2019-20	10595	1236
2020-21	6495	1629
CAGR (%)	-8.9	1.5



In the Import value of Fibre Intermediates no specific trend was seen during the year 2016-17 to 2018-19. Whereas, it was significantly decreased during 2020-21. The mix trend was seen in Export during 2016-17 to 2020-21.

Net Import of Fibre Intermediates

Year	Net Import (Rs. In Crore)
2016-17	7896
2017-18	8913
2018-19	7810
2019-20	9359
2020-21	4866
CAGR (%)	-11.4

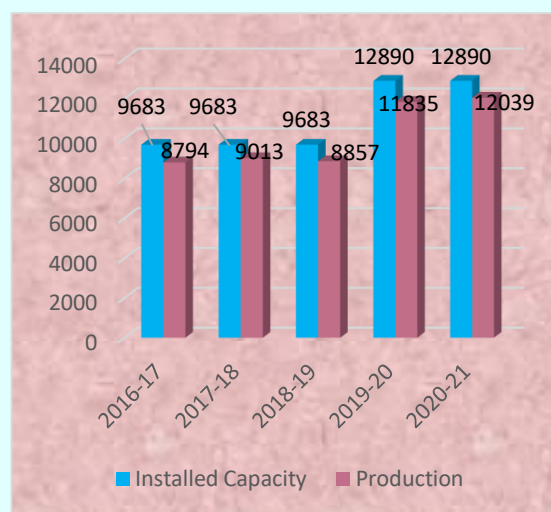


India is a net importer of Fibre Intermediates. Net Import of Fibre Intermediates was decreased significantly to Rs. 4,866 crore in 2020-21 as compare to its earlier four years which was highest to Rs. 9,359 crore in 2019-20.

Olefins

Installed Capacity-Production

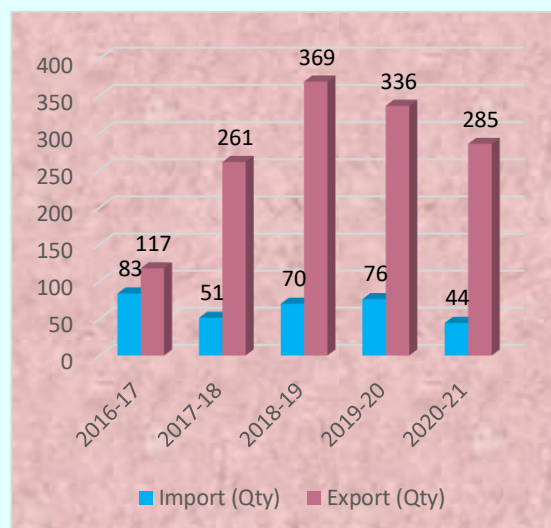
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	9683	8794
2017-18	9683	9013
2018-19	9683	8857
2019-20	12890	11835
2020-21	12890	12039
CAGR (%)	7.4	8.2



The installed capacity and production of Olefins was increased with CAGR of 7.4% and 8.2% respectively during the period 2016-17 to 2020-21.

Quantity Imported-Quantity Exported of Olefins

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	83	117
2017-18	51	261
2018-19	70	369
2019-20	76	336
2020-21	44	285
CAGR (%)	-14.8	24.8

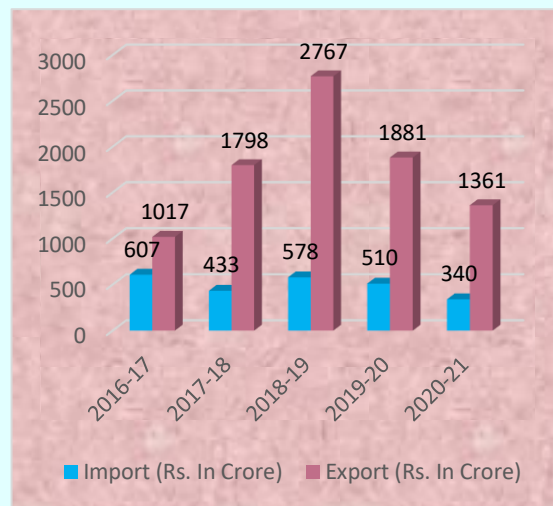


It is observed that the Export quantities of Olefins were significantly its Import during the period 2016-17 to 2020-21. The Exports were increased with a CAGR of 24.8% during 2016-17 to 2020-21.

Olefins

Value of Import- Value of Export

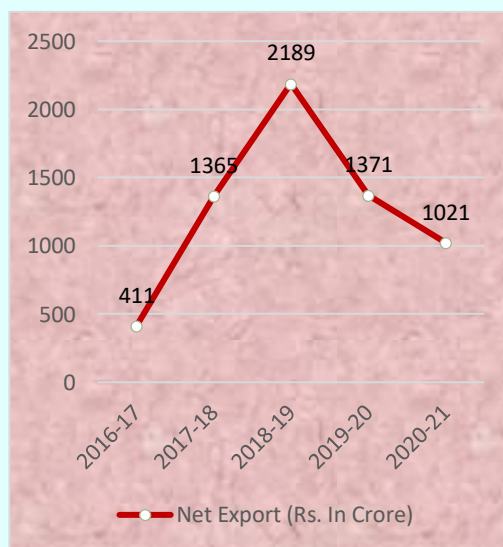
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	607	1017
2017-18	433	1798
2018-19	578	2767
2019-20	510	1881
2020-21	340	1361
CAGR (%)	-13.5	7.5



The Export values of Olefins were significantly increased during the year 2016-17 to 2018-19. Whereas, it was decreased during the period 2018-19 and further went down in 2020-21. The Export values of Olefins increased with CAGR of 7.5% during 2016-17 to 2020-21.

Net Import of Olefins

Year	Net Import (Rs. In Crore)
2016-17	411
2017-18	1365
2018-19	2189
2019-20	1371
2020-21	1021
CAGR (%)	25.6

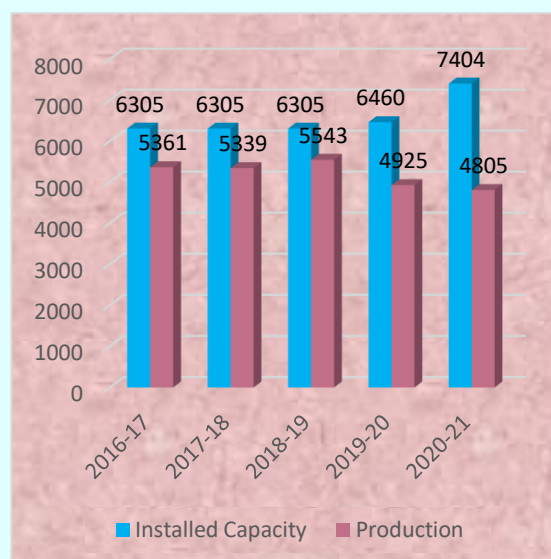


The net Exports of Olefins were significantly increased during the year 2016-17 to 2018-19. Whereas, it was decreased during the period 2018-19 to 2020-21 from this earlier years.

Aromatics

Installed Capacity-Production

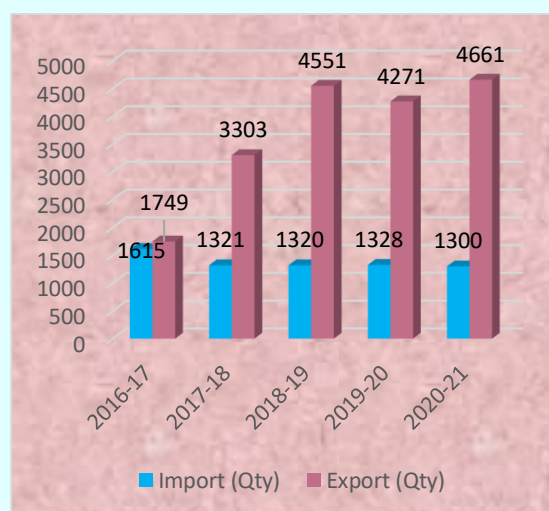
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	6305	5361
2017-18	6305	5339
2018-19	6305	5543
2019-20	6460	4925
2020-21	7404	4805
CAGR (%)	4.1	-2.7



It is observed that installed capacity and production of Aromatics had not shown any specific trend during 2016-17 to 2020-21. The actual productions were always lower than the installed capacity during the same period.

Quantity Imported-Quantity Exported of Aromatics

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	1615	1749
2017-18	1321	3303
2018-19	1320	4551
2019-20	1328	4271
2020-21	1300	4661
CAGR (%)	-5.3	27.8

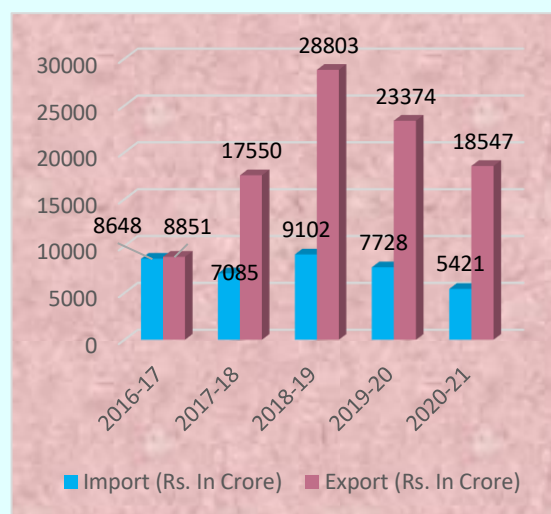


The Export quantity of Aromatics was significantly increased with CAGR of 27.8%. Whereas, its Import decreased with CAGR of 5.3% during the period 2016-17 to 2020-21.

Aromatics

Value of Import- Value of Export

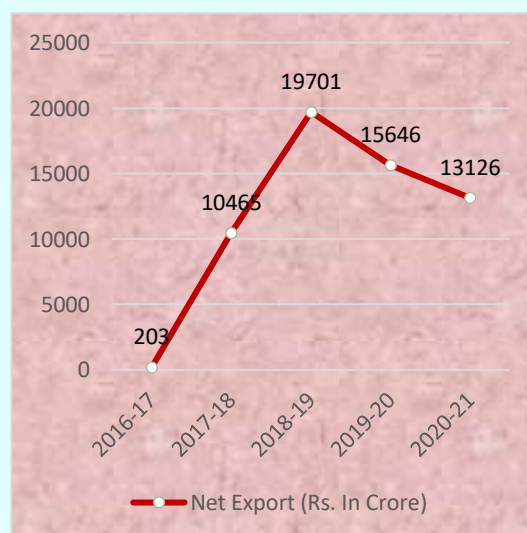
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	8648	8851
2017-18	7085	17550
2018-19	9102	28803
2019-20	7728	23374
2020-21	5421	18547
CAGR (%)	-11.0	20.3



The Export value of Aromatics was significantly increased with CAGR of 20.3%. Whereas, its Import decreased with CAGR of 11.0% during the period 2016-17 to 2020-21.

Net Import of Aromatics

Year	Net Export (Rs. In Crore)
2016-17	203
2017-18	10465
2018-19	19701
2019-20	15646
2020-21	13126
CAGR (%)	183.6

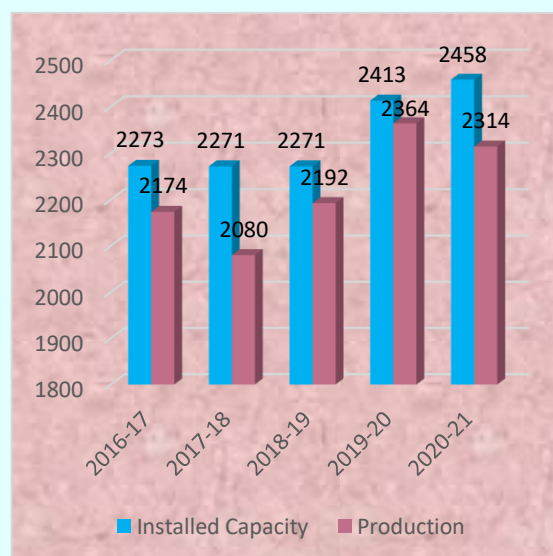


The net Export of Aromatics was significantly increased during the year 2016-17 to 2018-19. Whereas, it was decreased in 2019-20 and further went down in 2020-21.

Other Petro-based Chemicals

Installed Capacity-Production

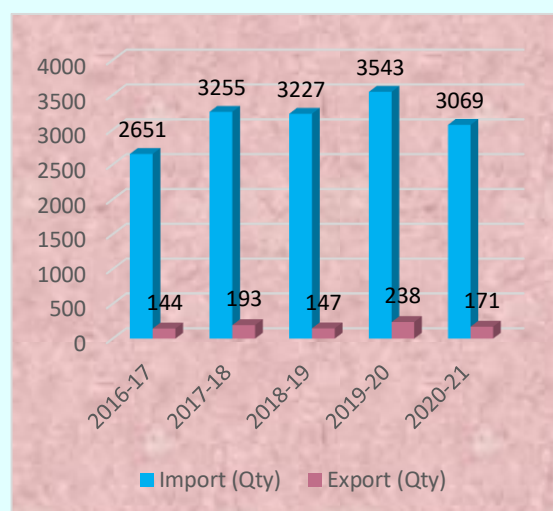
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	2273	2174
2017-18	2271	2080
2018-19	2271	2192
2019-20	2413	2364
2020-21	2458	2314
CAGR (%)	2.0	1.6



It is observed that the actual production of Other Petro-based Chemicals was always lower than the installed capacity during 2016-17 to 2020-21. The highest production was seen in the year 2019-20.

Quantity Imported-Quantity Exported of Other Petro-based Chemicals

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	2651	144
2017-18	3255	193
2018-19	3227	147
2019-20	3543	238
2020-21	3069	171
CAGR (%)	3.7	4.4

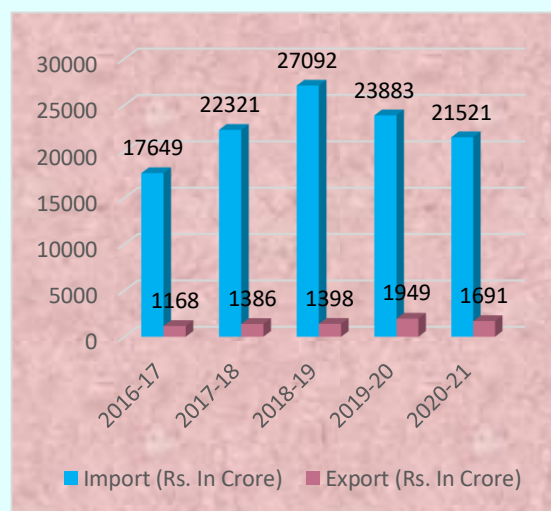


The Import quantity of Other Petro-based Chemicals was significantly higher than its Export during the period 2016-17 to 2020-21.

Other Petro-based Chemicals

Value of Import- Value of Export

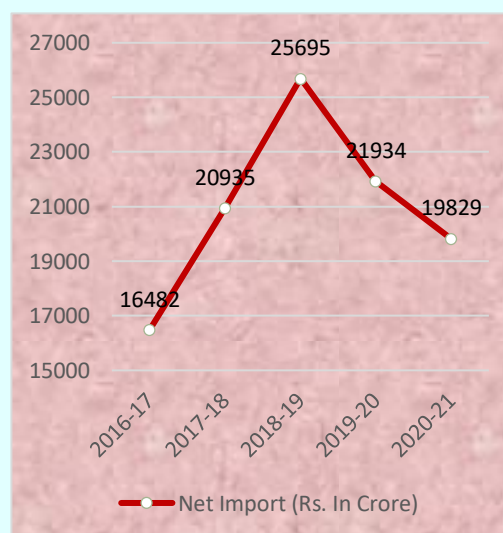
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	17649	1168
2017-18	22321	1386
2018-19	27092	1398
2019-20	23883	1949
2020-21	21521	1691
CAGR (%)	5.1	9.7



The Import values of Other Petro-based Chemicals were significantly higher than its Import during the period 2016-17 to 2020-21. The maximum Import of Other Petro-based Chemicals was seen in the year 2018-19.

Net Import of Other Petro-based Chemicals

Year	Net Import (Rs. In Crore)
2016-17	16482
2017-18	20935
2018-19	25695
2019-20	21934
2020-21	19829
CAGR (%)	4.7

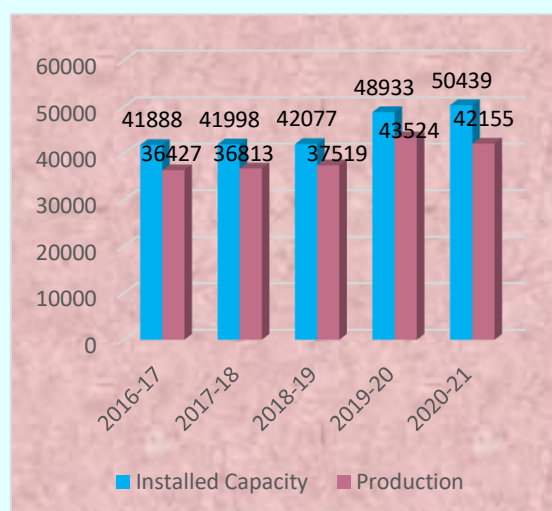


The net Import of Other Petro-based Chemicals was significantly increased during the years 2016-17 to 2018-19. Whereas, it was decreased in 2019-20 and further went down in the year 2020-21.

Total Major Petrochemical

Installed Capacity-Production

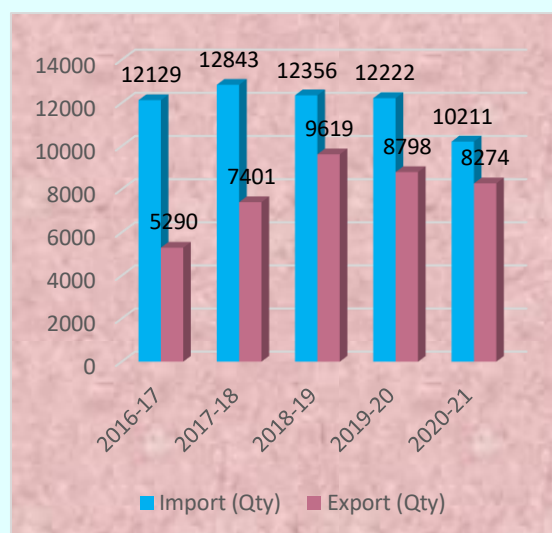
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	41888	36427
2017-18	41998	36813
2018-19	42077	37519
2019-20	48933	43524
2020-21	50439	42155
CAGR (%)	4.8	3.7



The installed capacity and production of Total Major Petrochemical were increased with CAGR of 4.8% and 3.7% respectively during the period 2016-17 to 2020-21.

Quantity Imported-Quantity Exported of Total Major Petrochemical

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	12129	5290
2017-18	12843	7401
2018-19	12356	9619
2019-20	12222	8798
2020-21	10211	8274
CAGR (%)	-4.2	11.8

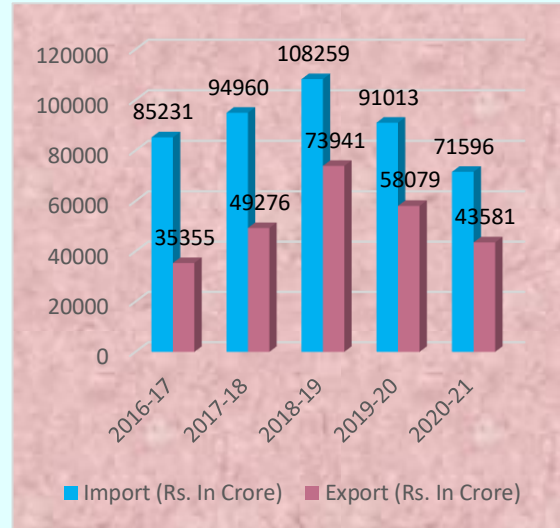


The Export quantity of Total Major Petrochemical was significantly increased with CAGR of 11.8%. Whereas, its Import decreased with CAGR of 4.2% during the period 2016-17 to 2020-21.

Total Major Petrochemical

Value of Import- Value of Export

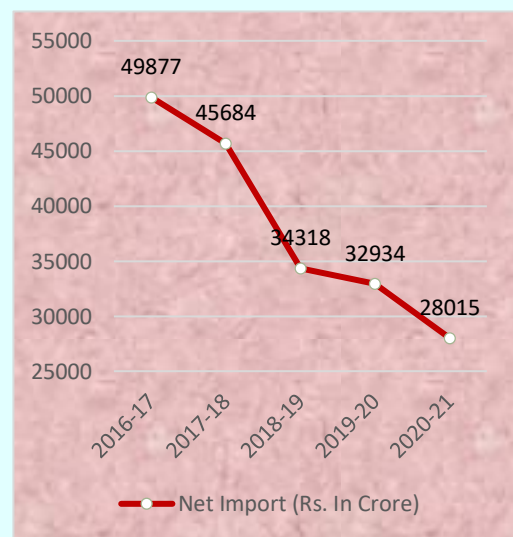
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	85231	35355
2017-18	94960	49276
2018-19	108259	73941
2019-20	91013	58079
2020-21	71596	43581
CAGR (%)	-4.3	5.4



The Import and Export values of Total Major Petrochemical were significantly increased during the period 2016-17 to 2018-19 and then both Import and Export were shown decreasing trend during 2018-19 to 2020-21.

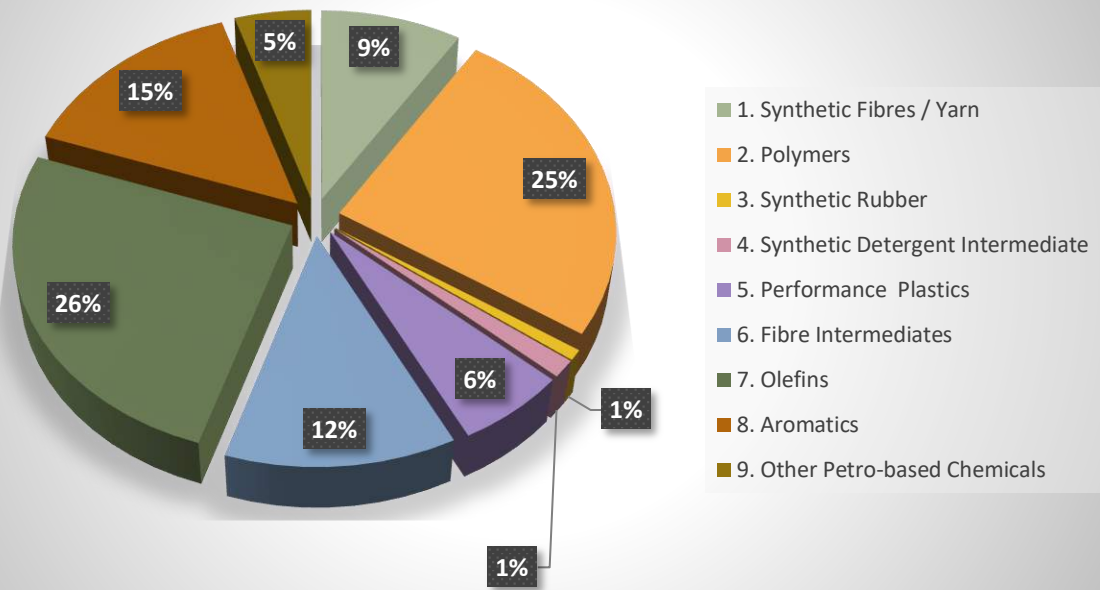
Net Import of Total Major Petrochemical

Year	Net Import (Rs. In Crore)
2016-17	49877
2017-18	45684
2018-19	34318
2019-20	32934
2020-21	28015
CAGR (%)	-13.4

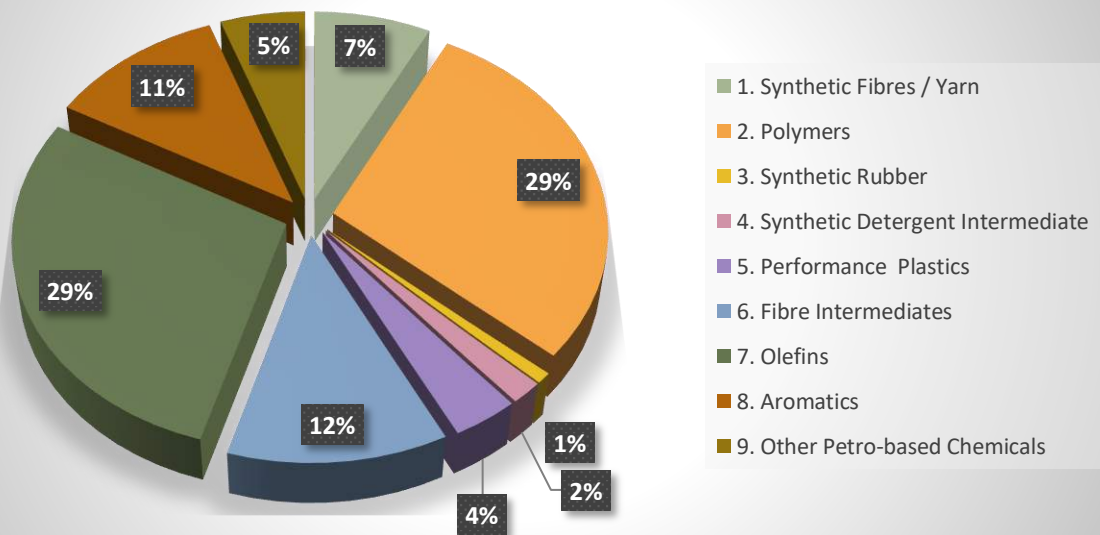


India is a net importer of Total Major Petrochemical during the period 2016-17 to 2020-21. Whereas, the Import was showing decreasing trend during the same period.

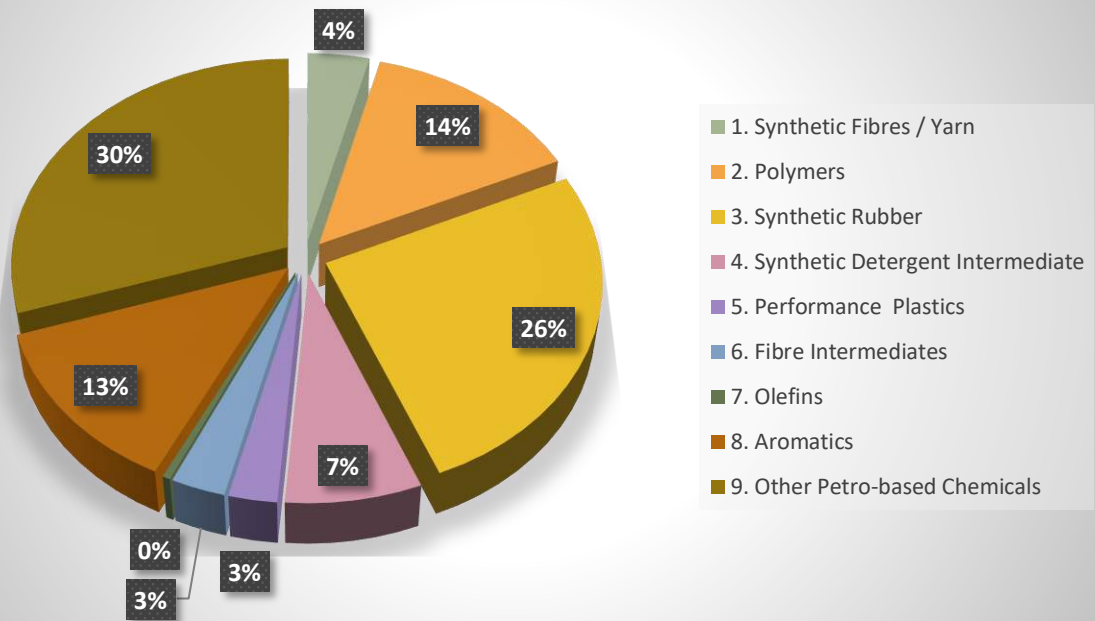
Share of different groups of Major Petrochemical in Installed Capacity during 2020-21



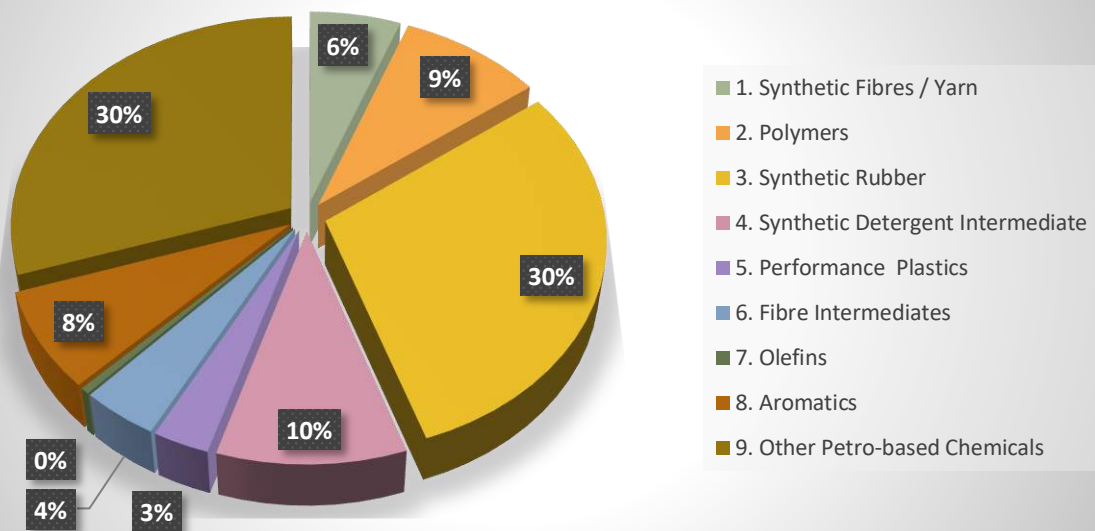
Share of different groups of Major Petrochemical in Production during 2020-21



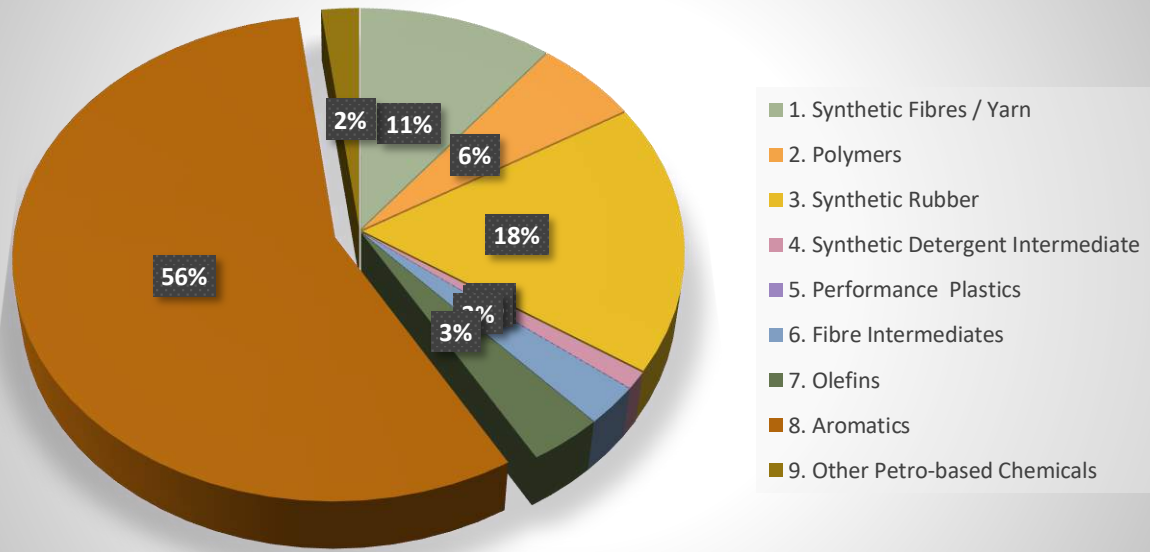
Share of different groups of Major Petrochemicals under total Import (Qty.) during 2020-21



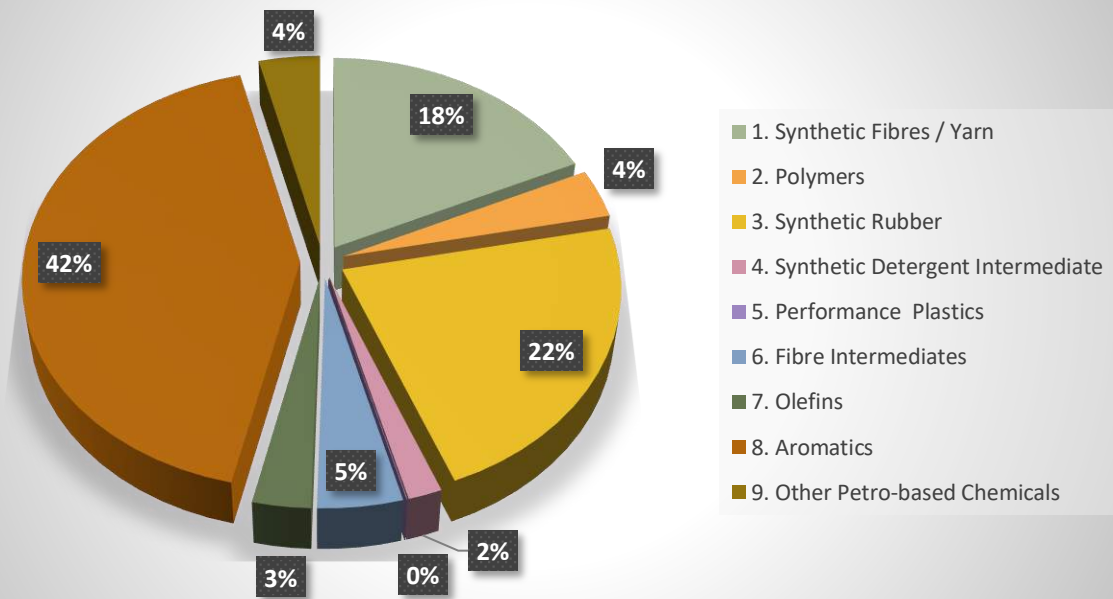
Share of different groups of Major Petrochemicals under total Import (Value) during 2020-21



Share of Groups under total Export (Qty.) of Major Petrochemicals during year 2020-21



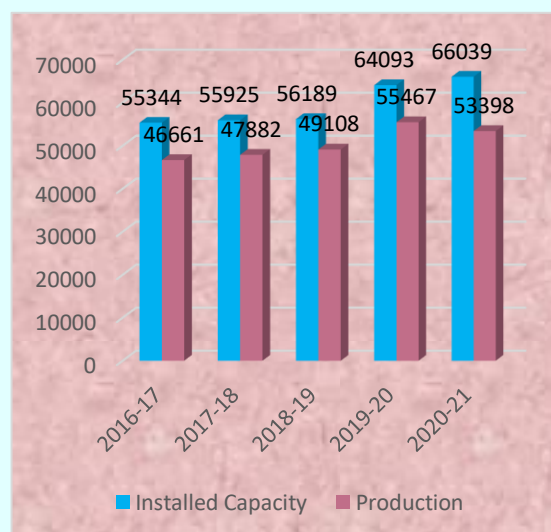
Share of Groups under total Export (Value) of Major Petrochemicals during year 2020-21



Total Major Chemicals & Major Petrochemicals

Installed Capacity-Production

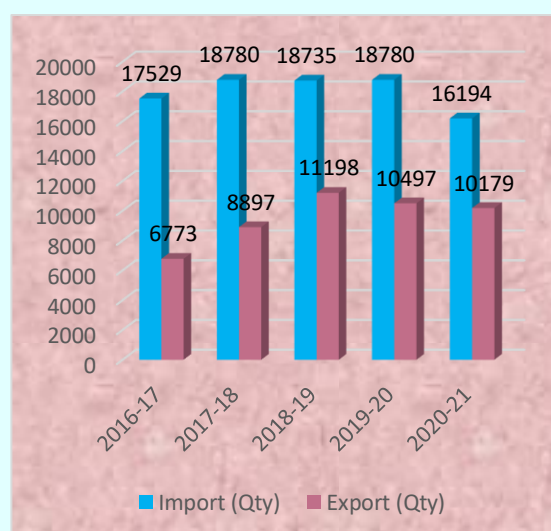
Year	Installed Capacity (In '000 MT)	Production (In '000 MT)
2016-17	55344	46661
2017-18	55925	47882
2018-19	56189	49108
2019-20	64093	55467
2020-21	66039	53398
CAGR (%)	4.5	3.4



The installed capacity and production of Total Major Chemicals & Major Petrochemicals was increased with CAGR of 4.5% and 3.4% respectively during the period 2016-17 to 2020-21.

Quantity Imported-Quantity Exported of Total Major Chemicals & Major Petrochemicals

Year	Import (In '000 MT)	Export (In '000 MT)
2016-17	17529	6773
2017-18	18780	8897
2018-19	18735	11198
2019-20	18780	10497
2020-21	16194	10179
CAGR (%)	-2.0	10.7

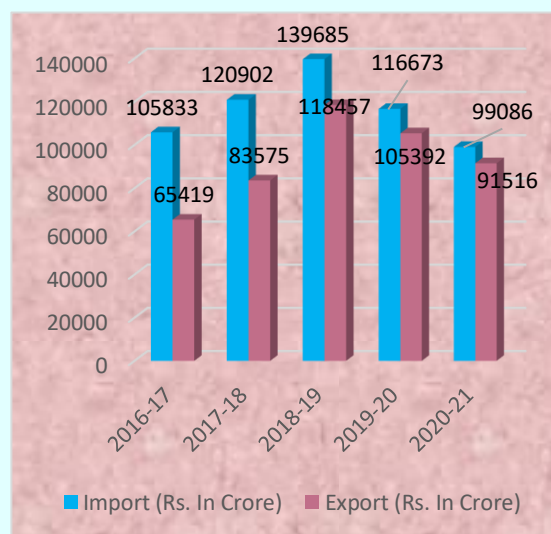


The Export quantity of Total Major Chemicals & Major Petrochemicals was significantly increased with CAGR of 10.7%. Whereas, its Import decreased with CAGR of 2.0% during the period 2016-17 to 2020-21.

Total Major Chemicals & Major Petrochemicals

Value of Import- Value of Export

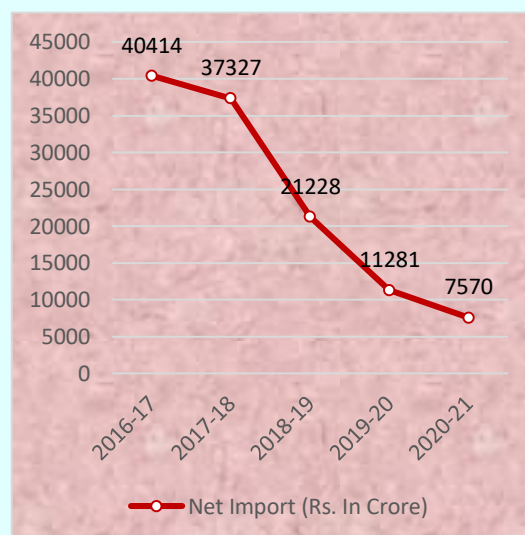
Year	Import (Rs. In Crore)	Export (Rs. In Crore)
2016-17	105833	65419
2017-18	120902	83575
2018-19	139685	118457
2019-20	116673	105392
2020-21	99086	91516
CAGR (%)	-1.6	8.8



The Import and Export values of Total Major Chemicals & Major Petrochemicals were increased from 2016-17 to 2018-19 and showing decreasing trend in 2018-19 to 2020-21.

Net Import of Total Major Chemicals & Major Petrochemicals

Year	Net Import (Rs. In Crore)
2016-17	40414
2017-18	37327
2018-19	21228
2019-20	11281
2020-21	7570
CAGR (%)	-34.2



India is a net importer of Total Major Chemicals & Major Petrochemicals during the period 2016-17 to 2020-21. The net Import was significantly decreased with CAGR of 34.2%.

Section – I

Chemical Sector

Table 1: Performance of Selected Major Chemicals (Group-Wise) during 2013-14 to 2020-21 at a Glance

(Figures in 000'MT)

GROUP	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	CAGR (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Alkali Chemicals									
Capacity	8075	8214	8422	8822	9274	9422	10089	10473	3.78
Production	6481	6625	6802	7009	7631	8043	8457	7776	2.64
Capacity Utilisation (%)	80	81	81	79	82	85	84	74	
Imports	874	1134	1118	1121	1194	1049	1157	968	1.46
Exports	164	74	107	154	273	239	329	429	14.70
2. Inorganic Chemicals									
Capacity	1228	1259	1316	1313	1315	1300	1538	1560	3.48
Production	906	944	1002	1053	1058	1064	1063	978	1.09
Capacity Utilisation (%)	74	75	76	80	81	82	69	63	
Imports	874	912	1010	1010	1229	1580	1532	1188	4.48
Exports	167	164	157	378	173	177	196	195	2.20
3. Organic Chemicals									
Capacity	2463	2537	2580	2529	2535	2575	2671	2664	1.13
Production	1792	1619	1589	1638	1799	1884	1847	1906	0.88
Capacity Utilisation (%)	73	64	62	65	71	73	69	72	
Imports	2496	2886	3143	3170	3407	3645	3775	3716	5.85
Exports	335	241	232	190	205	233	245	296	-1.77
4. Pesticides (Tech.)									
Capacity	297	302	307	322	325	324	334	371	3.26
Production	179	186	188	214	213	217	192	255	5.16
Capacity Utilisation (%)	60	62	61	66	65	67	58	69	
Imports \$	37	41	34	43	44	49	43	66	8.62
Exports \$	207	230	267	342	358	405	398	471	12.46
5. Dyes & Pigments									
Capacity	434	460	456	471	478	492	528	532	2.95
Production	284	285	304	320	367	382	384	327	2.08
Capacity Utilisation (%)	65	62	67	68	77	78	73	62	
Imports	52	52	55	56	63	56	51	45	-2.02
Exports	347	353	376	419	486	525	530	514	5.81
Total Major Chemicals (1 to 5)									
Capacity	12496	12772	13082	13456	13927	14112	15160	15601	3.22
Production	9643	9660	9884	10234	11069	11589	11943	11243	2.22
Capacity Utilisation (%)	77	76	76	76	79	82	79	72	
Imports	4333	5025	5360	5400	5937	6379	6557	5983	4.72
Exports	1221	1061	1138	1484	1496	1579	1698	1905	6.57

Note : 1. Production and Installed Capacity data based on MPRs received from manufacturer of chemicals under large and medium scale units only monitored by S&M Division of DCPC.

2. Data Source in respect of imports and exports is DGCI, M/O Commerce and Industry.

3. \$ Import and Export includes both technical and formulations.

Table 1A: Projection of Production, Installed Capacity, Export and Import of Selected Major Chemical (Group-wise) from the year 2021-22 to 2026-27

(Figures in 000'MT)

GROUP	Actual Values						Forecast Values					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Alkali Chemicals												
Capacity	8422	8822	9274	9422	10089	10473	10838	11254	11678	12140	12507	12932
Production	6802	7009	7631	8043	8457	7776	8583	8788	8885	9024	9222	9578
Capacity Utilisation (%)	81	79	82	85	84	74	79	78	76	73	73	73
Imports	1118	1121	1194	1049	1157	968	1022	979	927	908	852	846
Exports	107	154	273	239	329	429	466	526	582	662	717	772
2. Inorganic Chemicals												
Capacity	1316	1313	1315	1300	1538	1560	1578	1664	1753	1831	1867	1947
Production	1002	1053	1058	1064	1063	978	1028	1004	986	969	958	958
Capacity Utilisation (%)	76	80	81	82	69	63	65	59	53	48	46	42
Imports	1010	1010	1229	1580	1532	1188	1539	1593	1579	1555	1632	1740
Exports	157	378	173	177	196	195	178	124	150	133	112	97
3. Organic Chemicals												
Capacity	2580	2529	2535	2575	2671	2664	2681	2734	2774	2803	2826	2869
Production	1589	1638	1799	1884	1847	1906	2007	2060	2090	2143	2217	2270
Capacity Utilisation (%)	62	65	71	73	69	72	75	76	76	77	79	80
Imports	3143	3170	3407	3645	3775	3716	3968	4118	4218	4321	4457	4620
Exports	232	190	205	233	245	296	285	318	341	361	382	398
4. Pesticides (Tech.)												
Capacity	307	322	325	324	334	371	366	378	392	408	419	427
Production	188	214	213	217	192	255	241	246	257	269	283	282
Capacity Utilisation (%)	61	66	65	67	58	69	66	65	65	66	68	66
Imports \$	34	43	44	49	43	66	63	68	74	80	87	89
Exports \$	267	342	358	405	398	471	497	522	559	592	632	658
5. Dyes & Pigments												
Capacity	456	471	478	492	528	532	549	567	586	603	616	636
Production	304	320	367	382	384	327	380	378	369	367	371	383
Capacity Utilisation (%)	67	68	77	78	73	62	70	67	62	60	59	58
Imports	55	56	63	56	51	45	47	43	38	35	33	30
Exports	376	419	486	525	530	514	582	600	612	631	660	689
Total Major Chemicals (1 to 5)												
Capacity	13082	13456	13927	14112	15160	15601	16012	16596	17184	17785	18236	18810
Production	9884	10234	11069	11589	11943	11243	12238	12476	12588	12772	13051	13470
Capacity Utilisation (%)	76	76	79	82	79	72	77	75	73	71	71	71
Imports	5360	5400	5937	6379	6557	5983	6639	6801	6835	6899	7062	7324
Exports	1138	1484	1496	1579	1698	1905	2006	2091	2242	2379	2504	2614

Note : 1. Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only

2. Data Source in respect of imports and exports is DGCI, M/o Commerce and Industry.

3. \$ Import and Export includes both technical and formulations.

4. Projected figures have been calculated by using Forecast formula in MS Excel.

Table 2: Production, Installed Capacity & Growth Over its Previous Year of Selected Major Chemicals (Group-wise) during 2013-14 to 2020-21

(Figures in 000'MT)

Group	Installed Capacity			Production / Growth Rate	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
	2018-19	2019-20	2020-21									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Alkali Chemicals	9422	10089	10473	Production	6481	6625	6802	7009	7631	8043	8457	7776
				Growth Rate (%)	-0.09	2.22	2.67	3.04	8.89	5.39	5.15	-8.04
Inorganic Chemicals	1300	1538	1560	Production	906	944	1002	1053	1058	1064	1063	978
				Growth Rate (%)	1.70	4.18	6.08	5.13	0.53	0.51	-0.03	-8.06
Organic Chemicals	2575	2671	2664	Production	1792	1619	1589	1638	1799	1884	1847	1906
				Growth Rate (%)	6.28	-9.67	-1.87	3.12	9.79	4.76	-2.01	3.23
Pesticides	324	334	371	Production	179	186	188	214	213	217	192	255
				Growth Rate (%)	15.41	3.95	0.57	13.97	-0.48	1.88	-11.33	32.76
Dyes & Pigments	492	528	532	Production	284	285	304	320	367	382	384	327
				Growth Rate (%)	18.40	0.58	6.68	5.26	14.67	3.88	0.71	-14.77

Note: Production and Installed Capacity data based on MPRs received from manufacturer of chemicals under large and medium scale units only monitored by S&M Division of DCPC.

Table 3: Production, Capacity Utilization & growth of Major Chemicals (Product-wise) during 2013-14 to 2020-21

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilization in 2020-21
	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Alkali Chemicals													
SODA ASH	3489.00	3614.00	3614.00	2392.17	2462.00	2583.01	2613.42	2989.57	3048.19	3069.43	2638.12	1.41	73.00
CAUSTIC SODA	3397.34	3700.34	3898.20	2391.66	2442.89	2503.96	2594.50	2742.31	2925.35	3136.94	2964.08	3.11	76.04
LIQUID CHLORINE	2535.25	2774.73	2961.23	1697.33	1720.10	1714.82	1800.67	1899.41	2069.11	2250.43	2174.26	3.60	73.42
Total	9421.59	10089.07	10473.43	6481.15	6624.99	6801.78	7008.58	7631.30	8042.65	8456.80	7776.46	2.64	74.25
Inorganic Chemicals													
ALUMINIUM FLUORIDE	25.60	25.60	25.60	5.40	6.73	9.51	8.14	7.51	5.70	5.05	3.70	-5.26	14.45
CALCIUM CARBIDE	112.00	112.00	112.00	78.78	87.18	83.47	85.02	87.30	83.17	81.34	86.78	1.39	77.48
CARBON BLACK	696.00	696.00	696.00	406.41	444.35	469.56	535.27	530.36	546.39	500.15	384.78	-0.78	55.28
POTASSIUM CHLORATE	4.60	28.60	28.60	0.68	0.45	0.41	0.01	0.35	0.70	16.18	17.08	58.62	59.72
SODIUM CHLORATE	0.00	0.00	22.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.92		80.27
TITANIUM DIOXIDE	82.50	82.50	82.50	52.78	47.88	58.53	58.46	57.82	57.06	49.49	51.22	-0.43	62.09
RED PHOSPHORUS	1.68	1.68	1.68	0.75	0.89	0.84	0.77	0.88	1.03	1.03	1.07	5.13	63.45
HYDROGEN PEROXIDE	145.85	218.63	218.63	128.37	119.75	153.08	148.87	157.02	156.45	122.84	139.90	1.24	63.99
POTASSIUM IODATE	0.00	1.20	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.54		45.17
CALCIUM CARBONATE	231.55	371.55	371.55	233.12	236.93	226.13	216.33	217.25	213.33	286.83	274.79	2.38	73.96
Total	1299.78	1537.75	1560.07	906.27	944.15	1001.53	1052.87	1058.48	1063.83	1063.47	977.78	1.09	62.68
Organic Chemicals													
ACETIC ACID	141.62	142.05	142.05	157.17	159.61	157.91	158.51	157.07	153.80	167.86	154.76	-0.22	108.95
ACETIC ANHYDRIDE	113.33	119.18	119.18	80.85	93.84	92.99	94.82	97.09	95.47	74.15	75.09	-1.05	63.01
ACETONE	47.14	47.14	47.14	28.58	25.98	24.96	26.79	32.87	40.74	36.27	39.03	4.55	82.80
PHENOL	76.75	76.75	76.75	46.39	42.26	40.42	43.57	53.45	65.39	57.85	61.27	4.06	79.83
METHANOL	474.30	474.30	474.30	307.26	209.83	162.62	176.96	260.49	271.93	176.05	234.03	-3.81	49.34
FORMALDEHYDE	411.30	411.30	397.80	268.29	255.95	242.09	244.19	248.23	226.61	260.41	244.66	-1.31	61.50
NITROBENZENE	112.05	129.45	126.45	76.51	69.72	68.37	69.71	71.41	68.80	61.14	76.09	-0.08	60.18
MALEIC ANHYDRIDE	6.40	7.66	7.66	2.92	3.20	3.54	3.53	3.31	4.56	5.02	5.38	9.15	70.26
PENTAERYTHRITOL	15.76	15.76	15.76	12.18	13.46	13.97	14.01	14.10	14.99	15.21	11.65	-0.63	73.93
ANILINE	54.10	54.10	54.10	40.62	34.47	39.40	41.45	41.88	37.85	25.44	33.53	-2.70	61.98
CHLORO METHANES	279.25	279.25	279.25	214.03	220.71	220.18	221.51	222.43	285.53	296.91	326.95	6.24	117.08
ISOBUTYLBENZENE	13.80	16.80	16.80	6.08	4.30	7.24	6.92	8.95	9.70	9.44	12.72	11.13	75.71
ONCB	30.00	30.00	30.00	16.82	16.13	19.26	22.55	24.90	23.70	19.84	23.27	4.75	77.56
PNCB	48.40	48.40	48.40	27.06	26.96	31.27	34.19	37.78	36.07	31.90	38.89	5.32	80.34
MEK	10.00	10.00	10.00	3.72	4.02	5.75	6.54	6.40	7.00	9.83	8.00	11.57	80.01
ACETALDEHYDE	151.01	151.01	151.01	79.66	67.77	58.96	60.46	65.74	61.89	77.10	55.97	-4.92	37.06
ETHANOLAMINES	17.76	17.76	27.00	11.20	13.76	13.25	13.11	13.20	16.70	15.39	16.70	5.88	61.86

Table 3: Production, Capacity Utilization & growth of Major Chemicals (Product-wise) during 2013-14 to 2020-21

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilization in 2020-21
	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
ETHYL ACETATE	517.83	562.06	562.06	382.39	327.94	360.40	371.27	411.49	440.56	473.39	453.13	2.45	80.62
MENTHOL	33.65	33.65	33.65	18.34	17.45	14.73	14.54	13.68	6.24	7.44	7.48	-12.02	22.23
ORTHO NITRO TOLUENE	20.69	44.80	44.80	12.31	11.74	11.52	13.80	14.39	16.89	25.98	27.67	12.27	61.77
Total	2575.12	2671.41	2664.15	1792.34	1619.11	1588.83	1638.44	1798.85	1884.42	1846.62	1906.27	0.88	71.55
Pesticides and Insecticides													
D.D.T.	3.14	6.34	6.34	2.79	3.63	2.09	2.26	1.27	1.37	1.10	0.57	-20.31	8.97
MALATHION	3.20	3.80	3.80	2.04	2.24	2.04	2.26	3.29	4.39	3.79	3.84	9.47	101.00
DIMETHOATE	1.45	1.45	1.45	1.36	1.43	1.44	1.37	1.18	1.26	1.45	1.45	0.91	100.14
D.D.V.P.	33.62	33.62	33.62	5.52	6.66	7.22	8.13	8.13	9.14	0.00	0.94	-22.39	2.78
QUINALPHOS	2.20	2.20	3.40	1.74	1.88	0.84	1.29	1.18	0.89	0.86	1.06	-6.89	31.06
MONOCROTOPHOS	13.84	13.94	13.94	4.27	6.97	5.48	6.58	5.50	5.30	5.82	7.92	9.23	56.79
PHOSPHAMIDON	2.00	2.00	2.00	0.05	0.13	0.13	0.09	0.11	0.00	0.00	0.00	-100.00	0.00
PHORATE	12.40	12.40	12.40	6.85	6.62	5.92	5.91	7.02	5.85	0.00	0.00	-100.00	0.00
ETHION	2.20	2.80	2.80	1.51	1.60	1.72	2.11	2.38	1.32	2.13	2.22	5.62	79.29
FENVALERATE	3.60	4.96	4.96	0.75	0.51	0.56	0.53	0.74	0.70	0.67	0.49	-5.84	-241.57
CYPERMETHRIN	25.10	23.83	23.83	9.26	8.59	8.53	7.88	8.25	10.95	10.87	12.29	4.12	51.59
ACEPHATE	17.50	20.50	20.50	14.51	17.97	16.58	16.27	18.27	19.63	21.08	29.59	10.72	144.33
CHLORPYRIPHOS	18.08	13.60	13.80	9.54	9.73	6.87	5.87	7.98	7.14	6.50	8.53	-1.59	61.80
TRIAZOPHOS	3.36	3.36	3.36	0.99	1.00	1.72	2.37	1.54	0.89	0.00	0.00	-100.00	0.00
TEMEPHOS	0.25	0.25	0.25	0.25	0.00	0.08	0.08	0.10	0.08	0.15	0.15	-7.22	59.20
DELTAMETHRIN	0.73	0.79	0.79	0.52	0.51	0.38	0.37	0.55	0.68	0.69	0.59	1.93	74.68
ALPHAMETHRIN	0.49	0.48	0.50	0.56	0.75	0.23	0.10	0.32	0.34	0.44	0.54	-0.67	107.20
PROFENOFOS TECHNICAL	10.50	10.50	10.50	7.18	7.58	6.85	10.50	9.95	12.45	12.36	16.08	12.21	153.14
PRETILACHLOR TECHNICAL	4.24	4.24	4.24	2.22	1.88	1.94	2.58	3.60	3.63	3.07	3.59	7.12	84.60
LAMBDA CYHALOTHRIN	2.60	2.85	3.20	0.55	0.47	0.42	0.74	1.14	0.62	2.30	1.68	17.42	52.41
PHENTHOATE	0.90	0.90	0.90	1.24	1.40	1.11	1.14	1.32	1.53	1.41	1.35	1.19	149.89
PERMETHRIN TECH	1.67	1.80	1.80	1.39	1.70	1.30	1.10	1.53	1.86	1.22	1.66	2.53	92.00
IMIDACALOPRID TECH	0.20	0.15	0.15	0.94	0.56	0.20	0.18	0.34	0.10	0.02	0.03	-39.19	19.33
CAPTAN & CAPTAFOL	3.43	3.43	3.43	1.12	2.38	2.12	1.79	1.76	1.93	1.46	1.46	3.92	42.65
ZIRAM(THIO BARBAMATE)	0.70	0.70	0.70	0.60	0.58	0.51	0.60	0.72	0.76	0.63	0.88	5.72	126.40
CARBENDZIM(BAVISTIN)	0.98	0.78	0.78	0.31	0.36	0.24	0.13	0.03	0.02	0.00	0.00	-100.00	0.00
MANCOZAB	84.70	84.70	119.80	57.82	61.40	66.38	78.48	70.25	69.33	60.88	97.43	7.74	81.33
HEXACONAZOLE	1.20	1.70	1.70	0.58	0.59	0.62	0.46	0.59	0.50	0.75	0.81	4.97	47.59
METCONAZOLE	0.75	0.75	0.75	0.70	0.61	0.39	0.35	0.40	0.34	0.21	0.20	-16.42	26.67
2, 4-D	27.00	27.00	27.00	17.90	11.62	18.46	23.36	25.83	24.24	22.56	27.05	6.07	100.19

Table 3: Production, Capacity Utilization & growth of Major Chemicals (Product-wise) during 2013-14 to 2020-21

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilization in 2020-21
	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
BUTACHLOR	0.50	0.50	0.50	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-100.00	0.00
ETHOFUMESATE TECHNICAL	1.43	1.65	1.65	1.01	0.62	0.50	1.04	1.29	1.04	0.79	0.43	-11.45	26.24
THIAMETHOXAM TECHNICAL	3.75	4.55	5.10	3.31	1.66	1.92	2.51	3.28	5.57	6.15	5.21	6.69	102.18
PENDIMETHALIN	4.70	6.00	5.80	1.71	2.26	2.82	4.04	3.78	2.82	2.75	3.64	11.42	62.74
METRIBUZIN	1.35	1.95	2.52	0.74	0.52	0.91	1.12	0.88	1.92	2.65	3.19	23.17	126.73
TRICLOPYR ACID TECH	0.30	0.30	0.30	0.20	0.19	0.30	0.28	0.15	0.13	0.13	0.00	-100.00	0.00
ISOPROTURON	6.25	6.00	6.00	2.35	2.43	1.95	0.13	0.00	0.00	0.00	0.00	-100.00	0.00
GLYPHOSATE	12.87	12.92	12.92	8.48	9.69	6.96	6.35	6.29	6.68	5.91	6.13	-4.53	47.44
DIURON	3.72	6.00	6.00	0.07	0.12	1.26	3.68	3.26	3.62	3.40	3.42	74.67	57.05
ATRAZIN	0.50	1.20	1.20	1.24	1.20	1.21	1.90	2.25	1.48	1.73	1.61	3.85	134.25
ZINC PHOSPHIDE	1.92	1.92	1.92	0.65	1.29	1.50	1.31	1.40	1.26	1.32	1.47	12.42	76.46
ALUMINIUM PHOSPHIDE	4.74	4.74	4.74	4.47	5.05	5.75	6.40	4.77	4.91	4.91	7.61	7.91	160.63
DICOFOL	0.10	0.15	0.15	0.07	0.11	0.09	0.09	0.08	0.05	0.01	0.00	-100.00	0.00
Total	324.16	333.69	371.48	179.38	186.47	187.52	213.72	212.70	216.70	192.15	255.09	5.16	68.67
Dyes and Pigments													
AZO DYES	21.14	21.14	21.14	13.46	10.59	9.82	9.98	11.04	9.05	8.54	6.62	-9.64	31.34
ACID DIRECT DYES(OTHER THAN AZO)	40.90	40.90	40.90	19.00	17.23	20.57	19.86	21.15	24.13	22.75	20.22	0.89	49.45
DISPERSE DYES	67.21	75.01	77.93	29.21	29.56	43.57	41.35	46.72	55.24	61.94	51.79	8.53	66.46
FAST COLOUR BASES	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	-100.00	
INGRAIN DYES	0.00	0.00	0.00	0.51	0.44	0.30	0.00	0.00	0.00	0.00	0.00	-100.00	
OIL SOLUBLE (SOLVENT DYES)	3.60	3.60	3.60	2.26	1.80	2.20	2.23	2.07	2.29	2.41	0.44	-20.80	12.25
OPTICAL WHITENING AGENTS	41.16	67.68	67.68	23.74	22.94	24.70	23.77	23.21	29.30	20.74	18.18	-3.74	26.85
ORGANIC PIGMENT	87.04	88.36	88.36	68.67	76.89	61.31	63.74	73.34	73.94	75.08	67.27	-0.29	76.14
PIGMENT EMULSION	5.41	5.41	5.41	7.34	9.64	9.67	10.61	10.16	9.78	9.69	8.60	2.29	158.77
REACTIVE DYES	194.69	195.73	196.33	95.42	89.47	106.23	120.96	151.91	151.38	156.71	132.13	4.76	67.30
SULPHUR DYES (SULPHUR BLACK)	8.25	8.25	8.25	7.57	9.38	9.55	10.07	7.32	7.54	7.45	5.09	-5.49	61.77
VAT DYES	3.04	2.86	2.86	1.60	1.77	1.44	1.52	1.65	1.78	2.13	1.99	3.16	69.44
SOLUBILISED VAT DYES	0.13	0.13	0.13	0.02	0.03	0.03	0.02	0.02	0.00	0.00	0	-100.00	0.00
FOOD COLOURS	0.00	0.00	0.00	0.62	0.66	0.71	0.75	0.78	0.79	0.67	0.493	-3.24	
NAPTHOLS	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
INORGANIC PIGMENTS	18.05	18.05	18.05	14.18	14.82	14.19	15.41	17.88	16.29	16.12	14.64	0.46	81.07
Total	491.52	528.02	531.54	283.60	285.23	304.28	320.27	367.25	381.51	384.22	327.46	2.08	61.61
Total (All Group)	14112.17	15159.94	15600.67	9642.75	9659.94	9883.95	10233.88	11068.57	11589.11	11943.25	11243.05	2.22	72.07

Note: Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

Table 4: Installed Capacities of Selected Chemicals (Group-Wise) from 2013-14 to 2020-21

(Figures in 000'MT)

GROUP / PRODUCT	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Alkali Chemicals	8075	8214	8422	8822	9274	9422	10089	10473
2. Inorganic Chemicals	1228	1259	1316	1313	1315	1300	1538	1560
3. Organic Chemicals	2463	2537	2580	2529	2535	2575	2671	2664
4. Pesticides (Tech.)	297	302	307	322	325	324	334	371
5. Dyes & Pigments	434	460	456	471	478	492	528	532
TOTAL MAJOR CHEMICALS	12496	12772	13082	13456	13927	14112	15160	15601

Note: Installed Capacity data based on MPRs received from manufacturer of chemicals under large and medium scale units only monitored by S&M Division of DCPC.

Table 5: Consumption of Selected Major Chemicals (Product-Wise) during 2013-14 to 2020-21

(Figures in 000'MT)

PRODUCTS	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Alkali Chemicals								
SODA ASH	2877.33	3159.80	3197.66	3244.35	3652.11	3826.32	3779.39	3208.13
CAUSTIC SODA	2620.25	2808.67	2905.94	2935.48	3003.98	2961.45	3258.79	2936.76
LIQUID CHLORINE	1693.52	1717.03	1709.31	1795.64	1895.73	2064.68	2246.29	2170.53
Inorganic Chemicals								
ALUMINIUM FLUORIDE	26.28	34.02	34.98	54.39	57.07	67.63	44.05	62.88
CALCIUM CARBIDE	142.75	165.10	145.04	140.22	142.48	128.17	112.19	119.32
CARBON BLACK	428.67	469.70	478.95	331.84	594.29	702.09	553.62	436.53
POTASSIUM CHLORATE	6.99	5.96	2.81	-1.55	-1.57	-2.19	13.06	15.39
SODIUM CHLORATE	28.08	21.79	17.29	7.33	7.75	13.43	24.08	29.50
TITANIUM DIOXIDE	60.60	60.30	70.52	64.18	61.96	64.26	59.67	58.13
RED PHOSPHORUS	0.61	0.56	0.35	0.32	0.43	0.45	0.40	0.49
HYDROGEN PEROXIDE	190.35	175.78	196.82	205.66	225.38	240.45	174.76	159.18
POTASSIUM IODATE	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.54
CALCIUM CARBONATE	728.40	759.32	907.92	882.97	1026.48	1252.32	1416.88	1088.88
Organic Chemicals								
ACETIC ACID	814.63	865.50	942.30	993.41	1029.36	1073.28	1081.60	1048.40
ACETIC ANHYDRIDE	76.21	76.43	77.30	76.65	81.83	89.30	74.15	69.94
ACETONE	144.66	149.63	152.58	159.46	174.69	146.60	97.67	92.93
PHENOL	258.34	240.37	282.35	321.74	337.27	292.48	179.58	179.17
METHANOL	1535.78	1801.99	1830.49	1801.79	2034.32	2247.70	2449.38	2445.52
FORMALDEHYDE	262.35	248.90	233.68	235.87	237.66	214.15	246.27	229.43
NITROBENZENE	76.36	70.78	74.16	83.80	86.73	86.91	76.54	85.86
CITRIC ACID	62.09	65.63	74.49	80.01	81.87	92.96	88.55	92.67
MALEIC ANHYDRIDE	39.64	41.56	50.86	54.11	55.71	74.39	71.80	64.87
PENTAERYTHRITOL	26.37	25.58	31.82	31.35	29.95	31.11	33.94	23.93
ANILINE	72.27	70.48	77.61	85.94	107.14	126.17	106.32	106.23
CHLORO METHANES	214.14	220.68	220.75	221.68	222.85	286.87	299.26	329.35
ISOBUTYLBENZENE	-8.05	-9.64	-5.33	-6.51	-3.39	-2.04	-0.26	-3.44
ONCB	14.94	14.29	18.66	22.42	24.90	23.70	19.84	23.27
PNCB	25.09	29.96	38.01	39.26	37.78	36.07	31.90	38.89
MEK	30.50	30.89	46.45	37.25	51.71	53.69	35.10	50.48
ACETALDEHYDE	79.72	67.80	59.03	60.55	65.81	60.84	76.08	55.02
ETHANOLAMINES	19.98	24.02	22.19	23.08	24.50	30.21	30.40	33.01
ETHYL ACETATE	192.44	213.04	255.88	279.24	305.98	324.80	367.17	344.54
MENTHOL	3.80	4.82	6.83	4.05	2.31	-5.78	-6.59	-7.98
ORTHO NITRO TOLUENE	11.73	11.67	10.47	13.30	12.01	12.67	18.76	23.99

Note: 1. Production and Installed Capacity data based on MPRs received from manufacturer of chemicals under large and medium scale units only monitored by S&M Division of DCPC.

2. Data Source in respect of Imports and Exports is DGCIS, M/o Commerce and Industry.

3. Derived consumption as Production + Imports - Exports

Table 5A: Consumption of Selected Pesticides (Tech. Grade) (State -wise) during 2016-17 to 2020-21

(Figures in MT)

S. No.	States/UTs	2016-17	2017-18	2018-19	2019-20	2020-21
1	Andhra Pradesh	2,015	1,738	1,689	1559	1559
2	Bihar	790	840	850	850	995
3	Chhattisgarh	1,660	1,685	1,770	1672	1639
4	Goa	22	24	25	30	30
5	Gujarat	1,713	1,692	1,608	1784	1573
6	Haryana	4,050	4,025	4,015	4200	4050
7	Himachal Pradesh	341	467	322	881	56
8	Jharkhand	541	619	646	681	1161
9	Karnataka	1,288	1,502	1,524	1568	1930
10	Kerala	895	1,067	995	656	585
11	Madhya Pradesh	694	502	540	540	691
12	Maharashtra	13,496	15,568	11,746	12783	13243
13	Orissa	1,050	1,633	1,609	1115	1158
14	Punjab	5,843	5,835	5,543	4995	5193
15	Rajasthan	2,269	2,307	2,290	2088	2330
16	Tamil Nadu	2,092	1,929	1,901	2225	1834
17	Telangana	3,436	4,866	4,894	4915	4986
18	Uttar Pradesh	10,614	10,824	11,049	12217	11557
19	Uttarakhand	198	210	195	224	135
20	West Bengal	2,624	2,982	3,190	3630	3630
Sub Total		55,631	60,315	56,401	58,613	58,335
North-Eastern						
21	Arunachal Pradesh	18	NR	5	5	2
22	Assam	306	241	256	410	420
23	Manipur	33	27	NR	25	46
24	Meghalaya	Organic State	Organic State	Organic State	Organic State	Organic State
25	Mizoram	9	NR	26	27	NR
26	Nagaland	20	20	21	19	36
27	Sikkim	Organic State	Organic State	Organic State	Organic State	Organic State
28	Tripura	298	330	349	364	NR
Sub Total		684	618	657	850	504
Union Territories						
29	Andaman & Nicobar	NR	NR	NR	NR	1
30	Chandigarh	NR	NR	NR	NR	NR
31	Dadra & Nagar Haveli	NR	NR	NR	NR	NR
	Daman & Diu	NR	NR	NR	NR	NR
32	Delhi	88	NR	110	NR	NR
33	Jammu & Kashmir	2,188	2,430	2459	2198	3352
34	Ladakh	NR	NR	NR	NR	NR
35	Lakshadweep	NR	NR	NR	NR	NR
36	Pondicherry	43	43	42	40	NR
Sub Total		2,319	2,473	2,611	2,238	3,353
Grand Total		58,634	63,406	59,669	61,701	62,192

Note: States/UTs Zonal Conferences on Inputs (Plant Protection). **NR-** Not reported

Source: Directorate of Plant Protection, Quarantine & Storage, Department of Agriculture & Farmers Welfare, Ministry of Agriculture and Farmers Welfare

Section – II

Petrochemical Sector

Table 6: Performance of Selected Basic Major Petrochemicals (Group Wise) during 2013-14 to 2020-21

(Figures in 000'MT)

Group	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	CAGR (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Synthetic Fibres/Yarn									
Capacity	3769	4213	4452	4393	4379	4440	4521	4529	2.66
Production	3149	3532	3558	3599	3625	3601	3893	3185	0.16
Capacity Utilisation (%)	83.6	83.8	79.9	81.9	82.8	81.1	86.1	70.3	
Imports	164	236	264	280	260	276	347	403	13.70
Exports	908	887	878	1026	1001	1016	1059	879	-0.46
2. Polymers									
Capacity	8905	8905	9768	10110	10112	10115	12754	12799	5.32
Production	7876	7558	8839	9163	9276	10040	12404	12144	6.38
Capacity Utilisation (%)	88.4	84.9	90.5	90.6	91.7	99.3	97.3	94.9	
Imports	3125	3737	4214	4452	4751	4479	3430	2641	-2.37
Exports	1188	903	998	912	1188	1934	1615	1489	3.28
3. Synthetic Rubber									
Capacity	244	425	425	425	425	425	411	406	7.51
Production	105	172	242	285	308	351	358	353	19.00
Capacity Utilisation (%)	42.8	40.3	56.8	67.0	72.3	82.5	87.1	87.1	
Imports	580	578	596	560	608	619	575	747	3.68
Exports	13	26	43	38	52	64	74	95	33.11
4. Synthetic Detergent Intermediates									
Capacity	687	687	687	687	687	687	680	680	-0.16
Production	597	596	566	664	743	687	715	736	3.06
Capacity Utilisation (%)	86.8	86.7	82.3	96.6	108.1	100.0	105.1	108.3	
Imports	124	134	218	228	206	227	264	265	11.50
Exports	33	28	10	7	1	1	1	2	-33.60
5. Performance Plastics									
Capacity	2958	2983	3018	2945	2947	2963	2919	3046	0.42
Production	1685	1591	1700	1799	1719	1589	1672	1520	-1.46
Capacity Utilisation (%)	56.9	53.3	56.3	61.1	58.3	53.6	57.3	49.9	
Imports	311	395	389	417	583	684	741	299	-0.56
Exports	475	409	814	973	1051	1080	969	217	-10.57
Total Basic Major Petrochemicals (1 to 5)									
Capacity	16563	17213	18351	18561	18551	18630	21286	21460	3.77
Production	13410	13448	14905	15510	15670	16269	19041	17938	4.24
Capacity Utilisation (%)	81.0	78.1	81.2	83.6	84.5	87.3	89.5	83.6	
Imports	4304	5080	5681	5938	6408	6284	5356	4356	0.17
Exports	2616	2254	2743	2956	3293	4095	3719	2681	0.35

Note : 1. Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

2. Data Source in respect of imports and exports is DGCI, M/o Commerce and Industry.

Table 6A: Projection of Production, Installed Capacity, Export and Import of Selected Basic Major Petrochemical (Group-wise) from the year 2021-22 to 2026-27

(Figures in 000'MT)

Group	Actual Values						Forecast Values					
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. Synthetic Fibres/Yarn												
Capacity	4452	4393	4379	4440	4521	4529	4535	4590	4634	4660	4685	4725
Production	3558	3599	3625	3601	3893	3185	3476	3398	3308	3211	3100	3149
Capacity Utilisation (%)	79.9	81.9	82.8	81.1	86.1	70.3	76.6	73.9	71.1	68.5	65.6	66.0
Imports	264	280	260	276	347	403	396	435	482	519	544	575
Exports	878	1026	1001	1016	1059	879	988	944	926	900	879	891
2. Polymers												
Capacity	9768	10110	10112	10115	12754	12799	13252	14165	15172	16040	16476	17426
Production	8839	9163	9276	10040	12404	12144	13012	14028	15058	15864	16458	17543
Capacity Utilisation (%)	90.5	90.6	91.7	99.3	97.3	94.9	99	100	101	101	103	104
Imports	4214	4452	4751	4479	3430	2641	2875	2245	1590	1100	770	336
Exports	998	912	1188	1934	1615	1489	1887	2050	2098	2097	2313	2469
3. Synthetic Rubber												
Capacity	425	425	425	425	411	406	406	399	393	387	383	378
Production	242	285	308	351	358	353	398	413	430	445	468	491
Capacity Utilisation (%)	56.8	67.0	72.3	82.5	87.1	87.1	98	102	108	112	118	125
Imports	596	560	608	619	575	747	699	741	773	814	856	864
Exports	43	38	52	64	74	95	99	115	127	140	152	164
4. Synthetic Detergent Intermediates												
Capacity	687	687	687	687	680	680	679	676	673	671	670	667
Production	566	664	743	687	715	736	780	780	789	823	840	857
Capacity Utilisation (%)	82.3	96.6	108.1	100.0	105.1	108.3	115	115	117	122	125	128
Imports	218	228	206	227	264	265	271	287	307	318	326	342
Exports	10	7	1	1	1	2	-2	-3	-3	-4	-5	-7
5 : Performance Plastics												
Capacity	3018	2945	2947	2963	2919	3046	2981	3010	3028	3044	3065	3059
Production	1700	1799	1719	1589	1672	1520	1525	1448	1409	1371	1299	1268
Capacity Utilisation (%)	56.3	61.1	58.3	53.6	57.3	49.9	51	48	47	45	42	41
Imports	389	417	583	684	741	299	581	553	483	428	411	462
Exports	814	973	1051	1080	969	217	554	337	111	-96	-237	-297
Total Basic Major Petrochemicals (1 to 5)												
Capacity	18351	18561	18551	18630	21286	21460	21853	22841	23899	24802	25279	26256
Production	14905	15510	15670	16269	19041	17938	19191	20068	20994	21713	22165	23307
Capacity Utilisation (%)	81.2	83.6	84.5	87.3	89.5	83.6	88.2	88.3	88.5	88.3	88.6	90.2
Imports	5681	5938	6408	6284	5356	4356	4821	4261	3636	3179	2908	2581
Exports	2743	2956	3293	4095	3719	2681	3526	3442	3259	3037	3102	3220

Note : 1. Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC

2. Data Source in respect of imports and exports is DGCI, M/o Commerce and Industry.

3. Projected figures have been calculated by using Forecast formula in MS Excel.

Table 7: Production, Installed Capacity & Growth of Selected Basic Major Petrochemicals (Group-wise) during 2013-14 to 2020-21.

(Figures in 000' MT)

Group	Installed Capacity			Production / Growth Rate	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
	2018-19	2019-20	2020-21									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Synthetic Fibers	4440	4521	4529	Production	3149	3532	3558	3599	3625	3601	3893	3185
				Growth Rate (%)	0.7	12.2	0.7	1.2	0.7	-0.7	8.1	-18.2
Polymers	10115	12754	12799	Production	7876	7558	8839	9163	9276	10040	12404	12144
				Growth Rate (%)	4.9	-4.0	17.0	3.7	1.2	8.2	23.5	-2.1
Elastomers (S.Rubber)	425	411	406	Production	105	172	242	285	308	351	358	353
				Growth Rate (%)	8.7	64.1	40.8	17.9	8.0	14.0	2.1	-1.3
Synth. Detergent Intermediates	687	680	680	Production	597	596	566	664	743	687	715	736
				Growth Rate (%)	-4.8	-0.1	-5.1	17.4	11.9	-7.5	4.0	3.0
Performance Plastics	2963	2919	3046	Production	1685	1591	1700	1799	1719	1589	1672	1520
				Growth Rate (%)	-0.4	-5.5	6.9	5.8	-4.5	-7.6	5.2	-9.1
Total Basic Major Petrochemicals	18630	21286	21460	Production	13410	13448	14905	15510	15670	16269	19041	17938
				Growth Rate (%)	2.8	0.3	10.8	4.1	1.0	3.8	17.0	-5.8

Note : Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

Table 8: Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2013-14 to 2020-21.

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilisation
	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
A : BASIC MAJOR PETROCHEMICALS													
I : Synthetic Fibres / Yarn													
POLYESTER FILAMENT YARN (\$)	2827.42	2719.79	2727.37	1811.28	2178.75	2179.00	2200.91	2283.41	2316.43	2520.33	1997.93	1.41	73.25
NYLON FILAMENT YARN (\$\$)	24.62	58.52	58.52	24.32	32.45	37.25	40.91	40.01	46.62	48.29	33.27	4.58	56.86
NYLON INDUSTRIAL YARN/TYRE CORD(\$\$)	90.50	152.02	152.02	103.83	100.52	94.87	103.56	107.59	109.55	99.75	90.29	-1.98	59.39
POLYPROPYLENE FILAMENT YARN(\$\$)	3.60	3.60	3.60	5.91	5.14	3.47	3.39	3.15	2.36	2.52	2.17	-13.34	60.22
Sub Total Yarn (1+2+3+4)	2946.14	2933.92	2941.50	1945.34	2316.86	2314.59	2348.77	2434.15	2474.95	2670.89	2123.65	1.26	72.20
ACRYLIC FIBRE (AF)	107.00	107.00	107.00	94.38	89.63	105.87	95.39	90.97	99.45	102.90	77.02	-2.86	71.98
POLYESTER STAPLE FIBREFILL	69.00	69.00	69.00	56.46	57.30	51.05	53.65	51.33	52.99	49.89	40.30	-4.70	58.40
POLYESTER STAPLE FIBRE	1256.56	1350.46	1350.46	1010.05	1021.25	1039.65	1056.00	1005.30	931.44	1027.49	909.38	-1.49	67.34
POLYPROPYLENE STAPLE FIBRE	30.93	30.93	30.93	23.01	25.42	27.04	24.56	22.24	20.74	18.82	15.34	-5.63	49.59
POLYESTER INDUSTRIAL YARN	21.50	21.50	21.50	14.75	16.58	15.38	16.33	15.04	14.83	14.73	12.36	-2.49	57.49
10.ELASTOMERIC/SPANDEX FILAMENT YARN	8.50	8.50	8.50	4.74	4.95	4.81	4.70	6.18	7.08	8.06	6.60		77.65
Total Synth. Fibre / Yarn	4439.63	4521.31	4528.88	3148.73	3531.98	3558.39	3599.40	3625.20	3601.48	3892.78	3184.65	0.16	70.32
II : Polymers													
LINEAR LOW DENSITY POLYETHYLENE (LLDPE)	No separate Capacity			1036.58	910.26	1204.57	1318.26	1290.05	1581.22	2994.03	2958.92	16.17	
HIGH DENSITY POLYETHYLENE (HDPE)	No separate Capacity			1195.04	1155.79	1317.15	1520.04	1578.38	1597.68	1897.57	1910.04	6.93	
LLDPE/HDPE (Combined) (\$\$\$)	3348.10	5158.10	5158.10	2231.62	2066.05	2521.72	2838.30	2868.42	3178.90	4891.59	4868.96	11.79	94.39
LOW DENSITY POLYETHYLENE (LDPE)	160.00	560.00	610.00	190.01	184.40	200.03	201.76	185.66	193.05	613.29	616.61	18.31	101.08
POLYSTYRENE (PS)	471.00	471.00	471.00	270.33	281.17	308.58	311.35	301.58	292.86	291.72	217.45	-3.06	46.17
POLYPROPYLENE (PP)	4514.00	4933.80	4933.80	3739.64	3614.82	4284.42	4253.39	4350.20	4779.02	4982.82	4919.10	3.99	99.70
EXPANDABLE POLYSTYRENE (EXPS)	128.70	133.30	133.30	77.35	80.68	86.20	96.77	103.91	108.27	110.68	87.39	1.76	65.56
POLY VINYL CHLORIDE (PVC)	1493.00	1498.00	1493.00	1367.00	1330.44	1437.89	1461.53	1466.08	1488.40	1513.59	1434.12	0.69	96.06
Total Polymers	10114.80	12754.20	12799.20	7875.96	7557.57	8838.84	9163.10	9275.85	10040.50	12403.69	12143.62	6.38	94.88
III : Synthetic Rubber													
STYRENE BUTADIENE RUBBER (SBR)	271.00	271.00	277.00	11.95	57.25	124.80	167.33	193.97	228.64	227.83	212.91	50.90	76.86
POLY BUTADIENE RUBBER (PBR)	114.00	100.00	100.00	80.87	107.54	113.93	117.09	113.63	122.23	130.25	128.55	6.85	128.55
ETHYL VINYL ACETATE (EVA)	15.00	15.00	15.00	11.21	6.42	2.41	0.00	0.00	0.00	0.00	0.00	-100.00	0.00
NITRILE BUTADIENE RUBBER (NBR)	25.30	25.30	13.70	0.52	0.38	0.39	0.35	0.05	0.00	0.00	11.88	56.57	86.72
Total Synthetic Rubber	425.30	411.30	405.70	104.54	171.59	241.53	284.78	307.66	350.87	358.08	353.34	19.00	87.09
IV : Synthetic Detergent Intermediates													
LINEAR ALKYL BENZENE (LAB)	547.40	544.79	544.79	405.64	410.54	377.20	447.65	451.53	454.82	413.50	457.07	1.72	83.90
ETHYLENE OXIDE (EO)	140.00	135.00	135.00	190.89	185.32	188.31	216.06	291.30	232.34	301.18	279.37	5.59	206.94
Total Synth. Detergent Intermediates	687.40	679.79	679.79	596.53	595.86	565.51	663.71	742.82	687.16	714.68	736.44	3.06	108.33
V : Performance Plastic													

Table 8: Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2013-14 to 2020-21.

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilisation
	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
ABS RESINS	156.00	210.00	213.00	102.19	107.28	117.01	117.77	145.23	148.18	136.46	121.94	2.56	57.25
NYLON-6/ NYLON 6,6	28.20	68.50	83.50	20.45	20.75	21.44	21.54	20.56	21.52	41.57	55.39	15.30	66.33
POLYMETHYL METHACRYLATE (PMMA)	3.50	3.90	3.90	2.48	1.05	1.47	0.29	0.02	0.00	0.00	0.00	-100.00	0.00
STYRENE ACRYLONITRILE (SAN)	148.00	148.00	167.00	87.61	88.77	98.68	99.24	114.69	131.76	133.79	118.61	4.42	71.03
PET Chips/Polyester Chips	2607.66	2468.50	2558.55	1459.85	1361.98	1452.93	1548.70	1424.60	1271.09	1344.70	1208.99	-2.66	47.25
PTFE (TEFLON)	19.80	20.30	20.30	11.95	11.35	8.75	11.73	13.72	16.24	15.11	14.64	2.94	72.11
Total Performance Plastics	2963.16	2919.20	3046.25	1684.53	1591.18	1700.27	1799.27	1718.81	1588.79	1671.63	1519.57	-1.46	49.88
TOTAL BASIC MAJOR PETROCHEMICALS													
(I+II+III+IV+V)	18630.29	21285.80	21459.82	13410.29	13448.16	14904.54	15510.25	15670.34	16268.79	19040.86	17937.61	4.24	83.59
B : INTERMEDIATES													
I : FIBRE INTERMEDIATES													
ACRYLONITRILE (ACN)	41.00	24.00	24.00	37.04	33.70	1.94	0.00	0.00	0.00	0.00	0.00	-100.00	0.00
CAPROLACTUM	120.00	120.00	120.00	84.86	87.05	86.30	86.96	85.97	92.56	84.06	80.41	-0.77	67.00
MONO ETHYLENE GLYCOL (MEG)	1153.40	1868.10	2210.60	1069.28	1001.14	1158.97	1110.50	1132.65	1159.76	2007.78	1981.98	9.22	89.66
PURIFIED TEREPHTHALIC ACID (PTA)	3873.00	3873.00	3873.00	3476.51	3755.28	3431.78	3390.56	3492.44	3404.93	3267.07	2996.76	-2.10	77.38
Total Fibre Intermediates	5187.40	5885.10	6227.60	4667.68	4877.16	4678.98	4588.01	4711.06	4657.25	5358.91	5059.15	1.16	81.24
II : BUILDING BLOCKS													
(a) Olefins													
BUTADIENE	433.00	552.00	552.00	235.53	239.45	343.45	347.36	332.38	385.76	481.01	458.80	9.99	83.12
ETHYLENE	4446.50	7147.30	7147.30	3346.39	3191.90	3727.39	4021.73	4222.68	3831.89	6466.75	6364.89	9.62	89.05
PROPYLENE	4803.38	5190.38	5190.38	3988.06	3869.40	4456.69	4425.21	4457.91	4639.53	4887.62	5215.76	3.91	100.49
Total Olefins	9682.88	12889.68	12889.68	7569.97	7300.74	8527.53	8794.29	9012.97	8857.18	11835.39	12039.45	6.85	93.40
(b) Aromatics													
BENZENE	1566.35	1721.35	1884.35	1030.79	1094.38	1332.59	1332.04	1318.03	1414.56	1346.24	1407.87	4.55	74.71
MIXED XYLENE	898.33	898.33	898.33	247.54	215.00	269.35	296.03	271.35	249.05	269.63	146.68	-7.20	16.33
ORTHOXYLENE	420.00	420.00	511.00	412.41	462.46	499.51	444.88	447.76	406.30	386.39	522.12	3.43	102.18
TOLUENE	288.27	288.27	288.27	120.39	108.16	115.74	126.76	106.94	141.14	140.16	113.99	-0.78	39.54
PARAXYLENE (PX)	3131.70	3131.70	3821.70	2263.76	2757.84	3266.36	3161.30	3194.52	3331.81	2782.33	2614.21	2.08	68.40
Total Aromatics	6304.65	6459.65	7403.65	4074.89	4637.84	5483.55	5361.02	5338.60	5542.87	4924.74	4804.86	2.38	64.90
Total Intermediates													
(I+II(a)+II(b))	21174.93	25234.43	26520.93	16312.54	16815.75	18690.06	18743.32	19062.62	19057.29	22119.04	21903.46	4.30	82.59
C : OTHER PETRO-BASED CHEMICALS													
DIETHYLENE GLYCOL	83.30	132.90	170.90	106.65	100.96	114.24	108.24	105.70	107.41	167.74	172.33	7.10	100.83
DIACETONE ALCOHOL	9.50	9.50	9.50	0.00	0.00	0.00	0.00	0.21	4.07	6.04	2.93		30.81
ETHYLENE DICHLORIDE	593.20	593.20	593.20	278.03	285.30	277.35	282.57	282.35	339.20	345.29	326.24	2.31	55.00

Table 8: Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2013-14 to 2020-21.

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilisation
	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
BUTANOL	26.00	26.00	26.00	5.48	4.20	11.08	12.47	17.39	21.69	16.44	20.29	20.55	78.02
2-ETHYL HEXANOL **	55.20	55.20	55.20	20.19	13.89	44.41	45.59	56.64	58.89	48.75	49.67	13.72	89.99
VINYL CHLORIDE MONOMER	541.30	541.30	541.30	735.47	717.88	790.71	791.26	777.98	803.62	874.47	799.22	1.19	147.65
PBT*	0.00	0.00	0.00	0.43	0.50	0.50	0.61	0.58	1.29	6.25	6.09	45.97	
POLYCARBONATE*	0.00	0.00	0.00	0.16	0.16	0.17	0.15	0.09	0.12	0.11	0.00	-100.00	
PROPYLENE OXIDE	36.00	36.00	51.00	33.43	36.61	25.59	29.34	36.00	35.12	34.56	44.42	4.14	87.09
PROPYLENE GLYCOL	20.00	20.00	22.00	14.04	16.25	13.65	16.35	17.64	19.13	19.51	19.71	4.96	89.57
POLYVINYL ACETATE RESIN	17.34	17.34	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.96		24.68
UNSATURATED POLYESTER RESIN	0.00	34.00	34.00	0.00	0.00	0.00	0.00	0.00	0.00	16.44	8.79		25.85
METHYL METHACRYLATE	4.38	4.38	4.38	3.23	3.47	2.28	0.54	2.83	3.99	1.71	0.00	-100.00	0.00
ISO-BUTANOL	2.80	2.80	2.80	0.79	0.67	1.86	1.96	2.23	2.21	1.71	2.07	14.86	73.96
C4-RAFFINATE	291.60	291.60	291.60	392.64	364.61	428.64	437.17	339.20	380.26	413.33	433.42	1.42	148.63
PHTHALIC ANHYDRIDE	349.05	401.91	401.91	263.75	291.52	305.78	296.07	290.01	275.07	269.64	292.96	1.51	72.89
VINYL ACTATE MONOMER	30.00	30.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
ISOPROPANOL	70.20	70.20	70.20	75.90	74.98	71.18	72.47	71.83	58.27	60.51	55.31	-4.42	78.79
POLYOL	141.63	146.76	142.03	40.12	51.78	71.80	78.72	79.43	82.13	81.75	77.83	9.93	54.80
Total Other Petro-based Chemicals	2271.49	2413.09	2458.01	1970.31	1962.81	2159.22	2173.50	2080.10	2192.46	2364.23	2314.22	2.32	94.15
Total Major Petrochemical (9 group)	42076.70	48933.31	50438.76	31693.14	32226.72	35753.82	36427.08	36813.06	37518.55	43524.13	42155.29	4.16	83.58

(\$) : Includes capacity of all the units producing PFY, NFY, NIY and PPFY under broadbanding as Synthetic Filament Yarn :

* Nylon 6, 66 includes installed capacity of PBT and Polycarbonate.

(\$\$) : Independent capacity of units producing only NFY, NIY and PPFY.

As the capacities of these products are also included in Synthetic Filament yarn, capacity utilisation can not be worked out.

(\$\$\$) : Combined capacity to produce both LLDPE and HDPE and hence capacity utilisation can not be worked out. However production is independent.

(**) : Combined capacity of 2-EH, Butanol & Iso Butanol is given under 2 - EH)

Note : Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

Table 9: Installed Capacities of Selected Major Petrochemicals (Group Wise) from 2013-14 to 2020-21.

(Figures in 000'MT)

GROUP / PRODUCT	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
A : BASIC PETROCHEMICALS								
I : SYNTHETIC FIBRES	3769	4213	4452	4393	4379	4440	4521	4529
II : POLYMERS	8905	8905	9768	10110	10112	10115	12754	12799
III : SYNTHETIC RUBBER (ELASTOMERS)	244	425	425	425	425	425	411	406
IV : SYNTH. DETERGENT INTERMEDIATE	687	687	687	687	687	687	680	680
V : PERFORMANCE PLASTICS	2958	2983	3018	2945	2947	2963	2919	3046
MAJOR PETROCHEMICALS (I TO V)	16563	17213	18351	18561	18551	18630	21286	21460
B : INTERMEDIATES								
VI : FIBRE INTERMEDIATES	5067	5067	5067	5067	5187	5187	5885	6228
VII : OLEFINS	8484	8484	9462	9683	9683	9683	12890	12890
VIII : AROMATICS	5077	6274	6304	6305	6305	6305	6460	7404
Total (VI TO VIII)	18629	19826	20834	21055	21175	21175	25234	26521
C : OTHER PETRO-BASED CHEMICALS	2169	2244	2272	2273	2271	2271	2413	2458
Total (A,B & C)	37361	39283	41457	41888	41998	42077	48933	50439

Note: Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

Table 10: Consumption of Selected Major Petrochemicals (Product-wise) during 2013-14 to 2020-21

(Figures in 000'MT)

PRODUCT NAME	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I. SYNTHETIC FIBRE								
ACRYLIC FIBRE	95.81	88.54	97.20	83.83	83.94	94.00	118.72	93.38
POLYESTER STAPLE FIBREFILL	56.46	57.30	51.05	53.65	51.33	52.99	49.89	40.30
NYLON FILAMENT YARN	46.60	58.41	64.58	70.11	58.73	64.08	65.02	44.23
NYLON INDUSTRIAL YARN/TYRE CORD	107.96	102.52	98.16	109.826	112.53	115.76	103.02	95.452
POLYESTER FILAMENT YARN	1210.26	1602.69	1616.81	1537.24	1648.48	1703.72	1924.18	1695.96
POLYESTER STAPLE FIBRE	847.34	919.53	957.55	941.91	866.85	767.76	860.51	702.26
POLYPROPYLENE FILAMENT YARN	4.83	3.62	1.32	2.01	3.62	3.22	2.47	2.19
POLYPROPYLENE STAPLE FIBRE	8.52	15.14	21.39	16.82	16.02	16.19	12.08	9.29
POLYSTER INDUSTRIAL YARN	14.75	16.58	15.38	16.33	15.04	14.83	14.73	12.36
Elastomeric/Spandex Filament Yarn	12.69	16.04	20.36	21.93	27.24	28.89	29.42	13.89
Total	2405.22	2880.39	2943.80	2853.65	2883.77	2861.43	3180.03	2709.30
II. POLYMERS								
LOW DENSITY POLYETHYLENE	427.79	488.78	550.79	566.35	541.99	369.97	825.64	833.46
HIGH DENSITY POLYTHYLENE	1656.81	1947.02	2122.78	2372.35	2365.65	2042.53	2198.64	2321.85
POLYESTYRENE	224.14	247.12	264.80	273.18	284.55	285.18	296.48	250.86
POLYPROPYLENE (INC. CO-POLYMER)	3275.54	3499.59	4249.93	4460.35	4737.19	4915.80	5438.39	4911.79
EXPANDABLE POLYESTYRENE	77.69	78.99	85.42	96.85	103.44	106.44	108.98	91.18
POLY VINYL CHLORIDE	2574.19	2621.79	2936.15	3157.90	3305.72	3523.84	2439.91	1836.44
LINEAR LOW DENSITY POLYTHYLENE	1522.95	1449.51	1778.76	1734.12	1486.21	1349.40	2910.40	3050.91
PVC COMPOUND	54.20	58.29	65.91	42.13	14.35	-7.69	0.00	0.00
Total	9813.31	10391.10	12054.52	12703.23	12839.10	12585.47	14218.42	13296.48
III. SYNTHETIC RUBBER								
STYRENE BUTADIENE RUBBER	244.01	262.79	266.55	289.75	286.26	305.47	285.64	325.53
POLY BUTADIENE RUBBER	166.80	176.09	182.59	196.89	201.39	213.72	207.64	220.18
ETHYL PROPYLENE DIMERS	28.27	30.43	36.65	40.13	42.58	50.34	43.17	40.44
ETHYL VINYL ACETATE	124.76	144.70	166.40	143.11	182.45	178.15	192.67	188.54
NITRILE BUTADIENE RUBBER	29.67	26.66	51.93	36.35	39.93	38.01	40.46	166.57
BUTYL RUBBER	78.53	83.29	90.83	100.26	111.02	120.12	89.29	64.33
Total	672.04	723.95	794.94	806.50	863.63	905.82	858.88	1005.58
IV. SYNTHETIC DETERGENT INTERMEDIATES								
LINEAR ALKYL BENZENE	496.97	517.34	585.94	669.30	656.51	681.61	677.34	721.54
ETHYLENE OXIDE	190.44	184.56	188.03	215.58	290.89	231.64	300.36	278.43
Total	687.41	701.90	773.97	884.88	947.39	913.25	977.70	999.97
V. PERFORMANCE PLASTICS								
ABS RESIN	164.91	176.97	206.62	220.16	242.99	267.13	240.78	220.38
NYLON-6	118.59	136.67	150.18	161.53	174.07	216.48	237.01	55.39
POLYMETHYL METHACRYLATE	11.63	7.11	12.62	18.90	26.45	25.22	24.70	28.48
STYRENE ACRYLONITRILE	93.30	95.07	107.67	107.11	122.94	140.56	143.78	131.73
NYLON 6,6	0.91	1.25	1.23	1.17	1.08	1.02	0.73	0.00
POLYESTER CHIPS/PET CHIPS	1123.03	1153.57	792.03	729.45	676.37	534.81	789.58	1158.62
POLYTETRAFLUOROETHYLENE(PTFE)	8.52	5.95	4.75	5.64	7.07	7.14	6.84	6.79
Total	1520.90	1576.58	1275.10	1243.96	1250.96	1192.35	1443.41	1601.38
TOTAL BASIC MAJOR PETROCHEMICALS								
(I+II+III+IV+V)	15098.88	16273.91	17842.34	18492.22	18784.85	18458.32	20678.44	19612.71
FIBRE INTERMEDIATE								
ACRYLONITRILE	137.90	131.08	159.82	139.70	158.26	180.36	172.88	126.70
CAPROLACTUM	107.84	119.33	130.87	138.86	144.33	158.98	151.85	131.83
DIMETHYL TEREPHTHALATE	1.79	2.09	2.22	1.76	2.26	1.45	1.81	1.77
MONO EHYLENE GLYCOL	1822.97	1931.46	2198.31	2283.68	2061.67	1501.89	2644.05	2277.78
PURIFIED TEREPHTHALIC ACID	4454.58	4799.80	3955.64	3543.14	3801.61	3812.26	4073.60	3487.24
Total	6525.06	6983.76	6446.86	6107.15	6168.12	5654.95	7044.19	6025.31
OLEFINS								
BUTADIENE	117.19	170.19	214.64	242.62	231.81	250.62	306.78	292.02
ETHYLENE	3371.18	3235.80	3743.33	4102.62	4125.38	3699.24	6379.34	6301.90
PROPYLENE	3988.31	3871.53	4445.58	4415.14	4445.97	4608.31	4888.99	5204.42

Table 10: Consumption of Selected Major Petrochemicals (Product-wise) during 2013-14 to 2020-21

(Figures in 000'MT)

PRODUCT NAME (1)	2013-14 (2)	2014-15 (3)	2015-16 (4)	2016-17 (5)	2017-18 (6)	2018-19 (7)	2019-20 (8)	2020-21 (9)
Total	7476.67	7277.52	8403.54	8760.38	8803.16	8558.17	11575.10	11798.33
AROMATICS								
BENZENE	400.29	517.68	417.72	542.62	31.77	-214.30	-51.09	-80.55
MIXED XYLENE	65.87	206.19	269.45	296.08	273.36	248.71	269.34	146.67
ORTHO-XYLENE	228.28	271.15	299.63	316.81	277.81	203.57	225.51	237.70
TOLUENE	369.35	386.04	454.13	513.67	516.98	565.59	596.53	697.99
PARAXYLENE	2220.25	2391.98	3213.80	3557.33	2256.66	1508.80	940.51	442.74
Total	3284.04	3773.04	4654.73	5226.49	3356.58	2312.38	1980.80	1444.55
OTHER PETRO-BASED CHEMICALS								
DIETHYLENE GLYCOL	106.65	100.96	114.24	108.24	105.70	107.41	167.74	172.33
DIACETONE ALCOHOL	0.00	0.00	0.00	0.00	0.21	4.07	6.04	2.93
ETHYLENE DICHLORIDE	717.56	750.57	861.54	786.54	950.82	901.70	1044.87	921.71
BUTANOL	47.98	60.40	73.40	68.13	70.20	70.20	75.02	62.52
POLY VINYL ALCOHOL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OXO ALCOHOL	0.51	0.09	0.69	1.92	1.38	-0.24	1.55	2.06
2-ETHYL HEXANOL	120.37	142.39	152.76	110.41	112.13	109.82	130.36	104.51
VINYL CHLORIDE MONOMER	1038.51	1035.81	1140.08	1135.68	1262.37	1261.15	1385.63	1279.10
ALFA OLEFINS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EPICHLHYDRINE	22.98	33.57	43.36	48.06	55.98	64.97	61.06	55.14
ISO BUTYLENE	21.44	13.01	15.83	20.05	48.70	44.56	-7.30	-4.24
METAXYLENE	3.03	0.92	3.02	2.60	2.07	2.93	1.88	2.69
METHYL ISOBUTYL KETONE	18.29	23.04	27.29	21.57	33.74	31.89	27.81	30.08
PBT	0.43	0.50	0.50	0.61	0.58	1.29	6.25	6.09
PIB	3.56	6.30	8.24	13.80	12.42	11.99	10.30	6.67
POLYCARBONATE	120.57	122.26	133.91	134.53	154.11	187.12	172.47	174.66
PROPYLENE OXIDE	45.11	59.52	51.14	52.40	59.44	61.92	54.72	61.78
PROPYLENE GLYCOL	56.77	64.22	67.16	66.82	73.86	83.93	80.95	75.98
POLYVINYL ACETATE RESIN	-11.26	-11.45	-8.05	-5.72	-3.51	-5.80	-5.47	-1.40
UNSATURATED POLYESTER RESIN	20.41	16.20	18.19	23.71	35.45	28.29	49.55	40.83
METHYL METHACRYLATE	3.23	3.47	2.28	0.54	2.83	3.99	1.71	0.00
N-BUTENE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ISO-BUTANOL	0.79	0.67	1.86	1.96	2.23	2.21	1.71	2.07
ETHYL BENZENE	0.17	0.13	0.15	0.31	0.35	0.72	0.46	0.50
C4-RAFFINATE	392.64	364.61	428.64	437.17	339.20	380.26	413.33	433.42
TOLUOLE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ACRYLATES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CELLULOSE ACETATE BUTYRATE	-0.09	-0.04	0.00	-0.01	0.00	0.00	0.01	0.01
CELLULOSE ACETATE SHEET	0.92	1.23	1.26	0.98	1.29	1.49	1.32	1.29
CELLULOSE NITRATE SHEET	0.50	0.25	0.09	0.06	0.10	0.10	0.07	1.24
MELAMINE MOULDING POWDER	8.04	3.74	3.88	2.87	-0.06	-1.30	-6.75	-9.81
POLYACETAL RESIN	25.73	32.07	34.90	37.50	43.53	48.48	47.34	48.42
PHTHALIC ANHYDRIDE	295.51	305.24	345.13	346.10	382.58	393.37	415.23	410.45
STYRENE	570.41	610.86	716.90	724.54	784.75	811.25	872.56	720.79
VINYL ACTATE MONOMER	143.27	137.99	139.95	150.25	163.70	163.01	159.43	136.53
ISOPROPANOL	123.84	132.04	155.07	162.35	171.29	193.10	204.16	233.81
POLYOL	180.22	200.76	236.94	226.03	274.55	308.30	295.68	239.51
Total	4078.06	4211.34	4770.33	4679.97	5142.00	5272.18	5669.68	5211.66

Note : 1. Production and Installed Capacity data based on MPRs received from manufacturer under large and medium scale units only monitored by S&M Division of DCPC.

2. Data Source in respect of imports and exports is DGCIS, M/o Commerce and Industry.

§ Derived consumption as Production + Imports - Exports

Section – III

Foreign Trade

Table 11: Exports and Imports of Chemicals & Chemical Products (excluding Pharmaceutical Products and Fertilizers) during 2013-14 to 2020-21

<i>Values in Rs. Crore</i>										
HS Code	Commodity	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	CAGR (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Total National Exports of which		1905011	1896445	1716384	1849434	1956515	2307726	2219854	2159043	1.8
28	INORGANIC CHEMICALS	8258	8749	7913	9138	11175	14056	12512	12301	5.9
29	ORGANIC CHEMICALS	72860	73069	75295	78386	95381	127855	124195	133637	9.1
32	TANNING OR DYEING	15455	17206	16165	17189	18951	23124	24409	22660	5.6
38	MISCELLANEOUS CHEMICAL PRODUCTS.	18694	19432	20083	21792	25080	32397	35663	37886	10.6
39	PLASTIC AND ARTICLES THEREOF.	34154	31022	34381	35502	40928	56079	48970	51004	5.9
4002	SYNTHETIC RUBBER AND FACTICE	245	379	452	480	571	739	759	821	18.8
54	MAN-MADE FILAMENTS.	15575	14621	13460	13334	13984	16018	16962	11470	-4.3
55	MAN-MADE STAPLE FIBRES.	12621	13334	13625	14373	13212	13308	11824	9559	-3.9
A: Total Chemicals and Petrochemical Products		177862	177813	181374	190193	219281	283575	275294	279337	6.7
Share in Total Export (%)		9.3	9.4	10.6	10.3	11.2	12.3	12.4	12.9	
Total National Imports of which		2715434	2737087	2490306	2577675	3001033	3594675	3360954	2915958	1.0
28	INORGANIC CHEMICALS	29063	31413	33170	31654	38927	53237	45045	50955	8.4
29	ORGANIC CHEMICALS	103180	108320	101986	103798	123761	156552	140205	145830	5.1
32	TANNING OR DYEING	9254	9821	10467	11186	12995	15460	14518	14036	6.1
38	MISCELLANEOUS CHEMICAL PRODUCTS.	23084	25494	27207	30642	35521	41748	39069	45324	10.1
39	PLASTIC AND ARTICLES THEREOF.	61072	71398	74566	77573	89768	106591	100607	98392	7.1
4002	SYNTHETIC RUBBER AND FACTICE	7339	6697	5205	5654	6687	7896	6079	6269	-2.2
54	MAN-MADE FILAMENTS.	4597	5042	4879	4856	5538	6843	7351	6727	5.6
55	MAN-MADE STAPLE FIBRES.	3722	4539	4401	3826	4658	6508	6785	6180	7.5
B: Total Chemicals and Petrochemical Products		241311	262722	261880	269189	317856	394834	359660	373714	6.4
Share in Total Import (%)		8.9	9.6	10.5	10.4	10.6	11.0	10.7	12.8	

Chapter 28: Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes; Chapter 29: Organic Chemicals; Chapter 32: Tanning or Dyeing Extracts; Tannins and their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and other Mastics; Inks; Chapter 38: Miscellaneous Chemical Products; Chapter 39: Plastics and articles thereof; 4002: Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any product of heading No.4001 with any product of this heading, in primary forms or in plates, sheets; Chapter 54: Man-made Filaments and Chapter 55: Man-made staple fibres

Note : \$ Import and Export includes both technical and formulations.

Note: Data Source in respect of Imports and Exports is DGCIS, M/o Commerce and Industry.

Table 12: Exports and Imports of Chemicals & Chemical Products (including Pharmaceutical Products and Fertilizers) during 2013-14 to 2020-21

<i>Values in Rs. Crore</i>										
HS Code	Commodity	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	CAGR (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Total National Exports of which		1905011	1896445	1716384	1849434	1956515	2307726	2219854	2159043	1.8
28,29,32,38,39,4 002, 54 & 55	Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers)	177862	177813	181374	190193	219281	283575	275294	279337	6.7
	Share in Total Exports (%)	9.3	9.4	10.6	10.3	11.2	12.3	12.4	12.9	
30	Pharmaceutical Products	67404	70815	84481	86705	85447	103240	115473	143738	11.4
	Share in Total Exports (%)	3.5	3.7	4.9	4.7	4.4	4.5	5.2	6.7	
31	Fertilisers	492	555	673	466	685	1038	837	779	6.8
	Share in Total Exports (%)	0.03	0.03	0.04	0.03	0.04	0.04	0.04	0.04	
A: Total Chemicals and Chemical Products (including Pharmaceutical Products and Fertilizers)		245758	249183	266528	277364	305413	387853	391604	423855	8.1
Share in Total Exports (%)		12.90	13.14	15.53	15.00	15.61	16.81	17.64	19.63	
Total National Imports of which		2715434	2737087	2490306	2577675	3001033	3594675	3360954	2915958	1.0
28,29,32,38,39,4 002, 54 & 55	Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers)	241311	262722	261880	269189	317856	394834	359660	373714	6.4
	Share in Total Imports (%)	8.9	9.6	10.5	10.4	10.6	11.0	10.7	12.8	
30	Pharmaceutical Products	9371	9961	10742	11515	12241	14581	16530	18934	10.6
	Share in Total Imports (%)	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.6	
31	Fertilisers	32639	39106	45973	28754	30108	46457	47397	51034	6.6
	Share in Total Imports (%)	1.20	1.43	1.85	1.12	1.00	1.29	1.41	1.75	
B: Total Chemicals and Petrochemical Products (including Pharmaceutical Products and Fertilizers)		283322	311790	318595	309458	360205	455872	423587	443683	6.6
Share in Total Imports (%)		10.43	11.39	12.79	12.01	12.00	12.68	12.60	15.22	

Chapter 28: Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes; Chapter 29: Organic Chemicals; Chapter 30: Pharmaceutical Products; Chapter 31: Fertilisers; Chapter 32: Tanning or Dyeing Extracts; Tannins and their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and other Mastics; Inks; Chapter 38: Miscellaneous Chemical Products; Chapter 39: Plastics and articles thereof; 4002: Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any product of heading No.4001 with any product of this heading, in primary forms or in plates, sheets; Chapter 54: Man-made Filaments and Chapter 55: Man-made staple fibres

Note : \$ Import and Export includes both technical and formulations.

Note: Data Source in respect of Imports and Exports is DGCIS, M/o Commerce and Industry.

Table 12A: Net Imports of Chemicals and Chemical Products (including Pharmaceutical Products and Fertilizers) during 2013-14 to 2020-21.

Values in Rs. Crore

HS Code	Commodity	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Total National Net Imports of which		810423	840641	773921	728242	1044519	1286948	1141100	756914
28	INORGANIC CHEMICALS	20805	22664	25256	22516	27752	39181	32533	38654
29	ORGANIC CHEMICALS	30319	35251	26692	25412	28380	28696	16009	12194
32	TANNING OR DYEING	-6201	-7385	-5698	-6004	-5956	-7664	-9891	-8624
38	MISCELLANEOUS CHEMICAL PRODUCTS.	4390	6061	7124	8850	10441	9352	3407	7438
39	PLASTIC AND ARTICLES THEREOF.	26918	40376	40185	42071	48841	50512	51638	47388
4002	SYNTHETIC RUBBER AND FACTICE	7094	6318	4753	5174	6116	7157	5320	5448
54	MAN-MADE FILAMENTS.	-10978	-9579	-8582	-8479	-8446	-9175	-9611	-4743
55	MAN-MADE STAPLE FIBRES.	-8899	-8795	-9224	-10546	-8554	-6800	-5039	-3379
Net Imports of Total Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers)		63449	84909	80506	78995	98575	111259	84366	94377
Share in Total National Net Imports (%)		7.8	10.1	10.4	10.8	9.4	8.6	7.4	12.5
30	Pharmaceutical Products	-58032	-60854	-73739	-75190	-73206	-88659	-98943	-124804
31	Fertilisers	32147	38551	45300	28289	29423	45419	46560	50255
Net Imports of Total Chemicals and Chemical Products (including Pharmaceutical Products and Fertilizers)		37564	62607	52067	32094	54792	68019	31983	19828
Share in Total National Net Imports (%)		4.6	7.4	6.7	4.4	5.2	5.3	2.8	2.6

Chapter 28: Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes; Chapter 29: Organic Chemicals; Chapter 32: Tanning or Dyeing Extracts; Tannins and their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and other Mastics; Inks; Chapter 38: Miscellaneous Chemical Products; Chapter 39: Plastics and articles thereof; 4002: Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any product of heading No.4001 with any product of this heading, in primary forms or in plates, sheets; Chapter 54: Man-made Filaments and Chapter 55: Man-made staple fibres.

Note : (i) \$ Import and Export includes both technical and formulations.
(ii) Data Source in respect of imports and exports is DGCIS, M/o Commerce and Industry.

Table-13: Exports of Major Chemicals (Group Wise) during 2013-14 to 2020-21

(Qty. in MT ; Value in Rs. Lakh)

GROUP	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
ALKALI CHEMICALS	164213	35747	73639	17660	106744	29210	154244	39591	273456	86880	239321	87844	329459	82760	428873	85310
INORGANIC CHEMICALS	167449	116036	163592	100558	156683	74466	377587	111322	173071	102270	176900	133248	196035	134079	194941	119206
ORGANIC CHEMICALS	335353	343064	240545	249461	231728	216771	190306	232940	204923	320492	233147	425738	244524	422713	295922	438010
PESTICIDES & INSECTICIDES \$	206960	985161	230227	974682	266915	1126874	342331	1315026	358481	1481031	404783	2004132	398069	2163297	470787	2380601
DYES & PIGMENTS	346539	1145588	353220	1285827	376046	1219795	419272	1307546	485741	1439290	525170	1800681	530297	1928414	514395	1770381
EXPORTS OF MAJOR CHEMICALS	1220514	2625596	1061223	2628188	1138116	2667116	1483740	3006425	1495672	3429963	1579321	4451643	1698384	4731263	1904918	4793508

Source: Imports & Exports data have been received from DGCIS, Ministry of Commerce & Industry.

Note : \$ Import and Export includes both technical and formulations.

Table-14: Imports of Major Chemicals (Group Wise) during 2013-14 to 2020-21

(Qty. in MT ; Value in Rs. Lakh)

GROUP	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
ALKALI CHEMICALS	874159	152967	1134146	206474	1117878	218199	1121137	215051	1193978	265347	1049124	225523	1157130	240752	967827	170499
INORGANIC CHEMICALS	873906	265840	911969	267873	1009821	237368	1010071	235237	1228854	308363	1579667	485763	1531826	354602	1187990	302101
ORGANIC CHEMICALS	2495989	957223	2885815	995356	3143476	865684	3170287	904366	3407051	1207748	3644781	1520278	3775333	1078053	3715724	1124697
PESTICIDES & INSECTICIDES \$	37099	335996	40674	374050	33868	390707	42591	490581	44145	581385	49233	632590	42580	611078	66190	899057
DYES & PIGMENTS	52315	208985	51935	214741	54691	219304	55868	214913	62971	231383	56452	278422	50583	281435	45339	252666
IMPORTS OF MAJOR CHEMICALS	4333468	1921011	5024539	2058494	5359734	1931262	5399954	2060148	5936999	2594226	6379257	3142576	6557452	2565920	5983070	2749020

Source: Imports & Exports data have been received from DGCI, Ministry of Commerce & Industry.

Note : \$ Import and Export includes both technical and formulations.

Table-15: Net Imports of Major Chemicals (Group Wise) during 2013-14 to 2020-21

(Qty. in MT ; Value in Rs. Lakh)

GROUP	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
ALKALI CHEMICALS	709946	117220	1060507	188814	1011134	188989	966893	175460	920522	178467	809803	137679	827671	157992	538954	85189
INORGANIC CHEMICALS	706457	149804	748377	167315	853138	162902	632484	123915	1055783	206093	1402767	352515	1335791	220523	993049	182895
ORGANIC CHEMICALS	2160636	614159	2645270	745895	2911748	648913	2979981	671426	3202128	887256	3411634	1094540	3530809	655340	3419802	686687
PESTICIDES & INSECTICIDES \$	-169861	-649165	-189553	-600632	-233047	-736167	-299740	-824445	-314336	-899646	-355550	-1371542	-355489	-1552219	-404597	-1481544
DYES & PIGMENTS	-294224	-936603	-301285	-1071086	-321355	-1000491	-363404	-1092633	-422770	-1207907	-468718	-1522259	-479714	-1646979	-469056	-1517715
NET IMPORTS OF MAJOR CHEMICALS	3112954	-704585	3963316	-569694	4221618	-735854	3916214	-946277	4441327	-835737	4799936	-1309067	4859068	-2165343	4078152	-2044488

Source: Imports & Exports data have been received from DGCI, Ministry of Commerce & Industry.

Note : \$ Import and Export includes both technical and formulations.

Table 16 : Exports of Major Chemicals (Productwise) during 2013-14 to 2020-21

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
ALKALI CHEMICALS																
SODA ASH	84254	12506	27720	5166	18613	3927	64377	10793	110087	19377	62457	15202	137749	27137	149721	23725
CAUSTIC SODA	76059	22568	42200	11973	82144	23807	84809	27773	159630	66829	172165	71663	187494	54532	275374	60246
LIQUID CHLORINE	3900	673	3719	521	5987	1476	5058	1025	3739	674	4699	979	4216	1091	3778	1339
TOTAL	164213	35747	73639	17660	106744	29210	154244	39591	273456	86880	239321	87844	329459	82760	428873	85310
INORGANIC CHEMICALS																
ALUMINIUM FLUORIDE	3658	2571	2831	1980	1796	1240	321	265	206	204	442	363	1362	1210	2046	1872
CALCIUM CARBIDE	268	148	412	230	371	206	493	284	464	258	325	204	371	244	129	112
CARBON BLACK	123679	88731	114119	77832	114668	55019	332172	87414	122287	72959	122832	103643	144017	103457	138724	85640
POTASSIUM CHLORATE	724	451	634	492	758	576	1658	1145	1941	1245	3024	2124	3178	2190	2595	1803
SODIUM CHLORATE	7	10	31	21	13	13	118	56	1075	256	810	41	0	6	5	5
TITANIUM DIOXIDE	9051	12853	5158	7108	4436	5582	8183	10216	9560	15377	7345	12743	6235	10654	6483	11521
RED PHOSPHORUS	411	1557	360	1299	482	1777	454	1757	455	1716	595	2242	650	2567	582	2460
HYDROGEN PEROXIDE	544	217	244	143	351	222	270	284	116	214	263	225	808	482	3077	1053
CALCIUM CARBONATE	29107	9498	39803	11453	33808	9831	33918	9901	36967	10041	41264	11663	39414	13269	41300	14740
TOTAL	167449	116036	163592	100558	156683	74466	377587	111322	173071	102270	176900	133248	196035	134079	194941	119206
ORGANIC CHEMICALS																
ACETIC ACID	7338	3134	6489	3449	8378	5181	12914	6277	12220	5401	17821	10476	12746	6265	10697	6270
ACETIC ANHYDRIDE	6430	3470	20098	11565	18605	9941	20443	10277	19644	13743	18444	13582	20529	12815	23960	15302
ACETONE	674	628	3182	2975	10778	6392	3225	2201	5054	3173	10901	5904	11004	5646	28161	19355
PHENOL	2142	3230	2009	3338	6841	7379	4013	8192	4750	9709	4724	11740	22273	23408	53100	39575
METHANOL	81917	22584	49463	11525	44013	8196	12624	3123	9466	2846	10943	3819	12941	3482	8451	2607
FORMALDEHYDE	6369	2020	7467	1213	8480	1383	8406	1548	10616	2098	12484	2495	14153	2484	15241	2734
NITROBENZENE	146	131	150	137	49	38	344	231	60	49	103	110	133	131	98	99
CITRIC ACID	2013	1671	1737	1364	1487	1144	1670	1244	2393	1931	2323	2010	2411	1942	2296	2018
MALEIC ANHYDRIDE	27	36	37	47	80	67	232	164	233	227	87	105	167	193	50	62
PENTAERYTHRITOL	1460	2277	1557	2516	1632	2958	2044	3470	2110	3399	2287	4161	2584	4741	1336	2550
ANILINE	94	143	86	141	129	134	168	207	162	614	137	341	68	148	68	89

Table 16 : Exports of Major Chemicals (Productwise) during 2013-14 to 2020-21

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
CHLORO METHANES	35	353	144	236	38	41	89	121	101	283	75	149	49	107	68	156
ISOBUTYLBENZENE	14156	21087	13944	19250	12572	14186	13430	14854	12341	14384	11740	16320	9705	14150	16156	20894
ONCB	2555	2428	2231	2283	843	883	973	950	0	0	0	0	0	0	0	0
PNCB	2370	1763	843	564	1670	1114	1023	738	0	0	0	0	0	0	0	0
MEK	460	2382	673	922	184	795	189	98	19	36	465	477	243	245	66	75
ACETALDEHYDE	37	118	25	140	2	4	40	44	3	6	1148	912	1139	893	1027	692
ETHANOLAMINES	1235	4665	1027	3696	1129	7119	1692	4996	4801	14201	3143	13553	1686	10522	2760	11850
ETHYL ACETATE	190187	103855	115096	67934	104814	54269	93699	48020	105551	62174	118682	82170	108384	63095	108725	69937
MENTHOL	14988	166411	13135	115160	8836	94548	12006	125246	12749	183951	13351	253213	17089	265334	19980	240427
ORTHO NITRO TOLUENE	720	678	1152	1006	1168	999	1082	939	2650	2267	4289	4201	7220	7112	3682	3318
TOTAL	335353	343064	240545	249461	231728	216771	190306	232940	204923	320492	233147	425738	244524	422713	295922	438010
PESTICIDES & INSECTICIDES																
MALATHION	415	819	1260	2346	1010	1943	1264	2274	1977	3682	2499	5792	2318	6230	1673	5079
DIMETHOATE	184	679	369	1327	20	52	24	58	24	62	126	429	199	603	154	590
D.D.V.P.	298	707	564	1449	550	1461	322	1145	493	1835	689	2716	12	41	639	2620
QUINALPHOS	950	3360	996	3900	235	1036	384	1772	382	1645	281	1439	338	1606	522	2909
ENDOSULPHAN	45	59	0	0	0	0	0	0	0	1	0	0	0	0	0	0
CYPERMETHRIN	11982	58546	10487	50407	8837	45949	9416	45742	9706	62713	13609	112381	15122	95462	18945	106342
FENTHION	0	0	0	0	0	0	10	18	0	0	0	0	0	0	0	0
OTHER PESTICIDES	48228	206246	37862	178366	41058	214054	45560	208648	43320	216510	39174	233275	7416	28448	6155	23536
OTHER INSECTICIDES	48918	372937	45483	344754	31146	276427	41471	311285	50008	393497	62714	580271	106352	840555	111743	833725
COPPER-OXYCHLORIDE	417	1155	867	2311	810	1818	871	1921	723	1732	806	2427	2240	5896	1603	5135
2, 4-D	14851	27924	10938	18095	19449	29770	20677	27496	24125	36076	22242	46347	19623	32924	21097	33198
ISOPROTURON	2114	7804	2150	7972	1087	3830	356	1295	0	0	0	0	0	0	0	0
ALUMINIUM PHOSPHIDE	853	3703	223	562	64	226	127	515	505	1703	481	2084	426	1909	764	3024
METHYL BROMIDE	383	1333	551	1940	1274	4641	1756	6229	2000	7292	2208	8384	1628	6682	2089	9966
SPROUTING PRODUCTS	15005	130898	19150	151055	32381	266182	50720	362041	67039	425113	74058	595122	79434	717390	101726	857814
OTHER FUNGICIDES	62317	168991	99327	210198	128994	279485	169373	344587	158179	329170	185896	413465	162961	425551	203677	496663

Table 16 : Exports of Major Chemicals (Productwise) during 2013-14 to 2020-21

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
TOTAL	206960	985161	230227	974682	266915	1126874	342331	1315026	358481	1481031	404783	2004132	398069	2163297	470787	2380601
DYES & PIGMENTS																
AZO DYES	57392	172261	51902	194665	55327	161970	60390	162456	69996	181785	72999	225224	68352	210313	64125	179167
THAN AZO)	5637	21363	4004	20146	3559	17300	4434	19689	5098	21655	5103	26145	5601	28666	5892	29584
BASIC DYES	7148	19082	7646	21701	8173	23896	9229	26186	10757	32222	12017	44585	12730	48887	13585	51140
DISPERSE DYES	9248	33190	12065	48545	13117	52818	16078	59912	14460	56914	20552	107647	23362	133160	18521	93517
FAST COLOUR BASES	2619	10191	2806	11890	2262	11868	2174	15766	2042	9726	2652	14987	5364	46929	3667	21816
OIL SOLUBLE (SOLVENT DYES)	4965	23306	6826	32614	6123	31703	8702	39439	8995	42906	10195	66808	11091	76571	9106	65358
OPTICAL WHITENING AGENTS	23381	36889	27211	44223	25203	46519	26957	46240	30124	48069	30259	66858	26084	82724	21458	44381
ORGANIC PIGMENT	15	100	191	500	75	531	71	293	62	185	15	98	50	333	67	229
PIGMENT EMULSION	71335	353119	76407	365943	81536	374190	88980	392700	102051	441253	110526	494598	110669	534039	116980	581196
REACTIVE DYES	110018	340284	107369	392147	113224	344963	128417	379350	147417	413080	158530	511426	169648	502283	152579	426490
BLACK)	1141	1575	1993	2627	1472	1945	2023	2682	5467	5794	5720	7303	4510	5233	3701	4115
VAT DYES	1955	24387	2132	31855	1364	20523	1404	22737	1707	26607	4475	46284	4524	64023	3643	63587
SOLUBILISED VAT DYES	31	491	29	283	36	354	31	265	46	529	63	789	71	1185	83	759
FOOD COLOURS	22893	65439	26034	77218	27101	79537	28359	79492	31110	87129	29007	107344	25347	107786	30271	118294
NAPTHOLS	887	2597	1139	3113	1489	3463	2076	4753	2329	5725	3276	8341	4169	11467	4982	10894
OTHER DYES	9558	23840	9612	27865	10159	22693	12711	24977	13735	26227	13621	31196	15218	34504	17473	34086
INORGANIC PIGMENTS	18316	17474	15854	10492	25826	25522	27236	30609	40345	39484	46160	41048	43507	40311	48262	45768
TOTAL	346539	1145588	353220	1285827	376046	1219795	419272	1307546	485741	1439290	525170	1800681	530297	1928414	514395	1770381

Note: Data Source in respect of Imports and Exports is DGCIS, M/o Commerce and Industry.

Table 17 : Imports of Major Chemicals (Productwise) during 2013-14 to 2020-21

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
ALKALI CHEMICALS																
SODA ASH	569420	79817	725517	112616	633263	101707	695307	102490	772622	111757	840591	144900	847704	152515	719731	114804
CAUSTIC SODA	304653	73038	407981	93584	484133	116303	425795	112391	421298	153382	208267	79927	309345	87982	248057	55495
LIQUID CHLORINE	86	112	648	274	482	189	35	170	58	208	266	696	81	255	39	200
TOTAL	874159	152967	1134146	206474	1117878	218199	1121137	215051	1193978	265347	1049124	225523	1157130	240752	967827	170499
INORGANIC CHEMICALS																
ALUMINIUM FLUORIDE	24542	17383	30120	20259	27258	18102	46564	26437	49758	29075	62374	56075	40362	37910	61224	48059
CALCIUM CARBIDE	64239	26743	78332	31525	61935	25429	55692	23652	55651	23941	45321	21554	31218	14507	32666	17749
CARBON BLACK	145939	112823	139468	108915	124059	83401	128740	82424	186224	143618	278531	249368	197491	153367	190469	127583
POTASSIUM CHLORATE	7040	4357	6147	3856	3160	2026	100	61	29	22	128	272	55	119	909	884
SODIUM CHLORATE	28083	11570	21818	9085	17298	6400	7447	2907	8822	3041	14240	5884	24082	11254	11589	5118
TITANIUM DIOXIDE	16875	29196	17574	28243	16421	25709	13901	22943	13701	24771	14546	28686	16416	30825	13389	25107
RED PHOSPHORUS	266	750	36	98	0	0	0	1	0	3	14	51	18	57	4	18
HYDROGEN PEROXIDE	62527	16443	56276	14311	44084	11211	57068	15910	68474	19305	84261	36931	52727	15858	22355	8150
CALCIUM CARBONATE	524395	46575	562198	51581	715606	65090	700559	60902	846195	64587	1080252	86942	1169457	90705	855385	69433
TOTAL	873906	265840	911969	267873	1009821	237368	1010071	235237	1228854	308363	1579667	485763	1531826	354602	1187990	302101
ORGANIC CHEMICALS																
ACETIC ACID	664797	197806	712384	234821	792775	206305	847808	193958	884515	290624	937298	422360	926492	273709	904345	275694
ACETIC ANHYDRIDE	1792	985	2689	1538	2918	1780	2272	1118	4381	2346	12275	9700	20529	11716	18807	10479
ACETONE	116758	81421	126832	82658	138402	55796	135887	63055	146878	74975	116760	52108	72402	28094	82056	53673
PHENOL	214096	172402	200115	183502	248769	147715	282187	176601	288572	202842	231808	217710	144005	99070	170993	89789
METHANOL	1310438	341804	1641624	319399	1711879	285259	1637457	295762	1783293	400004	1986712	519474	2286274	425567	2219944	434805
FORMALDEHYDE	433	216	412	225	66	42	84	248	46	44	22	13	5	111	6	148
NITROBENZENE	0	4	1208	802	5838	2733	14429	6944	15384	8207	18204	10721	15533	8073	9866	5008
CITRIC ACID	64099	31694	67369	33345	75978	36119	81681	39558	84262	45489	95283	45136	90958	38453	94966	47550
MALEIC ANHYDRIDE	36751	39695	38388	35773	47399	31392	50813	34618	52627	42928	69920	61694	66942	46858	59533	46705
PENTAERYTHRITOL	15650	16423	13681	14646	19486	21468	19380	20690	17963	19614	18407	23000	21311	23116	13613	13022
ANILINE	31742	34853	36095	36876	38341	26965	44650	29368	65416	58924	88454	81524	80946	53293	72770	47402
CHLORO METHANES	143	296	113	289	608	364	258	223	519	429	1413	1089	2404	2122	2469	2111
ISOBUTYLBENZENE	26	19	0	0	0	0	0	0	0	0	0	0	2	4	0	0
ONCB	672	589	395	410	237	192	839	628	0	0	0	0	0	0	0	0
PNCB	398	295	3838	2301	8408	3886	6095	2899	0	0	0	0	0	0	0	0
MEK	27239	23186	27539	25599	40883	26950	30901	16629	45331	36027	47158	40994	25509	19145	42542	33013

Table 17 : Imports of Major Chemicals (Productwise) during 2013-14 to 2020-21

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
ACETALDEHYDE	97	436	53	176	74	299	130	357	81	243	94	275	113	375	82	568
ETHANOLAMINES	10023	10652	11286	17183	10072	10321	11662	10202	16101	16140	16648	19347	16694	16398	19070	17807
ETHYL ACETATE	240	466	201	453	290	909	1664	861	43	127	2917	2358	2157	1768	141	1697
MENTHOL	457	3889	507	4307	936	7112	1511	10211	1372	8573	1334	12718	3057	30181	4521	45226
ORTHO NITRO TOLUENE	138	92	1086	1053	117	77	579	436	267	212	74	57	0	0	0	0
TOTAL	2495989	957223	2885815	995356	3143476	865684	3170287	904366	3407051	1207748	3644781	1520278	3775333	1078053	3715724	1124697
PESTICIDES & INSECTICIDES																
DIMETHOATE	46	106	0	0	0	0	0	0	0	0	0	0	0	0	63	326
D.D.V.P.	70	99	20	36	64	116	16	28	35	66	1561	3167	0	0	0	0
QUINALPHOS	0	0	0	0	0	0	0	0	0	0	0	0	15	81	0	0
CYPERMETHRIN	4	11	0	0	0	0	0	0	8	47	5	53	93	849	6	57
FENTHION	35	173	50	236	0	0	0	0	0	0	0	0	0	0	0	0
OTHER PESTICIDES	2255	13747	2007	12072	1318	12700	1176	91641	1907	139991	1868	163792	4534	131268	5453	216253
OTHER INSECTICIDES	19563	194422	19369	205845	15634	213829	18067	208838	17307	239549	17188	240036	13525	268040	16512	343526
COPPER-OXYCHLORIDE	48	122	0	0	0	0	0	1	0	1	0	2	0	0	0	0
2, 4-D	0	0	34	77	72	123	16	27	1824	2735	2819	5935	2382	4311	2412	3657
ISOPROTURON	0	0	0	0	0	0	0	0	0	0	3	4	0	0	0	0
ALUMINIUM PHOSPHIDE	8	61	3	54	6	98	0	0	0	0	5	39	1	27	7	40
METHYL BROMIDE	460	1652	269	1150	53	250	24	70	18	107	2	14	28	141	12	63
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	10056	85938	12294	86257	10171	85167	16149	104626	15248	100387	18044	122207	14232	104807	30307	189422
OTHER FUNGICIDES	4554	39665	6628	68323	6550	78424	7143	85350	7798	98502	7738	97341	7770	101554	11418	145713
TOTAL	37099	335996	40674	374050	33868	390707	42591	490581	44145	581385	49233	632590	42580	611078	66190	899057
DYES & PIGMENTS																
AZO DYES	669	3559	1114	5148	716	4016	630	3509	514	3734	437	4207	306	4096	298	3880
ACID DIRECT DYES(OTHER THAN AZO)	729	2136	436	2036	312	1685	188	1348	248	1942	322	2639	133	1295	163	1073
BASIC DYES	1075	6569	724	5266	475	4135	560	4183	647	5445	487	6868	529	8213	735	9836
DISPERSE DYES	8788	33194	4671	26330	6199	28647	4970	23618	4051	23972	1731	19295	2322	23128	2314	20496
FAST COLOUR BASES	499	2653	327	2864	510	3058	426	2314	379	2113	169	1743	265	2149	260	2414
OIL SOLUBLE (SOLVENT DYES)	1131	7329	782	6414	689	5967	762	5446	846	6414	710	7812	590	6250	525	6140
OPTICAL WHITENING AGENTS	675	4708	565	4442	664	5376	612	5455	593	5540	565	6978	738	8746	588	6492
ORGANIC PIGMENT	178	694	142	575	190	889	100	678	65	271	138	471	98	272	107	646
PIGMENT EMULSION	7069	46089	6663	48423	6578	47122	7085	47759	8261	52679	7985	57272	7303	54365	6443	53389

Table 17 : Imports of Major Chemicals (Productwise) during 2013-14 to 2020-21

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
REACTIVE DYES	3352	24425	3146	26556	3148	27009	3460	28744	3340	24642	3117	26440	3661	27931	2962	21959
SULPHUR DYES (SULPHUR BLACK)	1781	2498	1151	2537	1332	2636	1283	2638	1252	2916	1116	3286	1041	3128	1337	3294
VAT DYES	13801	36889	17449	43388	20580	48846	23527	53539	26368	59134	21571	77638	16400	63470	13310	40263
SOLUBILISED VAT DYES	91	418	82	252	473	1007	337	756	319	764	358	1289	170	810	108	463
FOOD COLOURS	391	2978	653	3872	1083	5225	1041	4859	1162	5057	1364	6747	1215	6695	375	6268
NAPTHOLS	1142	4190	1024	3896	1051	3824	1107	3750	1286	4446	1255	5267	1374	6559	1465	5757
OTHER DYES	291	1927	271	1868	177	1531	183	1533	512	2239	2337	7151	2265	7188	2332	7239
INORGANIC PIGMENTS	10653	28729	12735	30874	10514	28331	9597	24784	13128	30075	12790	43319	12173	57140	12017	63057
TOTAL	52315	208985	51935	214741	54691	219304	55868	214913	62971	231383	56452	278422	50583	281435	45339	252666

Note: Data Source in respect of Imports and Exports is DGCI, M/o Commerce and Industry.

Table 18: Net Imports of Major Chemicals (Product-wise) during 2013-14 to 2020-21

PRODUCT	[QTY in MT & VAL in Rs. Lakh]															
	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
ALKALI CHEMICALS																
SODA ASH	485166	67311	697797	107450	614650	97780	630930	91697	662535	92380	778134	129698	709955	125378	570010	91079
CAUSTIC SODA	228594	50470	365781	81611	401989	92496	340986	84618	261668	86553	36102	8264	121851	33450	-27317	-4751
LIQUID CHLORINE	-3814	-561	-3071	-247	-5505	-1287	-5023	-855	-3681	-466	-4433	-283	-4135	-836	-3739	-1139
TOTAL	709946	117220	1060507	188814	1011134	188989	966893	175460	920522	178467	809803	137679	827671	157992	538954	85189
INORGANIC CHEMICALS																
ALUMINIUM FLUORIDE	20884	14812	27289	18279	25462	16862	46243	26172	49552	28871	61932	55712	39000	36700	59178	46187
CALCIUM CARBIDE	63971	26595	77920	31295	61564	25223	55199	23368	55187	23683	44996	21350	30847	14263	32537	17637
CARBON BLACK	22260	24092	25349	31083	9391	28382	-203432	-4990	63937	70659	155699	145725	53474	49910	51745	41943
POTASSIUM CHLORATE	6316	3906	5513	3364	2402	1450	-1558	-1084	-1912	-1223	-2896	-1852	-3123	-2071	-1686	-919
SODIUM CHLORATE	28076	11560	21787	9064	17285	6387	7329	2851	7747	2785	13430	5843	24082	11248	11584	5113
TITANIUM DIOXIDE	7824	16343	12416	21135	11985	20127	5718	12727	4141	9394	7201	15943	10181	20171	6906	13586
RED PHOSPHORUS	-145	-807	-324	-1201	-482	-1777	-454	-1756	-455	-1713	-581	-2191	-632	-2510	-578	-2442
HYDROGEN PEROXIDE	61983	16226	56032	14168	43733	10989	56798	15626	68358	19091	83998	36706	51919	15376	19278	7097
CALCIUM CARBONATE	495288	37077	522395	40128	681798	55259	666641	51001	809228	54546	1038988	75279	1130043	77436	814085	54693
TOTAL	706457	149804	748377	167315	853138	162902	632484	123915	1055783	206093	1402767	352515	1335791	220523	993049	182895
ORGANIC CHEMICALS																
ACETIC ACID	657459	194672	705895	231372	784397	201124	834894	187681	872295	285223	919477	411884	913746	267444	893648	269424
ACETIC ANHYDRIDE	-4638	-2485	-17409	-10027	-15687	-8161	-18171	-9159	-15263	-11397	-6169	-3882	0	-1099	-5153	-4823
ACETONE	116084	80793	123650	79683	127624	49404	132662	60854	141824	71802	105859	46204	61398	22448	53895	34318
PHENOL	211954	169172	198106	180164	241928	140336	278174	168409	283822	193133	227084	205970	121732	75662	117893	50214
METHANOL	1228521	319220	1592161	307874	1667866	277063	1624833	292639	1773827	397158	1975769	515655	2273333	422085	2211493	432198
FORMALDEHYDE	-5936	-1804	-7055	-988	-8414	-1341	-8322	-1300	-10570	-2054	-12462	-2482	-14148	-2373	-15235	-2586
NITROBENZENE	-146	-127	1058	665	5789	2695	14085	6713	15324	8158	18101	10611	15400	7942	9768	4909
CITRIC ACID	62086	30023	65632	31981	74491	34975	80011	38314	81869	43558	92960	43126	88547	36511	92670	45532
MALEIC ANHYDRIDE	36724	39659	38351	35726	47319	31325	50581	34454	52394	42701	69833	61589	66775	46665	59483	46643
PENTAERYTHRITOL	14190	14146	12124	12130	17854	18510	17336	17220	15853	16215	16120	18839	18727	18375	12277	10472
ANILINE	31648	34710	36009	36735	38212	26831	44482	29161	65254	58310	88317	81183	80878	53145	72702	47313
CHLORO METHANES	108	-57	-31	53	570	323	169	102	418	146	1338	940	2355	2015	2401	1955
ISOBUTYLBENZENE	-14130	-21068	-13944	-19250	-12572	-14186	-13430	-14854	-12341	-14384	-11740	-16320	-9703	-14146	-16156	-20894
ONCB	-1883	-1839	-1836	-1873	-606	-691	-134	-322	0	0	0	0	0	0	0	0
PNCB	-1972	-1468	2995	1737	6738	2772	5072	2161	0	0	0	0	0	0	0	0

Table 18: Net Imports of Major Chemicals (Product-wise) during 2013-14 to 2020-21

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
MEK	26779	20804	26866	24677	40699	26155	30712	16531	45312	35991	46693	40517	25266	18900	42476	32938
ACETALDEHYDE	60	318	28	36	72	295	90	313	78	237	-1054	-637	-1026	-518	-945	-124
ETHANOLAMINES	8788	5987	10259	13487	8943	3202	9970	5206	11300	1939	13505	5794	15008	5876	16310	5957
ETHYL ACETATE	-189947	-103389	-114895	-67481	-104524	-53360	-92035	-47159	-105508	-62047	-115765	-79812	-106227	-61327	-108584	-68240
MENTHOL	-14531	-162522	-12628	-110853	-7900	-87436	-10495	-115035	-11377	-175378	-12017	-240495	-14032	-235153	-15459	-195201
ORTHO NITRO TOLUENE	-582	-586	-66	47	-1051	-922	-503	-503	-2383	-2055	-4215	-4144	-7220	-7112	-3682	-3318
TOTAL	2160636	614159	2645270	745895	2911748	648913	2979981	671426	3202128	887256	3411634	1094540	3530809	655340	3419802	686687
PESTICIDES & INSECTICIDES																
MALATHION	-415	-819	-1260	-2346	-1010	-1943	-1264	-2274	-1977	-3682	-2499	-5792	-2318	-6230	-1673	-5079
DIMETHOATE	-138	-573	-369	-1327	-20	-52	-24	-58	-24	-62	-126	-429	-199	-603	-91	-264
D.D.V.P.	-228	-608	-544	-1413	-486	-1345	-306	-1117	-458	-1769	872	451	-12	-41	-639	-2620
QUINALPHOS	-950	-3360	-996	-3900	-235	-1036	-384	-1772	-382	-1645	-281	-1439	-323	-1525	-522	-2909
ENDOSULPHAN	-45	-59	0	0	0	0	0	0	0	-1	0	0	0	0	0	0
CYPERMETHRIN	-11978	-58535	-10487	-50407	-8837	-45949	-9416	-45742	-9698	-62666	-13604	-112328	-15029	-94613	-18939	-106285
FENTHION	35	173	50	236	0	0	-10	-18	0	0	0	0	0	0	0	0
OTHER PESTICIDES	-45973	-192499	-35855	-166294	-39740	-201354	-44384	-117007	-41413	-76519	-37306	-69483	-2882	102820	-702	192717
OTHER INSECTICIDES	-29355	-178515	-26114	-138909	-15512	-62598	-23404	-102447	-32701	-153948	-45526	-340235	-92827	-572515	-95231	-490199
COPPER-OXYCHLORIDE	-369	-1033	-867	-2311	-810	-1818	-871	-1920	-723	-1731	-806	-2425	-2240	-5896	-1603	-5135
2, 4-D	-14851	-27924	-10904	-18018	-19377	-29647	-20661	-27469	-22301	-33341	-19423	-40412	-17241	-28613	-18685	-29541
ISOPROTURON	-2114	-7804	-2150	-7972	-1087	-3830	-356	-1295	0	0	3	4	0	0	0	0
ALUMINIUM PHOSPHIDE	-845	-3642	-220	-508	-58	-128	-127	-515	-505	-1703	-476	-2045	-425	-1882	-757	-2984
METHYL BROMIDE	77	319	-282	-790	-1221	-4391	-1732	-6159	-1982	-7185	-2206	-8370	-1600	-6541	-2077	-9903
OTHER HERBICIDES-ANTI SPROUTING	-4949	-44960	-6856	-64798	-22210	-181015	-34571	-257415	-51791	-324726	-56014	-472915	-65202	-612583	-71419	-668392
OTHER FUNGICIDES	-57763	-129326	-92699	-141875	-122444	-201061	-162230	-259237	-150381	-230668	-178158	-316124	-155191	-323997	-192259	-350950
TOTAL	-169861	-649165	-189553	-600632	-233047	-736167	-299740	-824445	-314336	-899646	-355550	-1371542	-355489	-1552219	-404597	-1475726
DYES & PIGMENTS																
AZO DYES	-56723	-168702	-50788	-189517	-54611	-157954	-59760	-158947	-69482	-178051	-72562	-221017	-68046	-206217	-63827	-175287
ACID DIRECT DYES(OTHER THAN AZO)	-4908	-19227	-3568	-18110	-3247	-15615	-4246	-18341	-4850	-19713	-4781	-23506	-5468	-27371	-5729	-28511
BASIC DYES	-6073	-12513	-6922	-16435	-7698	-19761	-8669	-22003	-10110	-26777	-11530	-37717	-12201	-40674	-12850	-41304
DISPERSE DYES	-460	4	-7394	-22215	-6918	-24171	-11108	-36294	-10409	-32942	-18821	-88352	-21040	-110032	-16207	-73021
FAST COLOUR BASES	-2120	-7538	-2479	-9026	-1752	-8810	-1748	-13452	-1663	-7613	-2483	-13244	-5099	-44780	-3407	-19402
OIL SOLUBLE (SOLVENT DYES)	-3834	-15977	-6044	-26200	-5434	-25736	-7940	-33993	-8149	-36492	-9485	-58996	-10501	-70321	-8581	-59218

Table 18: Net Imports of Major Chemicals (Product-wise) during 2013-14 to 2020-21

[QTY in MT & VAL in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
OPTICAL WHITENING AGENTS	-22706	-32181	-26646	-39781	-24539	-41143	-26345	-40785	-29531	-42529	-29694	-59880	-25346	-73978	-20870	-37889
ORGANIC PIGMENT	163	594	-49	75	115	358	29	385	3	86	123	373	48	-61	40	417
PIGMENT EMULSION	-64266	-307030	-69744	-317520	-74958	-327068	-81895	-344941	-93790	-388574	-102541	-437326	-103366	-479674	-110537	-527807
REACTIVE DYES	-106666	-315859	-104223	-365591	-110076	-317954	-124957	-350606	-144077	-388438	-155413	-484986	-165987	-474352	-149617	-404531
SULPHUR DYES (SULPHUR BLACK)	640	923	-842	-90	-140	691	-740	-44	-4215	-2878	-4604	-4017	-3469	-2105	-2364	-821
VAT DYES	11846	12502	15317	11533	19216	28323	22123	30802	24661	32527	17096	31354	11876	-553	9667	-23324
SOLUBILISED VAT DYES	60	-73	53	-31	437	653	306	491	273	235	295	500	99	-375	25	-296
FOOD COLOURS	-22502	-62461	-25381	-73346	-26018	-74312	-27318	-74633	-29948	-82072	-27643	-100597	-24132	-101091	-29896	-112026
NAPTHOLS	255	1593	-115	783	-438	361	-969	-1003	-1043	-1279	-2021	-3074	-2795	-4908	-3517	-5137
OTHER DYES	-9267	-21913	-9341	-25997	-9982	-21162	-12528	-23444	-13223	-23988	-11284	-24045	-12953	-27316	-15141	-26847
INORGANIC PIGMENTS	-7663	11255	-3119	20382	-15312	2809	-17639	-5825	-27217	-9409	-33370	2271	-31334	16829	-36245	17289
TOTAL	-294224	-936603	-301285	-1071086	-321355	-1000491	-363404	-1092633	-422770	-1207907	-468718	-1522259	-479714	-1646979	-469056	-1517715

Note: Data Source in respect of Imports and Exports is DGCI, M/o Commerce and Industry.

Table 19: Top Five Export Destinations of selected Chemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
SODA ASH	BANGLADESH PR	78949.607	11471.279
	PHILIPPINES	16800.060	2219.562
	INDONESIA	16244.152	2484.135
	NEPAL	15613.022	2555.005
	SRI LANKA DSR	9724.590	1702.846
	Product Total	137331.431	20432.827
CAUSTIC SODA	SAUDI ARAB	23641.095	4080.539
	TANZANIA REP	21755.435	4740.191
	U ARAB EMTS	20318.244	3755.084
	KENYA	20071.700	4169.648
	Product Total	85786.474	16745.462
LIQUID CHLORINE	KENYA	1034.400	271.100
	U ARAB EMTS	593.975	116.389
	SRI LANKA DSR	427.000	37.381
	QATAR	420.942	72.410
	NIGERIA	302.000	201.578
	Product Total	2778.317	698.858
ALUMINIUM FLUORIDE	U ARAB EMTS	1800.000	1705.756
	JAPAN	120.000	137.904
	TURKEY	100.060	12.449
	SOUTH AFRICA	24.000	12.773
	U K	1.000	1.354
	Product Total	2045.060	1870.236
CALCIUM CARBIDE	BANGLADESH PR	82.000	62.212
	BHUTAN	46.718	47.055
	MOZAMBIQUE	0.200	0.721
	GERMANY	0.190	0.298
	U ARAB EMTS	0.140	0.245
	Product Total	129.248	110.531
CARBON BLACK	SRI LANKA DSR	29468.043	16699.569
	THAILAND	16834.685	10537.412
	VIETNAM SOC REP	16146.610	8846.214
	KOREA RP	13828.464	7575.604
	U ARAB EMTS	9023.522	6923.208
	Product Total	85301.324	50582.007
POTASSIUM CHLORATE	KENYA	600.000	390.691
	MEXICO	553.000	379.785
	PHILIPPINES	252.000	207.047
	SRI LANKA DSR	150.000	103.140
	TANZANIA REP	150.000	105.120
	Product Total	1705.000	1185.783
SODIUM CHLORATE	SINGAPORE	5.000	3.677
	NEPAL	0.119	0.819
	MALAWI	0.002	0.120
	UGANDA	0.002	0.030
	ETHIOPIA	0.001	0.085
	Product Total	5.124	4.731
TITANIUM DIOXIDE	U S A	2463.584	4327.552
	ITALY	1220.100	2411.436
	JAPAN	1135.000	1585.621
	SRI LANKA DSR	147.907	250.698
	EGYPT A RP	142.224	227.515
	Product Total	5108.815	8802.822

Table 19: Top Five Export Destinations of selected Chemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
RED PHOSPHORUS	U S A	144.067	566.695
	U ARAB EMTS	90.500	436.383
	RUSSIA	67.500	231.362
	BRAZIL	40.000	181.406
	EGYPT A RP	33.000	139.209
	Product Total	375.067	1555.055
HYDROGEN PEROXIDE	QATAR	878.005	233.190
	U ARAB EMTS	362.600	95.709
	GHANA	308.000	91.643
	MAURITIUS	292.282	102.049
	NEPAL	274.759	108.373
	Product Total	2115.646	630.964
CALCIUM CARBONATE	NEPAL	20609.359	4723.616
	SOUTH AFRICA	3779.972	1171.730
	BANGLADESH PR	3036.791	2329.172
	SRI LANKA DSR	2617.469	606.346
	ETHIOPIA	1573.258	470.527
	Product Total	31616.849	9301.391
ACETIC ACID	BANGLADESH PR	4037.965	2041.124
	SPAIN	1500.000	1110.075
	SRI LANKA DSR	645.770	363.972
	U ARAB EMTS	481.850	198.678
	OMAN	452.574	273.758
	Product Total	7118.159	3987.607
ACETIC ANHYDRIDE	BELGIUM	18750.979	11593.829
	NETHERLAND	1920.000	1394.281
	BANGLADESH PR	1240.800	828.071
	U S A	520.975	261.491
	VIETNAM SOC REP	370.200	303.429
	Product Total	22802.954	14381.101
ACETONE	BRAZIL	5690.380	3716.203
	NETHERLAND	4744.778	2934.733
	CHINA P RP	3879.740	2204.640
	U S A	3308.750	2213.627
	MEXICO	2531.000	1712.649
	Product Total	20154.648	12781.852
PHENOL	CHINA P RP	29934.267	16335.861
	IRAN	5152.570	3546.503
	BRAZIL	5137.792	3549.704
	TURKEY	3509.441	2484.803
	U ARAB EMTS	2724.132	1925.010
	Product Total	46458.202	27841.881
METHANOL	NEPAL	3620.283	1026.339
	SRI LANKA DSR	1747.692	464.709
	KENYA	1227.108	380.480
	TANZANIA REP	889.663	255.908
	UGANDA	388.543	112.904
	Product Total	7873.289	2240.340
FORMALDEHYDE	NEPAL	12061.889	1871.562
	BHUTAN	661.735	125.718
	KENYA	502.970	126.246
	U ARAB EMTS	280.360	66.938
	QATAR	260.600	53.910

Table 19: Top Five Export Destinations of selected Chemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
	Product Total	13767.554	2244.374
NITROBENZENE	THAILAND	46.250	43.346
	JAPAN	20.000	15.675
	NEPAL	17.665	16.845
	U S A	10.000	17.707
	CAMBODIA	3.000	3.977
	Product Total	96.915	97.550
CITRIC ACID	U S A	835.434	760.737
	LITHUANIA	700.000	434.259
	SPAIN	200.000	128.845
	SRI LANKA DSR	84.712	104.816
	PUERTO RICO	74.000	72.660
	Product Total	1894.146	1501.317
MALEIC ANHYDRIDE	BANGLADESH PR	24.500	33.286
	SRI LANKA DSR	16.000	15.874
	NEPAL	9.400	12.133
	GERMANY	0.050	0.103
	ETHIOPIA	0.010	0.118
	Product Total	49.960	61.514
PENTAERYTHRITOL	U S A	640.000	1181.041
	NETHERLAND	216.020	293.771
	BELGIUM	190.000	671.929
	COLOMBIA	108.000	151.540
	NEPAL	90.207	102.233
	Product Total	1244.227	2400.514
ANILINE	U S A	32.000	37.569
	TURKEY	18.004	24.942
	THAILAND	10.000	11.605
	MEXICO	6.000	9.594
	BRAZIL	0.800	1.833
	Product Total	66.804	85.543
CHLORO METHANES	SAUDI ARAB	37.741	58.373
	U ARAB EMTS	16.450	28.617
	SINGAPORE	7.260	17.366
	U S A	6.080	29.460
	MALAWI	0.810	0.599
	Product Total	68.341	134.415
ISOBUTYLBENZENE	CHINA P RP	11435.004	15246.050
	U S A	4714.000	5627.522
	NETHERLAND	5.000	16.674
	VIETNAM SOC REP	2.000	3.478
	Product Total	16156.004	20893.724
MEK	U ARAB EMTS	61.200	54.920
	CONGO D. REP.	1.980	9.199
	NEPAL	1.528	4.143
	BANGLADESH PR	0.380	0.530
	ETHIOPIA	0.350	1.596
	Product Total	65.438	70.388
ACETALDEHYDE	TURKEY	962.440	652.313
	NEPAL	62.925	14.419
	BANGLADESH PR	0.950	20.344
	SAUDI ARAB	0.530	4.190
	MYANMAR	0.028	0.267

Table 19: Top Five Export Destinations of selected Chemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
	Product Total	1026.873	691.533
ETHANOLAMINES	U ARAB EMTS	648.373	1329.859
	U S A	504.515	1196.737
	TURKEY	373.862	280.098
	CHINA P RP	253.132	949.527
	U K	201.316	1232.845
	Product Total	1981.198	4989.066
ETHYL ACETATE	BELGIUM	15102.438	9308.943
	ITALY	12850.330	8015.576
	NIGERIA	9508.500	5891.882
	U ARAB EMTS	8682.025	5390.303
	SPAIN	8594.455	5460.683
	Product Total	54737.748	34067.387
MENTHOL	CHINA P RP	14613.595	163124.051
	U S A	1185.910	17728.072
	SINGAPORE	716.852	8456.936
	NETHERLAND	482.500	7563.223
	JAPAN	471.222	6844.309
	Product Total	17470.079	203716.591
ORTHO NITRO TOLUENE	GERMANY	2511.140	2385.053
	CHINA P RP	567.051	331.818
	JAPAN	553.616	550.884
	NETHERLAND	50.110	50.290
	Product Total	3681.917	3318.045
MALATHION	MEXICO	360.000	1156.822
	EGYPT A RP	340.000	851.080
	NETHERLAND	272.000	1034.575
	TURKEY	232.000	662.768
	MALAYSIA	123.000	364.701
	Product Total	1327.000	4069.946
DIMETHOATE	ECUADOR	48.000	180.998
	NEPAL	25.541	67.428
	CHILE	21.040	83.893
	ETHIOPIA	19.500	98.532
	MADAGASCAR	17.750	80.905
	Product Total	131.831	511.756
D.D.V.P.	UGANDA	546.560	2354.894
	NIGERIA	80.000	218.953
	ZAMBIA	8.960	36.833
	NEPAL	3.500	9.230
	Product Total	639.020	2619.910
QUINALPHOS	VIETNAM SOC REP	373.275	2343.002
	SAUDI ARAB	101.600	353.844
	BANGLADESH PR	41.358	152.466
	AUSTRALIA	4.000	45.057
	NEPAL	0.941	7.084
	Product Total	521.174	2901.453
CYPERMETHRIN	CHINA P RP	3181.975	22261.735
	BRAZIL	1575.906	10479.830
	INDONESIA	1271.340	4640.107
	THAILAND	1237.643	8339.713
	NIGERIA	893.115	1741.401
	Product Total	8159.979	47462.786

Table 19: Top Five Export Destinations of selected Chemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
OTHER PESTICIDES	NEPAL	2092.419	5630.763
	GHANA	569.932	3092.337
	BRAZIL	344.460	1591.706
	THAILAND	258.701	303.844
	INDONESIA	258.562	868.715
	Product Total	3524.074	11487.365
OTHER INSECTICIDES	BRAZIL	45270.016	372313.095
	U S A	7742.065	100158.923
	BANGLADESH PR	5316.435	24888.026
	NIGERIA	4552.162	11124.215
	MEXICO	2297.167	14032.936
	Product Total	65177.845	522517.195
COPPER-OXYCHLORIDE	SPAIN	307.800	1069.688
	EGYPT A RP	176.400	489.542
	ALGERIA	120.800	297.265
	BELGIUM	109.410	344.540
	MOROCCO	100.000	319.038
	Product Total	814.410	2520.073
2, 4-D	ARGENTINA	4135.400	6334.986
	AUSTRALIA	4029.800	6762.405
	BRAZIL	3032.001	4781.417
	U S A	2180.600	3294.602
	GUATEMALA	1242.000	1856.308
	Product Total	14619.801	23029.718
ALUMINIUM PHOSPHIDE	BANGLADESH PR	297.538	909.400
	TURKEY	116.595	508.103
	RUSSIA	69.120	276.896
	NIGERIA	66.145	324.542
	ETHIOPIA	51.840	275.196
	Product Total	601.238	2294.137
METHYL BROMIDE	NEW ZEALAND	493.200	2138.147
	VIETNAM SOC REP	419.942	1893.333
	LIBYA	397.100	2089.406
	AUSTRALIA	378.000	1761.263
	EGYPT A RP	90.000	443.531
	Product Total	1778.242	8325.680
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	U S A	29820.278	313875.857
	BRAZIL	11307.882	143913.827
	AUSTRALIA	7329.845	33464.947
	FRANCE	3744.413	24438.239
	VIETNAM SOC REP	3617.726	17495.530
	Product Total	55820.144	533188.400
OTHER FUNGICIDE NES	BRAZIL	31562.663	112927.148
	BANGLADESH PR	21256.432	19871.310
	U S A	13119.273	35337.495
	COSTA RICA	12396.808	15259.795
	FRANCE	10497.963	29300.319
	Product Total	88833.139	212696.067
AZO DYES	CHINA P RP	8892.255	23891.259
	ITALY	8710.474	31496.455
	NETHERLAND	4324.483	8755.964
	SPAIN	3916.443	13038.353
	POLAND	3588.900	4135.722

Table 19: Top Five Export Destinations of selected Chemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
	Product Total	29432.555	81317.753
ACID DIRECT DYES(OTHER THAN AZO)	U S A	1476.552	6027.820
	CHINA P RP	533.699	2604.999
	ITALY	530.221	2953.174
	MALAYSIA	257.090	711.080
	KOREA RP	245.332	1317.618
	Product Total	3042.894	13614.691
BASIC DYES	CHINA P RP	2062.344	8371.438
	U S A	864.426	4607.904
	NETHERLAND	827.072	3223.212
	BRAZIL	720.419	1858.007
	INDONESIA	719.026	1319.529
	Product Total	5193.287	19380.090
DISPERSE DYES	CHINA P RP	3860.412	22470.936
	TURKEY	2640.430	9434.218
	HONDURAS	1715.938	8552.893
	EGYPT A RP	1220.190	4101.114
	KOREA RP	905.270	4603.898
	Product Total	10342.240	49163.059
FAST COLOUR BASES	CHINA P RP	871.298	4589.879
	NETHERLAND	778.500	5434.647
	GERMANY	371.080	2242.276
	U S A	315.759	2026.056
	INDONESIA	224.385	964.638
	Product Total	2561.022	15257.496
OIL SOLUBLE (SOLVENT DYES)	U K	2131.363	10581.520
	U S A	1052.033	10494.348
	ITALY	705.817	4989.506
	CHINA P RP	531.302	6062.454
	SINGAPORE	519.031	2327.751
	Product Total	4939.546	34455.579
OPTICAL WHITENING AGENTS	AUSTRALIA	2252.300	1986.662
	BANGLADESH PR	1864.414	2442.672
	SOUTH AFRICA	1786.123	2848.116
	GERMANY	1297.375	2745.501
	JAPAN	1224.947	975.016
	Product Total	8425.159	10997.967
ORGANIC PIGMENT	BANGLADESH PR	58.100	170.151
	NIGERIA	5.542	47.106
	AUSTRALIA	2.080	6.054
	BHUTAN	0.904	5.324
	SPAIN	0.071	0.015
	Product Total	66.697	228.650
PIGMENT EMULSION	CHINA P RP	20304.640	81128.857
	U S A	12336.855	68978.192
	NETHERLAND	6126.121	33162.781
	BRAZIL	5103.021	24723.995
	BELGIUM	4975.841	23999.478
	Product Total	48846.478	231993.303
REACTIVE DYES	BANGLADESH PR	37155.499	78688.285
	TURKEY	36370.503	86339.836
	SINGAPORE	7342.690	26921.520
	HONDURAS	7213.183	22301.680

Table 19: Top Five Export Destinations of selected Chemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
	BRAZIL	7174.216	19470.142
	Product Total	95256.091	233721.463
SULPHUR DYES (SULPHUR BLACK)	BANGLADESH PR	1147.535	1142.697
	EGYPT A RP	553.900	542.931
	ITALY	521.250	592.931
	TURKEY	360.220	362.300
	Product Total	2582.905	2640.859
VAT DYES	CHINA P RP	922.943	13601.396
	BANGLADESH PR	403.009	5071.619
	GERMANY	250.053	9130.047
	TAIWAN	239.000	562.846
	U S A	198.735	5045.633
	Product Total	2013.740	33411.541
SOLUBILISED VAT DYES	INDONESIA	35.742	600.962
	BANGLADESH PR	35.279	26.868
	NEPAL	3.930	3.545
	VIETNAM SOC REP	3.400	57.484
	CHINA P RP	1.475	28.680
	Product Total	79.826	717.539
FOOD COLOURS	U S A	2924.071	14253.227
	CHINA P RP	2219.759	8783.956
	MEXICO	1607.815	6249.866
	INDONESIA	1575.267	8056.363
	BRAZIL	1413.724	6290.770
	Product Total	9740.636	43634.182
NAPTHOLS	SOUTH AFRICA	1227.750	1647.262
	RUSSIA	813.217	1393.761
	KENYA	433.992	813.667
	U ARAB EMTS	374.725	548.622
	POLAND	358.475	428.914
	Product Total	3208.159	4832.226
OTHER DYES	CHINA P RP	2240.295	5543.535
	NETHERLAND	2117.022	2992.288
	POLAND	2077.400	2830.930
	U K	1824.936	2102.034
	KOREA RP	846.365	1145.661
	Product Total	9106.018	14614.448
INORGANIC PIGMENTS	KENYA	5074.885	3381.497
	TANZANIA REP	2568.025	1713.067
	ECUADOR	2501.083	1422.721
	BANGLADESH PR	2230.494	2932.080
	ALGERIA	1989.150	2932.135
	Product Total	14363.637	12381.500

Note: Data Source in respect of Imports and Exports is DGCI, M/o Commerce and Industry.

Table 20: Top Five Import Destinations of selected Chemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
SODA ASH	U S A	198121.185	33269.181
	U ARAB EMTS	125233.606	18390.644
	BULGARIA	98584.12	16191.192
	RUSSIA	87836.343	12916.162
	TURKEY	86511.192	12900.049
	Product Total	596286.446	93667.228
CAUSTIC SODA	JAPAN	138719.003	31005.054
	QATAR	54976.11	11524.452
	CHINA P RP	24206.03	6302.485
	U ARAB EMTS	15885.007	3112.249
	IRAN	12883	1848.441
	Product Total	246669.15	53792.681
LIQUID CHLORINE	KOREA RP	37.686	193.972
	FRANCE	0.951	3.454
	U K	0.002	0.392
	U S A	0	2.314
	Product Total	38.639	200.132
ALUMINIUM FLUORIDE	CHINA P RP	22845.51	20143.586
	ITALY	13284	11561.181
	QATAR	7496.289	948.533
	MEXICO	7000	5768.871
	U ARAB EMTS	5323.5	4942.44
	Product Total	55949.299	43364.611
CALCIUM CARBIDE	CHINA P RP	29248.5	15807.882
	INDONESIA	3384	1933.335
	DOMINICA	33	7.299
	Product Total	32665.5	17748.516
CARBON BLACK	KOREA RP	58562.624	35234.877
	CHINA P RP	37091.568	21589.238
	RUSSIA	31459.299	17060.372
	U ARAB EMTS	24537.533	11725.155
	EGYPT A RP	5864.8	3326.035
	Product Total	157515.824	88935.677
POTASSIUM CHLORATE	CHINA P RP	822.75	596.291
	NETHERLAND	77	261.824
	U K	8.022	23.174
	GERMANY	0.814	2.279
	BELGIUM	0.002	0.06
	Product Total	908.588	883.628
SODIUM CHLORATE	URUGUAY	5200	2137.038
	BRAZIL	3050	1382.568
	FRANCE	1311.002	613.232
	FINLAND	1100	502.6
	U S A	925.036	451.969
	Product Total	11586.038	5087.407
TITANIUM DIOXIDE	KOREA RP	5678	9389.566
	CHINA P RP	4322.401	7200.438
	JAPAN	795.674	1771.497
	GERMANY	718.976	2027.666
	BELGIUM	463.96	1232.858
	Product Total	11979.011	21622.025
RED PHOSPHORUS	PHILIPPINES	4	17.995
	GERMANY	0.001	0.078
	U K	0	0.049
	U S A	0	0.256
	Product Total	4.001	18.378
	BANGLADESH PR	11943	4111.935

Table 20: Top Five Import Destinations of selected Chemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
HYDROGEN PEROXIDE	THAILAND	6664.883	2479.018
	EGYPT A RP	2238	522.177
	INDONESIA	1241.4	370.804
	BELGIUM	174.418	197.549
	Product Total	22261.701	7681.483
CALCIUM CARBONATE	VIETNAM SOC REP	317224.285	22651.541
	MALAYSIA	263262.901	25595.916
	EGYPT A RP	238604.089	14323.08
	JORDAN	15580.762	1150.53
	GREECE	6129.5	522.454
	Product Total	840801.537	64243.521
ACETIC ACID	MALAYSIA	268949	83495.721
	SINGAPORE	220879.418	65022.307
	CHINA P RP	163086.461	55686.277
	TAIWAN	108607	26737.562
	SAUDI ARAB	67583	18846.554
	Product Total	829104.879	249788.421
ACETIC ANHYDRIDE	SAUDI ARAB	17725.756	9773.869
	SINGAPORE	1081.29	699.168
	U S A	0.058	6.32
	Product Total	18807.104	10479.357
ACETONE	THAILAND	39480.009	24318.346
	KOREA RP	15151.68	9016.025
	BELGIUM	9638.701	5315.812
	SINGAPORE	7495	4615.158
	NETHERLAND	4714	2976.977
	Product Total	76479.39	46242.318
PHENOL	U S A	65937.083	30184.445
	THAILAND	25036	13355.141
	SOUTH AFRICA	19026.98	8824.19
	CHINA P RP	18485.85	13633.06
	KOREA RP	13341.28	7425.482
	Product Total	141827.193	73422.318
METHANOL	SAUDI ARAB	835791.212	163206.989
	QATAR	558596.681	99303.988
	OMAN	287686	61605.62
	IRAN	174998	30944.091
	U ARAB EMTS	126172	26978.722
	Product Total	1983243.893	382039.41
FORMALDEHYDE	CHINA P RP	4.203	109.473
	GERMANY	1.328	26.329
	SPAIN	0.858	4.876
	U S A	0.077	6.24
	JAPAN	0.002	0.046
	Product Total	6.468	146.964
NITROBENZENE	KOREA RP	9830.2	4978.466
	INDONESIA	20	17.436
	CHINA P RP	16	12.273
	Product Total	9866.2	5008.175
CITRIC ACID	CHINA P RP	92386.937	44691.844
	THAILAND	1159.105	1067.375
	HONG KONG	1000	447.264
	GERMANY	199.37	1058.075
	SINGAPORE	57.692	55.762
	Product Total	94803.104	47320.32
	TAIWAN	17380	12107.905
	CHINA P RP	16072	13208.176

Table 20: Top Five Import Destinations of selected Chemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
MALEIC ANHYDRIDE	MALAYSIA	12636.71	10550.378
	KOREA RP	8541.57	6978.771
	INDONESIA	3933.5	3136.657
	Product Total	58563.78	45981.887
PENTAERYTHRITOL	SAUDI ARAB	5060	4740.604
	TAIWAN	3290.69	2901.266
	SPAIN	1937	1616.813
	GERMANY	1234.778	1434.894
	CHINA P RP	1140.101	1203.238
	Product Total	12662.569	11896.815
ANILINE	CHINA P RP	48946.28	31441.533
	NETHERLAND	8583	4283.246
	U S A	4887.006	4054.043
	U K	3867	3333.644
	PORTUGAL	2835.3	1798.891
	Product Total	69118.586	44911.357
CHLORO METHANES	CHINA P RP	1970.08	1230.441
	NETHERLAND	391.1	697.408
	U S A	48.825	77.81
	U K	39.016	68.938
	ITALY	19.5	35.953
	Product Total	2468.521	2110.55
MEK	CHINA P RP	9857.395	8443.61
	NETHERLAND	8917	6227.996
	TAIWAN	8127.044	6107.947
	SOUTH AFRICA	5776	5062.276
	BELGIUM	5464	3655.038
	Product Total	38141.439	29496.867
ACETALDEHYDE	SWITZERLAND	45.04	73.156
	GERMANY	17.543	308.77
	FRANCE	16.207	71.718
	U K	1.563	49.533
	CHINA P RP	0.82	35.219
	Product Total	81.173	538.396
ETHANOLAMINES	U ARAB EMTS	5617.494	3494.944
	SAUDI ARAB	3973.28	2573.037
	MALAYSIA	2135.52	1442.56
	THAILAND	1552.445	1145.937
	BELGIUM	1337.426	1616.223
	Product Total	14616.165	10272.701
ETHYL ACETATE	SWITZERLAND	67.204	1103.387
	BELGIUM	28.872	461.704
	SINGAPORE	15.735	7.933
	ITALY	14.08	13.324
	CHINA P RP	7.553	18.688
	Product Total	133.444	1605.036
MENTHOL	MALAYSIA	2388.96	24750.928
	SINGAPORE	1085.94	10013.686
	GERMANY	470.822	4498.858
	BELGIUM	204.5	1862.331
	CHINA P RP	109.9	1502.596
	Product Total	4260.122	42628.399
DIMETHOATE	DENMARK	34.8	164.273
	CHINA P RP	28.203	161.254
	Product Total	63.003	325.527
CYPERMETHRIN	BRAZIL	6.24	52.014
	U ARAB EMTS	0.03	4.203

Table 20: Top Five Import Destinations of selected Chemicals during 2020-21

PRODUCT (1)	COUNTRY (2)	QUANTITY(MT) (3)	VALUE(RS.Lakhs) (4)
	U K	0.005	0.768
	Product Total	6.275	56.985
OTHER PESTICIDES	CHINA P RP	4729.751	206550.2
	TAIWAN	404.8	815.255
	U S A	164.499	7855.952
	AUSTRIA	130	832.09
	RUSSIA	15	64.198
	Product Total	5444.05	216117.695
OTHER INSECTICIDES	CHINA P RP	10487.742	131152.495
	U S A	981.983	51383.24
	ISRAEL	967.246	9421.034
	NETHERLAND	892.504	36021.956
	KOREA RP	876.114	25075.654
	Product Total	14205.589	253054.379
COPPER-OXYCHLORIDE	GERMANY	0.021	0.194
	NETHERLAND	0.001	0.027
	Product Total	0.022	0.221
2, 4-D	CHINA P RP	2394	3626.724
	TURKEY	18.005	30.273
	GERMANY	0.021	0.265
	PHILIPPINES	0.004	0.03
	Product Total	2412.03	3657.292
ALUMINIUM PHOSPHIDE	LEBANON	7	38.594
	FRANCE	0.003	0.129
	ITALY	0.002	0.623
	ISRAEL	0.001	0.061
	BELGIUM	0	0.052
	Product Total	7.006	39.459
METHYL BROMIDE	HONG KONG	10.608	58.165
	CANADA	1	4.446
	U S A	0.004	0.178
	Product Total	11.612	62.789
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	CHINA P RP	13506.591	54928.647
	ISRAEL	5788.547	36701.66
	TAIWAN	4329.6	7741.643
	JAPAN	1574.737	20303.07
	U K	1309.108	5541.603
	Product Total	26508.583	125216.623
OTHER FUNGICIDE NES	CHINA P RP	2834.873	28892.678
	THAILAND	1746.78	6702.273
	GERMANY	1717.677	28297.535
	SINGAPORE	943.431	17927.503
	NETHERLAND	682.886	16346.346
	Product Total	7925.647	98166.335
AZO DYES	CHINA P RP	49.934	517.052
	GERMANY	42.414	439.747
	SPAIN	37.267	1748.459
	U K	29.029	48.522
	ITALY	25.876	135.234
	Product Total	184.52	2889.014
ACID DIRECT DYES(OTHER THAN AZO)	MALAYSIA	56	147.047
	CHINA P RP	51.571	356.83
	HONG KONG	20.02	50.666
	U S A	9.542	110.097
	ITALY	7.413	70.177
	Product Total	144.546	734.817
	CHINA P RP	649.52	8975.349

Table 20: Top Five Import Destinations of selected Chemicals during 2020-21

PRODUCT (1)	COUNTRY (2)	QUANTITY(MT) (3)	VALUE(RS.Lakhs) (4)
BASIC DYES	ICELAND	36	360.743
	GERMANY	16.768	168.335
	TAIWAN	10.22	150.362
	MALAYSIA	8.12	15.543
	Product Total	720.628	9670.332
DISPERSE DYES	CHINA P RP	1403.616	12977.948
	ICELAND	403.9	1239.408
	BRAZIL	137.4	492.378
	INDONESIA	93.495	1373.51
	SINGAPORE	67.902	1217.927
	Product Total	2106.313	17301.171
FAST COLOUR BASES	CHINA P RP	239.5	1800.745
	NETHERLAND	11.203	530
	GERMANY	6.395	30.593
	UNSPECIFIED	1.045	19.971
	SINGAPORE	0.55	6.472
	Product Total	258.693	2387.781
OIL SOLUBLE (SOLVENT DYES)	CHINA P RP	293.684	4313.907
	KOREA RP	137.01	744.779
	U ARAB EMTS	34.585	191.312
	BELGIUM	14.443	151.183
	TAIWAN	12.317	70.102
	Product Total	492.039	5471.283
OPTICAL WHITENING AGENTS	CHINA P RP	250.922	2325.231
	SWITZERLAND	180.001	2199.264
	BELGIUM	48	748.68
	NETHERLAND	27.12	374.33
	HONG KONG	24.24	320.284
	Product Total	530.283	5967.789
ORGANIC PIGMENT	ITALY	52.849	401.655
	U S A	43.273	189.487
	CHINA P RP	9.305	29.962
	SPAIN	0.7	5.224
	GERMANY	0.193	4.631
	Product Total	106.32	630.959
PIGMENT EMULSION	CHINA P RP	3045.312	18524.746
	GERMANY	657.796	9790.122
	KOREA RP	448.05	3341.041
	MALAYSIA	391.863	998.723
	ITALY	341.037	1124.314
	Product Total	4884.058	33778.946
REACTIVE DYES	THAILAND	1276.158	10161.435
	KOREA RP	749.303	3411.253
	CHINA P RP	264.552	4256.245
	TURKEY	227.91	651.994
	SINGAPORE	78.61	923.834
	Product Total	2596.533	19404.761
SULPHUR DYES (SULPHUR BLACK)	CHINA P RP	1125.015	2532.435
	SPAIN	184.456	554.987
	TURKEY	12.555	19.382
	SINGAPORE	5.98	17.919
	JAPAN	5.58	85.043
	Product Total	1333.586	3209.766
VAT DYES	CHINA P RP	6842.144	27724.197
	SINGAPORE	6184.541	11505.782
	MEXICO	167.04	325.591
	BELGIUM	43.1	187.256

Table 20: Top Five Import Destinations of selected Chemicals during 2020-21

PRODUCT (1)	COUNTRY (2)	QUANTITY(MT) (3)	VALUE(RS.Lakhs) (4)
	GERMANY	31.985	324.554
	Product Total	13268.81	40067.38
SOLUBILISED VAT DYES	SINGAPORE	89.175	210.717
	NETHERLAND	10.975	41.239
	CHINA P RP	5.442	125.54
	SWITZERLAND	1.095	33.244
	GERMANY	0.95	34.031
	Product Total	107.637	444.771
FOOD COLOURS	TAIWAN	57.467	190.155
	U S A	49.077	718.14
	YEMEN REPubLC	48	35.931
	CHINA P RP	33.541	2055.471
	SPAIN	31.806	226.063
	Product Total	219.891	3225.76
NAPTHOLS	CHINA P RP	1289.627	5606.9
	U S A	168.514	60.032
	GERMANY	3.171	13.951
	ITALY	1.28	18.904
	KOREA RP	0.765	6.506
	Product Total	1463.357	5706.293
OTHER DYES	U K	2050.3	5233.411
	U S A	133.968	1430.003
	CHINA P RP	97.617	194.235
	THAILAND	19.85	60.295
	ITALY	18.553	144.43
	Product Total	2320.288	7062.374
INORGANIC PIGMENTS	U ARAB EMTS	3199.598	4199.696
	CHINA P RP	1892.925	7080.543
	ISRAEL	1851.966	4140.188
	THAILAND	803.548	2687.798
	U S A	723.942	4498.422
	Product Total	8471.979	22606.647

Note: Data Source in respect of Imports and Exports is DGCI, M/o Commerce and Industry.

Table -21: Exports of Major Petrochemicals (Group-wise) during 2013-14 to 2020-21

[QTY in MT & VAL in Rs. Lakh]

GROUP	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
SYNTHETIC FIBRES	907646	1015940	887182	917327	878358	833783	1025740	922018	1001053	977982	1015666	1172008	1059348	1054987	878619	787040
FIBRE INTERMEDIATES	67873	53980	73270	57347	247540	121394	323096	153574	351358	181069	456955	275919	234372	123612	475165	162929
POLYMERS	1187634	1078251	903266	793550	998339	732497	912124	667432	1188233	891771	1934155	1558391	1615451	1095332	1488512	968069
SYNTHETIC RUBBER (ELASTOMERS)	12834	21597	26040	34492	42688	42428	38204	46387	51889	54589	63550	70696	74036	73065	95037	79421
SYNTHETIC DETERGENT INTERMEDIATES	32971	35845	27992	29004	9634	7768	7058	5941	1413	1468	1048	1534	1044	1479	1876	1939
PERFORMANCE PLASTICS	474528	440224	409365	353492	813967	527737	972750	636450	1050548	747271	1080286	1018773	968791	739010	217142	198743
OLEFINS	119411	88308	72479	45302	149389	76055	117365	101742	260597	179804	368714	276701	336140	188100	284988	136102
AROMATICS	1789251	1344539	1888275	1163302	2033143	942807	1749173	885136	3303041	1754998	4550911	2880299	4271477	2337408	4660796	1854685
OTHER PETRO-BASED CHEMICALS	96237	107611	124125	143644	128670	101261	144135	116773	193342	138613	147298	139759	237571	194934	171468	169127
TOTAL EXPORT OF MAJOR PETRO-CHEMICALS	4688385	4186295	4411994	3537460	5301728	3385730	5289645	3535453	7401474	4927565	9618583	7394080	8798230	5807927	8273603	4358055

Note: 1. Data source in respect of Imports and Exports is DGCIS, M/o Commerce and Industry.

2. The data of 2012-13 is based on ITCHS 2007 and the data from 2013-14 is based on ITCHS 2012

Table -22: Imports of Major Petrochemicals (Group-wise) during 2013-14 to 2020-21

[QTY in MT & VAL in Rs. Lakh]

GROUP	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
SYNTHETIC FIBRES	164136	274315	235590	346205	263774	346368	279993	342993	259632	363079	275617	453356	346600	460883	403273	410701
FIBRE INTERMEDIATES	1925258	1304669	2179870	1273665	2015419	1026126	1842229	943136	1808425	1072331	1454656	1056882	1919655	1059484	1441326	649525
POLYMERS	3124986	2531008	3736798	3177068	4214022	3132488	4452258	3267230	4751478	3549286	4479129	3684829	3430180	2639363	2641372	2142272
SYNTHETIC RUBBER (ELASTOMERS)	580333	793037	578400	758949	596101	612690	559919	628042	607867	741750	618500	851418	574832	709547	747278	718860
SYNTHETIC DETERGENT INTERMEDIATES	123846	139467	134035	138461	218097	177489	228229	179003	205984	164533	227136	210428	264058	237426	265406	216258
PERFORMANCE PLASTICS	310899	438390	394766	496367	388796	445847	417442	472270	582692	621047	683851	891721	740577	782460	298958	293817
OLEFINS	26109	21482	49255	43981	25398	20177	83453	60651	50791	43283	69700	57846	75857	51011	43875	33958
AROMATICS	998399	850360	1023472	712564	1204325	633048	1614652	864845	1321018	708548	1320424	910212	1327535	772834	1300486	542096
OTHER PETRO-BASED CHEMICALS	2203984	1817179	2372654	1897349	2739780	1775978	2650608	1764933	3255244	2232102	3227017	2709229	3543017	2388328	3068899	2152067
TOTAL IMPORT OF MAJOR PETRO-CHEMICALS	9457950	8169907	10704840	8844609	11665712	8170211	12128783	8523103	12843131	9495959	12356030	10825921	12222311	9101336	10210873	7159554

Note: 1. Data source in respect of Imports and Exports is DGCIS, M/o Commerce and Industry.

2. The data of 2012-13 is based on ITCHS 2007 and the data from 2013-14 is based on ITCHS 2012

Table 23: Net Imports of Major Petrochemicals (Group-wise) during 2013-14 to 2020-21

[Qty in MT & Value in Rs. Lakh]

GROUP	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
SYNTHETIC FIBRES	-743510	-741625	-651592	-571122	-614584	-487415	-745747	-579025	-741421	-614903	-740049	-718652	-712748	-594104	-475346	-376339
FIBRE INTERMEDIATES	1857385	1250689	2106600	1216318	1767879	904732	1519133	789562	1457067	891262	997701	780963	1685283	935872	966161	486596
POLYMERS	1937352	1452757	2833532	2383518	3215683	2399991	3540134	2599798	3563245	2657515	2544974	2126438	1814729	1544031	1152860	1174203
SYNTHETIC RUBBER (ELASTOMERS)	567499	771440	552360	724457	553413	570262	521715	581655	555978	687161	554950	780722	500796	636482	652241	639439
SYNTHETIC DETERGENT INTERMEDIATES	90875	103622	106043	109457	208463	169721	221171	173062	204571	163065	226088	208894	263014	235947	263530	214319
PERFORMANCE PLASTICS	-163629	-1834	-14599	142875	-425171	-81890	-555308	-164180	-467856	-126224	-396435	-127052	-228214	43450	81816	95074
OLEFINS	-93302	-66826	-23224	-1321	-123991	-55878	-33912	-41091	-209806	-136521	-299014	-218855	-260283	-137089	-241113	-102144
AROMATICS	-790852	-494179	-864803	-450738	-828818	-309759	-134521	-20291	-2E+06	-1E+06	-3230487	-1970087	-2943942	-1564574	-3360310	-1312589
OTHER PETRO-BASED CHEMICALS	2107747	1709568	2248529	1753705	2611110	1674717	2506473	1648160	3061902	2093489	3079719	2569470	3305446	2193394	2897431	1982940
TOTAL NET IMPORT OF MAJOR PETRO-CHEMICALS	4769565	3983612	6292846	5307149	6363984	4784481	6839138	4987650	5441657	4568394	2737447	3431841	3424081	3293409	1937270	2801499

Note: 1. Data source in respect of Imports and Exports is DGCIS, M/o Commerce and Industry.

2. The data of 2012-13 is based on ITCHS 2007 and the data from 2013-14 is based on ITCHS 2012

Table -24: Exports of Major Petrochemicals (Product-wise) 2013-14 to 2020-21

[Qty in MT & Value in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
SYNTHETIC FIBRES																
ACRYLIC FIBRE	31562	47385	37420	59176	47911	58966	48332	60060	39213	52227	45932	71700	40505	59726	25569	33923
NYLON FILAMENT YARN	2023	7402	1848	6939	1639	6236	1857	6462	4014	12111	5794	18888	7748	22360	6098	15495
NYLON INDUSTRIAL YARN/TYRE CORD	2896	5696	1752	2937	1122	1471	1474	1872	1620	2239	1895	2827	3624	5116	4296	5939
POLYESTER FILAMENT YARN	647732	743768	648773	677742	634799	624444	748037	690836	717714	730282	696668	839555	711319	750466	540650	545550
POLYESTER STAPLE FIBRE	205341	187652	183575	151547	181813	129129	213903	150316	227441	169364	255455	225045	285157	204876	291399	172242
POLYPROPYLENE FILAMENT YARN	1863	2813	2232	3234	2844	3878	2077	2690	869	1117	494	713	720	965	729	1005
POLYPROPYLENE STAPLE FIBRE	14892	16220	10611	11862	7531	6885	9755	8767	9497	8663	7892	8446	9509	9103	8212	7668
Elastomeric/Spandex Filament Yarn	1337	5004	971	3890	699	2774	305	1015	685	1979	1536	4834	766	2375	1666	5218
TOTAL	907646	1015940	887182	917327	878358	833783	1025740	922018	1001053	977982	1015666	1172008	1059348	1054987	878619	787040
FIBRE INTERMEDIATES																
ACRYLONITRILE	2	5	4	85	2323	2132	6	39	1514	1900	1872	3059	2988	3262	8533	8178
CAPROLACTUM	514	902	0	1	0	8	1010	867	53	93	77	129	258	327	6225	4672
DIMETHYL TEREPHTHALATE	1	2	0	0	1	1	1	1	0	0	1	2	0	1	0	0
MONO EHYLENE GLYCOL	67032	53008	73216	57216	72239	52081	62199	45932	137462	90499	292583	175325	151301	81361	325429	105684
PURIFIED TEREPHTHALIC ACID	324	63	50	45	172977	67172	259880	106735	212329	88577	162422	97404	79825	38661	134978	44395
TOTAL	67873	53980	73270	57347	247540	121394	323096	153574	351358	181069	456955	275919	234372	123612	475165	162929
POLYMERS																
LOW DENSITY POLYETHYLENE	18369	20153	21519	23853	24007	26531	26909	27321	108257	88430	164142	132765	140022	98135	39442	35801
HIGH DENSITY POLYTHYLENE	113344	103538	51663	51095	116114	97840	148142	117815	205797	155550	457416	365235	486892	315945	398659	247524
POLYESTYRENE	83962	91765	73695	69174	86290	72301	82542	75483	69814	67452	63990	64060	49611	43139	36502	27805
POLYPROPYLENE (INC. CO-POLYMER)	943284	832814	726906	620745	735410	503124	574234	382678	552002	397646	718053	596611	539045	386684	861712	561818
EXPANDABLE POLYESTYRENE	3646	4413	4810	5489	3762	3735	3697	3548	3119	3272	3064	3818	2745	2762	894	895
POLY VINYL CHLORIDE	1332	2754	1988	2085	3054	3272	6484	6127	6662	6015	2133	1788	2060	1471	16985	8467
LINEAR LOW DENSITY POLYTHYLENE	13451	13366	10854	10267	15825	14160	53215	41558	228952	163632	508135	380841	395076	247196	134318	85759
PVC COMPOUND	10246	9448	11831	10842	13877	11534	16901	12902	13630	9774	17222	13273	0	0	0	0
TOTAL	1187634	1078251	903266	793550	998339	732497	912124	667432	1188233	891771	1934155	1558391	1615451	1095332	1488512	968069
SYNTHETIC RUBBER (ELASTOMERS)																
STYRENE BUTADIENE RUBBER	7483	8024	18007	17961	31053	23969	27139	27423	40704	36382	46179	43572	44929	37838	39757	28768
POLY BUTADIENE RUBBER	267	388	1919	1978	5988	4008	5114	4942	7012	7376	13175	15311	20323	19289	23329	15059

Table -24: Exports of Major Petrochemicals (Product-wise) 2013-14 to 2020-21

[Qty in MT & Value in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
ETHYL PROPYLENE DIMERS	2075	7096	2915	8114	2725	8882	3282	9531	2517	7696	2463	7958	2292	7284	1371	3275
ETHYL VINYL ACETATE	1215	1494	1141	1734	1274	1510	1494	1751	901	1314	530	1251	999	1614	1042	1650
NITRILE BUTADIENE RUBBER	446	1557	444	1124	400	970	451	1092	427	1128	507	1316	719	1316	3823	4326
BUTYL RUBBER	1348	3038	1614	3581	1248	3089	724	1648	328	693	696	1288	4774	5724	25715	26343
TOTAL	12834	21597	26040	34492	42688	42428	38204	46387	51889	54589	63550	70696	74036	73065	95037	79421
SYNTHETIC DETERGENT INTERMEDIATES																
LINEAR ALKYL BENZENE	32493	34657	27199	27204	9256	7034	6440	4816	930	809	323	367	193	253	926	956
ETHYLENE OXIDE	478	1188	793	1800	378	734	618	1125	483	659	725	1167	851	1226	950	983
TOTAL	32971	35845	27992	29004	9634	7768	7058	5941	1413	1468	1048	1534	1044	1479	1876	1939
PERFORMANCE PLASTICS																
ABS RESIN	303	424	225	281	465	682	294	473	273	445	449	622	328	598	407	673
NYLON-6	15308	25961	16715	28775	14577	25321	17656	29593	21353	34774	19744	38965	21214	40855	0	0
POLYMETHYL METHACRYLATE	9775	12115	9306	11215	9158	10541	8557	10230	3563	3584	4323	5218	4632	5586	3296	4774
STYRENE ACRYLONITRILE	275	249	120	158	579	459	671	450	1179	682	387	380	460	362	230	212
POLYESTER CHIPS/PET CHIPS	443104	372102	375421	274943	783106	460787	937251	557185	1014588	655326	1043386	889691	930982	618181	202297	117960
POLYTETRAFLUOROETHYLENE(PTFE)	5763	29373	7578	38120	6082	29947	8321	38519	9592	52460	11997	83897	11175	73428	10912	75124
TOTAL	474528	440224	409365	353492	813967	527737	972750	636450	1050548	747271	1080286	1018773	968791	739010	217142	198743
OLEFINS																
BUTADIENE	119410	88301	72479	45301	129808	66961	106838	97268	103426	73371	136191	113889	174252	103916	166809	72272
ETHYLENE	1	7	0	1	5119	3789	27	23	136426	97327	193233	140672	152230	79955	102895	57712
PROPYLENE	0	0	0	0	14462	5305	10500	4451	20745	9106	39290	22140	9658	4229	15284	6118
TOTAL	119411	88308	72479	45302	149389	76055	117365	101742	260597	179804	368714	276701	336140	188100	284988	136102
AROMATICS																
BENZENE	635749	437813	576741	348900	914875	371288	789425	366822	1286323	662408	1651123	822052	1408477	635303	1507626	559554
MIXED XYLENE	187239	139394	10464	6923	8	49	66	110	418	278	981	668	410	297	535	330
ORTHO-XYLENE	229010	172190	227007	138341	234386	107621	154347	74761	185675	86881	225703	122734	177267	100950	309550	127934
TOLUENE	14798	11449	9994	6409	5268	3314	5843	3764	4103	2772	13601	9501	8124	5564	17834	9791
PARAXYLENE	722455	583693	1064069	662729	878606	460535	799492	439679	1826522	1002659	2659503	1925344	2677199	1595294	2825251	1157076
TOTAL	1789251	1344539	1888275	1163302	2033143	942807	1749173	885136	3303041	1754998	4550911	2880299	4271477	2337408	4660796	1854685

Table -24: Exports of Major Petrochemicals (Product-wise) 2013-14 to 2020-21

[Qty in MT & Value in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
OTHER PETRO-BASED CHEMICALS																
ETHYLENE DICHLORIDE	9	5	21	14	15839	3103	16	8	44861	6510	19181	4478	80857	20134	37412	8605
BUTANOL	2186	3583	759	993	195	162	2292	1189	863	703	452	655	282	287	1032	1288
OXO ALCOHOL	1188	1133	1191	907	582	565	1271	731	890	682	2935	1505	1328	1146	740	2021
2-ETHYL HEXANOL	321	654	6391	6405	746	654	2055	1437	2636	1701	3175	2781	46	54	1408	1412
VINYL CHLORIDE MONOMER	1	8	0	0	0	0	0	0	0	0	0	3	0	0	0	1
EPICHLOHYDRINE	4	7	14	19	28	33	54	55	49	76	48	90	106	183	58	306
ISO BUTYLENE	1815	1382	1	2	28	249	1	3	0	2	0	1	18085	9028	6048	2593
METAXYLENE	4	13	23	146	46	140	64	217	4	263	15	282	35	587	18	857
METHYL ISOBUTYL KETONE	24	53	206	364	287	266	918	788	940	878	2038	1817	2165	1525	667	882
PIB	5896	7554	4993	5925	6128	7200	2237	2448	2620	2711	4297	4788	5828	5839	9729	8097
POLYCARBONATE	3022	6103	2459	2772	4790	4597	3990	3284	4926	5370	3432	4605	3331	3621	4447	5685
PROPYLENE GLYCOL	818	986	773	1043	531	724	865	1113	1117	1713	1697	2419	5934	6573	3254	3931
POLYVINYL ACETATE RESIN	15509	13643	15456	15384	11259	11415	8767	8927	6958	6522	8510	8622	9048	7767	8175	7358
UNSATURATED POLYESTER RESIN	10750	14533	12660	17074	12112	15025	16263	18552	14436	18212	14667	21668	15498	22694	17443	27544
CELLULOSE ACETATE BUTYRATE	93	163	44	93	6	81	8	30	1	18	1	15	0	0	9	39
CELLULOSE ACETATE SHEET	63	152	33	84	34	116	85	178	59	145	22	79	33	106	25	102
CELLULOSE NITRATE SHEET	3	14	12	16	3	5	19	14	2	5	7	24	5	9	4	31
MELAMINE MOULDING POWDER	2168	1431	6339	2284	7993	2541	10124	3072	14754	3747	16578	4758	21691	6495	21800	6695
POLYACETAL RESIN	540	654	537	598	312	383	387	439	141	279	276	402	334	540	590	1081
PHTHALIC ANHYDRIDE	23182	20259	38634	26744	40448	22378	42033	25960	37869	25156	26495	18956	28898	17976	23296	12668
STYRENE	2242	2392	6940	6623	793	669	5088	4176	4524	3842	6531	6690	4366	3326	17361	7081
VINYL ACTATE MONOMER	4096	2635	1562	1392	1695	1388	11755	6285	21261	13220	8344	6623	3434	2260	1834	1231
ISOPROPANOL	3334	4053	6139	6508	3716	2805	7385	5106	11004	7850	6281	5336	10442	7773	8298	9567
POLYOL	18969	26201	18938	48254	21099	26760	28458	32760	23427	39008	22316	43162	25825	77010	7820	60051
TOTAL	96237	107611	124125	143644	128670	101259	144135	116772	193342	138613	147298	139759	237571	194933	171468	169126
TOTAL EXPORT OF MAJOR PETRO-CHEMICALS	4688385	4186295	4411994	3537460	5301728	3385728	5289645	3535452	7401474	4927565	9618583	7394080	8798230	5807926	8273603	4358054

Note: Data source in respect of Imports and Exports is DGCI, M/o Commerce and Industry.

Table - 25 : Imports of Major Petrochemicals (Product-wise) 2013-14 to 2020-21

[Qty in MT & Value in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
SYNTHETIC FIBRES																
ACRYLIC FIBRE	32990	53051	36339	60959	39238	53809	36771	44394	32184	46549	40475	71158	56316	84841	41928	53586
NYLON FILAMENT YARN	24295	54650	27813	59448	28972	54485	31063	53352	22731	43317	23259	52088	24476	49669	17058	34533
NYLON INDUSTRIAL YARN/TYRE CORD	7022	13749	3750	7035	4411	6803	7741	10247	6566	10070	8108	16323	6893	11802	9459	15174
POLYESTER FILAMENT YARN	46713	67653	72718	89105	72605	86166	84367	92492	82784	100756	83954	118045	115170	129162	238680	197017
POLYESTER STAPLE FIBRE	42635	41577	81864	71552	99719	73357	99809	70113	88990	71053	91775	89685	118176	94729	84273	64616
POLYPROPYLENE FILAMENT YARN	792	1056	716	1002	697	1001	695	850	1343	1715	1362	2007	670	954	755	1418
POLYPROPYLENE STAPLE FIBRE	401	567	329	461	1885	1997	2016	2181	3281	3378	3333	3863	2778	3097	2164	2316
Elastomeric/Spandex Filament Yarn	9288	42012	12061	56643	16247	68750	17531	69364	21753	86241	23351	100187	22121	86629	8956	42041
TOTAL	164136	274315	235590	346205	263774	346368	279993	342993	259632	363079	275617	453356	346600	460883	403273	410701
FIBRE INTERMEDIATES																
ACRYLONITRILE	100862	111632	97388	118956	160202	121692	139709	108192	159778	172707	182234	244043	175867	200713	135230	121075
CAPROLACTUM	23494	34307	32276	43571	44577	45299	52906	50601	58413	75965	66497	99336	68049	75256	57649	55553
DIMETHYL TEREPHTHALATE	1786	1466	2094	1594	2216	1400	1761	1051	2256	1520	1455	1137	1807	1199	1766	982
MONO EHYLENE GLYCOL	820724	512134	1003540	550364	1111582	539689	1235385	604838	1066477	584695	634714	371592	787574	312149	621221	226286
PURIFIED TEREPHTHALIC ACID	978392	645130	1044572	559180	696842	318046	412468	178454	521501	237444	569756	340774	886358	470167	625460	245629
TOTAL	1925258	1304669	2179870	1273665	2015419	1026126	1842229	943136	1808425	1072331	1454656	1056882	1919655	1059484	1441326	649525
POLYMERS																
LOW DENSITY POLYETHYLENE	256147	239302	325901	295717	374761	313547	391501	330125	464591	398992	341063	310441	352372	282510	256287	208489
HIGH DENSITY POLYTHYLENE	575117	545552	842892	811233	921743	798927	1000457	824364	993072	840665	902265	872720	787964	634354	810467	648402
POLYSTYRENE	37772	49378	39647	50104	42514	47364	44374	54225	52790	64224	56312	69827	54371	62759	69916	81878
POLYPROPYLENE (INC. CO-POLYMER)	479176	472948	611673	589950	700914	574265	781188	611882	938998	762085	854828	837001	994615	853958	854399	746492
EXPANDABLE POLYSTYRENE	3978	4682	3113	3441	2981	2723	3779	3554	2644	2744	1241	1611	1037	1184	4684	4308
POLY VINYL CHLORIDE	1208529	755732	1293338	854467	1501311	878823	1702852	1015835	1846296	1123738	2037570	1354121	928376	587544	419309	300980
LINEAR LOW DENSITY POLYTHYLENE	499817	413556	550109	515931	590015	459471	469075	381387	425112	335698	276313	228745	311445	217054	226310	151723
PVC COMPOUND	64450	49858	70125	56225	79783	57368	59032	45858	27975	21140	9537	10363	0	0	0	0
TOTAL	3124986	2531008	3736798	3177068	4214022	3132488	4452258	3267230	4751478	3549286	4479129	3684829	3430180	2639363	2641372	2142272
SYNTHETIC RUBBER (ELASTOMERS)																
STYRENE BUTADIENE RUBBER	239544	287779	223549	264399	172802	155614	149559	155436	132989	161301	123010	156987	102738	118659	152373	149081
POLY BUTADIENE RUBBER	86200	109762	70471	79518	74646	63210	84910	93064	94772	122673	104671	138315	97712	107321	114961	113497
ETHYL PROPYLENE DIMERS	30347	50127	33348	54653	39370	60759	43411	54947	45099	59035	52800	80061	45465	59429	41810	52572

Table - 25 : Imports of Major Petrochemicals (Product-wise) 2013-14 to 2020-21

[Qty in MT & Value in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
ETHYL VINYL ACETATE	114764	125169	139414	155970	165264	162033	144604	141686	183348	184503	178684	202884	193671	212988	189581	212461
NITRILE BUTADIENE RUBBER	29596	45051	26719	44760	51937	44391	36451	45999	40310	63203	38519	73014	41179	60140	158510	52408
BUTYL RUBBER	79882	175149	84899	159649	92082	126683	100984	136910	111349	151035	120816	200157	94067	151010	90043	138841
TOTAL	580333	793037	578400	758949	596101	612690	559919	628042	607867	741750	618500	851418	574832	709547	747278	718860
SYNTHETIC DETERGENT INTERMEDIATES																
LINEAR ALKYL BENZENE	123825	139218	133994	137918	217997	176537	228092	177675	205910	163748	227111	210012	264026	236771	265392	215927
ETHYLENE OXIDE	21	249	41	543	100	952	137	1328	74	785	25	416	32	655	14	331
TOTAL	123846	139467	134035	138461	218097	177489	228229	179003	205984	164533	227136	210428	264058	237426	265406	216258
PERFORMANCE PLASTICS																
ABS RESIN	63020	86113	69910	94132	90081	100935	102685	114201	98026	131230	119398	173631	104643	126833	98848	129553
NYLON-6	114365	214028	133891	237580	144545	218291	158810	233711	175945	299915	215718	430268	217382	345202	0	0
POLYMETHYL METHACRYLATE	18924	25935	15367	21697	20309	30401	27175	35588	29994	47445	29540	55142	29331	45525	31774	44980
STYRENE ACRYLONITRILE	5973	7523	6411	7884	9569	9061	8542	8299	9430	10630	9188	11431	10452	11103	13347	14631
POLYESTER CHIPS/PET CHIPS	106283	90135	167015	123074	122206	74948	117996	68960	266358	113614	307111	199059	375865	233917	151926	85030
POLYTETRAFLUOROETHYLENE(PTFE)	2334	14656	2172	12000	2086	12211	2234	11511	2939	18213	2896	22190	2904	19880	3063	19623
TOTAL	310899	438390	394766	496367	388796	445847	417442	472270	582692	621047	683851	891721	740577	782460	298958	293817
OLEFINS																
BUTADIENE	1071	820	3223	2823	994	706	2105	1657	2859	3104	1048	1363	14	82	29	108
ETHYLENE	24791	19461	43905	38467	21050	14753	80917	57116	39119	32795	60583	50604	64816	43283	39902	28526
PROPYLENE	247	1201	2127	2691	3354	4718	431	1878	8813	7384	8069	5879	11027	7646	3944	5324
TOTAL	26109	21482	49255	43981	25398	20177	83453	60651	50791	43283	69700	57846	75857	51011	43875	33958
AROMATICS																
BENZENE	5250	3146	47	35	0	5	0	8	60	66	22264	12820	11153	5330	19212	8254
MIXED XYLENE	5567	4339	1647	1155	108	96	113	125	2424	1200	641	433	122	139	524	293
ORTHO-XYLENE	44879	41678	35697	23547	34502	16871	26275	14609	15730	8337	22974	15464	16382	9962	25136	11309
TOLUENE	263759	193333	287877	183823	343662	163765	392749	183101	414144	194854	438055	235492	464497	238119	601835	238357
PARAXYLENE	678944	607864	698204	504004	826053	452311	1195515	667002	888660	504091	836490	646003	835381	519284	653779	283883
TOTAL	998399	850360	1023472	712564	1204325	633048	1614652	864845	1321018	708548	1320424	910212	1327535	772834	1300486	542096
OTHER PETRO-BASED CHEMICALS																
ETHYLENE DICHLORIDE	439537	98004	465292	117028	600033	104976	503987	86304	713334	108450	581677	141440	780433	182591	632881	150504
BUTANOL	44683	37454	56954	42657	62512	31380	57959	26234	53679	30719	48955	35342	58865	33488	43270	27054

Table - 25 : Imports of Major Petrochemicals (Product-wise) 2013-14 to 2020-21

[Qty in MT & Value in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
OXO ALCOHOL	1698	3182	1285	3866	1270	4347	3186	6713	2272	6324	2696	7376	2873	6210	2798	4355
2-ETHYL HEXANOL	100495	88209	134894	117375	109095	66012	66867	37312	58129	39652	54107	44522	81656	56216	56250	38505
VINYL CHLORIDE MONOMER	303042	167918	317925	178829	349371	167169	344423	177368	484390	247256	457532	252913	511166	280807	479876	315306
EPICHLHYDRINE	22986	22594	33588	33629	43383	37643	48112	34563	56024	51446	65013	83311	61163	72337	55202	58174
ISO BUTYLENE	23254	21809	13010	12222	15853	10526	20051	14133	48702	36009	44558	40254	10787	7475	1806	1231
METAXYLENE	3029	3223	946	902	3064	2755	2667	2600	2078	2064	2943	3306	1910	1991	2711	2492
METHYL ISOBUTYL KETONE	18318	21987	23243	26643	27576	22104	22487	17388	34684	31270	33932	29589	29977	18245	30744	31945
PIB	9456	13554	11290	16394	14367	17322	16034	16949	15041	16964	16287	20089	16125	19857	16396	18107
POLYCARBONATE	123434	183633	124555	189828	138535	207756	138365	204195	158944	256209	190435	369272	175692	263317	179111	267899
PROPYLENE OXIDE	11676	13076	22914	25917	25552	25697	23064	21699	23446	23594	26800	30694	20160	20127	17361	22038
PROPYLENE GLYCOL	43547	40750	48749	50720	54045	46881	51339	39956	57333	49579	66498	69089	67372	54615	59532	55321
POLYVINYL ACETATE RESIN	4246	8824	4003	8300	3209	5941	3043	3829	3448	5059	2713	3894	3578	4955	3818	4871
UNSATURATED POLYESTER RESIN	31157	40025	28855	33910	30303	36568	39975	42255	49888	53751	42954	59992	48616	58735	49482	58712
ETHYL BENZENE	172	228	128	182	150	146	308	267	351	320	719	806	463	471	500	490
CELLULOSE ACETATE BUTYRATE	0	1	1	5	2	12	3	18	3	10	0	0	12	18	19	14
CELLULOSE ACETATE SHEET	980	569	1260	749	1295	775	1066	564	1346	921	1516	1122	1356	1013	1311	1059
CELLULOSE NITRATE SHEET	502	843	263	467	88	260	75	250	99	327	106	396	75	270	1243	538
MELAMINE MOULDING POWDER	10210	12619	10081	12356	11872	13961	12997	15304	14699	16993	15280	20127	14945	18772	11992	15425
POLYACETAL RESIN	26266	25418	32605	29992	35212	34173	37883	37829	43672	43617	48759	59046	47673	53004	49011	56158
PHTHALIC ANHYDRIDE	54934	48521	52350	39837	79803	44118	92058	53567	130440	86282	144801	107477	174482	110039	140781	80887
STYRENE	572654	602695	617800	543696	717696	516539	729627	557571	789273	654655	817779	744118	876922	610879	738149	459419
VINYL ACTATE MONOMER	147364	87273	139553	114477	141649	88260	162004	87159	184964	117193	171353	135851	162866	98977	138364	88247
ISOPROPANOL	51271	42756	63194	51016	87606	47646	97262	55519	110464	71816	141113	98531	154095	83539	186792	164736
POLYOL	159073	232014	167916	246352	186239	243011	175766	225387	218541	281622	248491	350672	239755	330380	169499	228580
TOTAL	2203984	1817179	2372654	1897349	2739780	1775978	2650608	1764933	3255244	2232102	3227017	2709229	3543017	2388328	3068899	2152067
TOTAL IMPORT OF MAJOR PETRO-CHEMICALS	9457950	8169907	1.1E+07	8844609	1.2E+07	8170211	1.2E+07	8523103	1.3E+07	9495959	1.2E+07	1.1E+07	1.2E+07	9101336	1E+07	7159554

Note: Data source in respect of Imports and Exports is DGCIS, M/o Commerce and Industry.

Table 26: Net Imports of Major Petrochemicals (Product-wise) 2013-14 to 2020-21

[Qty in MT & Value in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
SYNTHETIC FIBRES																
ACRYLIC FIBRE	1428	5666	-1081	1783	-8673	-5157	-11561	-15666	-7029	-5678	-5457	-542	15811	25115	16359	19663
NYLON FILAMENT YARN	22272	47248	25965	52509	27333	48249	29206	46890	18717	31206	17465	33200	16728	27309	10960	19038
NYLON INDUSTRIAL YARN/TYRE CORD	4126	8053	1998	4098	3289	5332	6267	8375	4946	7831	6213	13496	3269	6686	5163	9235
POLYESTER FILAMENT YARN	-601019	-676115	-576055	-588637	-562194	-538278	-663670	-598344	-634930	-629526	-612714	-721510	-596149	-621304	-301970	-348533
POLYESTER STAPLE FIBRE	-162706	-146075	-101711	-79995	-82094	-55772	-114094	-80203	-138451	-98311	-163680	-135360	-166981	-110147	-207126	-107626
POLYPROPYLENE FILAMENT YARN	-1071	-1757	-1516	-2232	-2147	-2877	-1382	-1840	474	598	868	1294	-50	-11	26	413
POLYPROPYLENE STAPLE FIBRE	-14491	-15653	-10282	-11401	-5646	-4888	-7739	-6586	-6216	-5285	-4559	-4583	-6731	-6006	-6048	-5352
Elastomeric/Spandex Filament Yarn	7951	37008	11090	52753	15548	65976	17226	68349	21068	84262	21815	95353	21355	84254	7290	36823
TOTAL	-743510	-741625	-651592	-571122	-614584	-487415	-745747	-579025	-741421	-614903	-740049	-718652	-712748	-594104	-475346	-376339
FIBRE INTERMEDIATES																
ACRYLONITRILE	100860	111627	97384	118871	157879	119560	139703	108153	158264	170807	180362	240984	172879	197451	126697	112897
CAPROLACTUM	22980	33405	32276	43570	44577	45291	51896	49734	58360	75872	66420	99207	67791	74929	51424	50881
DIMETHYL TEREPHTHALATE	1785	1464	2094	1594	2215	1399	1760	1050	2256	1520	1454	1135	1807	1198	1766	982
MONO EHYLENE GLYCOL	753692	459126	930324	493148	1039343	487608	1173186	558906	929015	494196	342131	196267	636273	230788	295792	120602
PURIFIED TEREPHTHALIC ACID	978068	645067	1044522	559135	523865	250874	152588	71719	309172	148867	407334	243370	806533	431506	490482	201234
TOTAL	1857385	1250689	2106600	1216318	1767879	904732	1519133	789562	1457067	891262	997701	780963	1685283	935872	966161	486596
POLYMERS																
LOW DENSITY POLYETHYLENE	237778	219149	304382	271864	350754	287016	364592	302804	356334	310562	176921	177676	212350	184375	216845	172688
HIGH DENSITY POLYTHYLENE	461773	442014	791229	760138	805629	701087	852315	706549	787275	685115	444849	507485	301072	318409	411808	400878
POLYESTYRENE	-46190	-42387	-34048	-19070	-43776	-24937	-38168	-21258	-17024	-3228	-7678	5767	4760	19620	33414	54073
POLYPROPYLENE (INC. CO-POLYMER)	-464108	-359866	-115233	-30795	-34496	71141	206954	229204	386996	364439	136775	240390	455570	467274	-7313	184674
EXPANDABLE POLYESTYRENE	332	269	-1697	-2048	-781	-1012	82	6	-475	-528	-1823	-2207	-1708	-1578	3790	3413
POLY VINYL CHLORIDE	1207197	752978	1291350	852382	1498257	875551	1696368	1009708	1839634	1117723	2035437	1352333	926316	586073	402324	292513
LINEAR LOW DENSITY POLYTHYLENE	486366	400190	539255	505664	574190	445311	415860	339829	196160	172066	-231822	-152096	-83631	-30142	91992	65964
PVC COMPOUND	54204	40410	58294	45383	65906	45834	42131	32956	14345	11366	-7685	-2910	0	0	0	0
TOTAL	1937352	1452757	2833532	2383518	3215683	2399991	3540134	2599798	3563245	2657515	2544974	2126438	1814729	1544031	1152860	1174203
SYNTHETIC RUBBER (ELASTOMERS)																
STYRENE BUTADIENE RUBBER	232061	279755	205542	246438	141749	131645	122420	128013	92285	124919	76831	113415	57809	80821	112616	120313
POLY BUTADIENE RUBBER	85933	109374	68552	77540	68658	59202	79796	88122	87760	115297	91496	123004	77389	88032	91632	98438
ETHYL PROPYLENE DIMERS	28272	43031	30433	46539	36645	51877	40129	45416	42582	51339	50337	72103	43173	52145	40439	49297

Table 26: Net Imports of Major Petrochemicals (Product-wise) 2013-14 to 2020-21

[Qty in MT & Value in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ETHYL VINYL ACETATE	113549	123675	138273	154236	163990	160523	143110	139935	182447	183189	178154	201633	192672	211374	188539	210811
NITRILE BUTADIENE RUBBER	29150	43494	26275	43636	51537	43421	36000	44907	39883	62075	38012	71698	40460	58824	154687	48082
BUTYL RUBBER	78534	172111	83285	156068	90834	123594	100260	135262	111021	150342	120120	198869	89293	145286	64328	112498
TOTAL	567499	771440	552360	724457	553413	570262	521715	581655	555978	687161	554950	780722	500796	636482	652241	639439
SYNTHETIC DETERGENT INTERMEDIATES																
LINEAR ALKYL BENZENE	91332	104561	106795	110714	208741	169503	221652	172859	204980	162939	226788	209645	263833	236518	264466	214971
ETHYLENE OXIDE	-457	-939	-752	-1257	-278	218	-481	203	-409	126	-700	-751	-819	-571	-936	-652
TOTAL	90875	103622	106043	109457	208463	169721	221171	173062	204571	163065	226088	208894	263014	235947	263530	214319
PERFORMANCE PLASTICS																
ABS RESIN	62717	85689	69685	93851	89616	100253	102391	113728	97753	130785	118949	173009	104315	126235	98441	128880
NYLON-6	99057	188067	117176	208805	129968	192970	141154	204118	154592	265141	195974	391303	196168	304347	0	0
POLYMETHYL METHACRYLATE	9149	13820	6061	10482	11151	19860	18618	25358	26431	43861	25217	49924	24699	39939	28478	40206
STYRENE ACRYLONITRILE	5698	7274	6291	7726	8990	8602	7871	7849	8251	9948	8801	11051	9992	10741	13117	14419
POLYESTER CHIPS/PET CHIPS	-336821	-281967	-208406	-151869	-660900	-385839	-819255	-488225	-748230	-541712	-736275	-690632	-555117	-384264	-50371	-32930
POLYTETRAFLUOROETHYLENE(PTFE)	-3429	-14717	-5406	-26120	-3996	-17736	-6087	-27008	-6653	-34247	-9101	-61707	-8271	-53548	-7849	-55501
TOTAL	-163629	-1834	-14599	142875	-425171	-81890	-555308	-164180	-467856	-126224	-396435	-127052	-228214	43450	81816	95074
OLEFINS																
BUTADIENE	-118339	-87481	-69256	-42478	-128814	-66255	-104733	-95611	-100567	-70267	-135143	-112526	-174238	-103834	-166780	-72164
ETHYLENE	24790	19454	43905	38466	15931	10964	80890	57093	-97307	-64532	-132650	-90068	-87414	-36672	-62993	-29186
PROPYLENE	247	1201	2127	2691	-11108	-587	-10069	-2573	-11932	-1722	-31221	-16261	1369	3417	-11340	-794
TOTAL	-93302	-66826	-23224	-1321	-123991	-55878	-33912	-41091	-209806	-136521	-299014	-218855	-260283	-137089	-241113	-102144
AROMATICS																
BENZENE	-630499	-434667	-576694	-348865	-914875	-371283	-789425	-366814	-1286263	-662342	-1628859	-809232	-1397324	-629973	-1488414	-551300
MIXED XYLENE	-181672	-135055	-8817	-5768	100	47	47	15	2006	922	-340	-235	-288	-158	-11	-37
ORTHO-XYLENE	-184131	-130512	-191310	-114794	-199884	-90750	-128072	-60152	-169945	-78544	-202729	-107270	-160885	-90988	-284414	-116625
TOLUENE	248961	181884	277883	177414	338394	160451	386906	179337	410041	192082	424454	225991	456373	232555	584001	228566
PARAXYLENE	-43511	24171	-365865	-158725	-52553	-8224	396023	227323	-937862	-498568	-1823013	-1279341	-1841818	-1076010	-2171472	-873193
TOTAL	-790852	-494179	-864803	-450738	-828818	-309759	-134521	-20291	-1982023	-1046450	-3230487	-1970087	-2943942	-1564574	-3360310	-1312589
OTHER PETRO-BASED CHEMICALS																
ETHYLENE DICHLORIDE	439528	97999	465271	117014	584194	101873	503971	86296	668473	101940	562496	136962	699576	162457	595469	141899
BUTANOL	42497	33871	56195	41664	62317	31218	55667	25045	52816	30016	48503	34687	58583	33201	42238	25766
OXO ALCOHOL	510	2049	94	2959	688	3782	1915	5982	1382	5642	-239	5871	1545	5064	2058	2334

Table 26: Net Imports of Major Petrochemicals (Product-wise) 2013-14 to 2020-21

[Qty in MT & Value in Rs. Lakh]

PRODUCT	2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
2-ETHYL HEXANOL	100174	87555	128503	110970	108349	65358	64812	35875	55493	37951	50932	41741	81610	56162	54842	37093
VINYL CHLORIDE MONOMER	303041	167910	317925	178829	349371	167169	344423	177368	484390	247256	457532	252910	511166	280807	479876	315305
EPICHLHYDRINE	22982	22587	33574	33610	43355	37610	48058	34508	55975	51370	64965	83221	61057	72154	55144	57868
ISO BUTYLENE	21439	20427	13009	12220	15825	10277	20050	14130	48702	36007	44558	40253	-7298	-1553	-4242	-1362
METAXYLENE	3025	3210	923	756	3018	2615	2603	2383	2074	1801	2928	3024	1875	1404	2693	1635
METHYL ISOBUTYL KETONE	18294	21934	23037	26279	27289	21838	21569	16600	33744	30392	31894	27772	27812	16720	30077	31063
PIB	3560	6000	6297	10469	8239	10122	13797	14501	12421	14253	11990	15301	10297	14018	6667	10010
POLYCARBONATE	120412	177530	122096	187056	133745	203159	134375	200911	154018	250839	187003	364667	172361	259696	174664	262214
PROPYLENE OXIDE	11676	13076	22914	25917	25552	25697	23064	21698	23446	23594	26800	30694	20160	20126	17361	22037
PROPYLENE GLYCOL	42729	39764	47976	49677	53514	46157	50474	38843	56216	47866	64801	66670	61438	48042	56278	51390
POLYVINYL ACETATE RESIN	-11263	-4819	-11453	-7084	-8050	-5474	-5724	-5098	-3510	-1463	-5797	-4728	-5470	-2812	-4357	-2487
UNSATURATED POLYESTER RESIN	20407	25492	16195	16836	18191	21543	23712	23703	35452	35539	28287	38324	33118	36041	32039	31168
ETHYL BENZENE	172	228	128	182	150	144	308	267	351	320	719	806	463	471	500	490
CELLULOSE ACETATE BUTYRATE	-93	-162	-43	-88	-4	-69	-5	-12	2	-8	-1	-15	12	18	10	-25
CELLULOSE ACETATE SHEET	917	417	1227	665	1261	659	981	386	1287	776	1494	1043	1323	907	1286	957
CELLULOSE NITRATE SHEET	499	829	251	451	85	255	56	236	97	322	99	372	70	261	1239	507
MELAMINE MOULDING POWDER	8042	11188	3742	10072	3879	11420	2873	12232	-55	13246	-1298	15369	-6746	12277	-9808	8730
POLYACETAL RESIN	25726	24764	32068	29394	34900	33790	37496	37390	43531	43338	48483	58644	47339	52464	48421	55077
PHTHALIC ANHYDRIDE	31752	28262	13716	13093	39355	21740	50025	27607	92571	61126	118306	88521	145584	92063	117485	68219
STYRENE	570412	600303	610860	537073	716903	515870	724539	553395	784749	650813	811248	737428	872556	607553	720788	452338
VINYL ACTATE MONOMER	143268	84638	137991	113085	139954	86872	150249	80874	163703	103973	163009	129228	159432	96717	136530	87016
ISOPROPANOL	47937	38703	57055	44508	83890	44841	89877	50413	99460	63966	134832	93195	143653	75766	178494	155169
POLYOL	140104	205813	148978	198098	165140	216251	147308	192627	195114	242614	226175	307510	213930	253370	161679	168529
TOTAL	2107747	1709568	2248529	1753705	2611110	1674717	2506473	1648160	3061902	2093489	3079719	2569470	3305446	2193394	2897431	1982940
TOTAL IMPORT OF MAJOR PETRO-CHEMICALS	4769565	3983612	6292846	5307149	6363984	4784481	6839138	4987650	5441657	4568394	2737447	3431841	3424081	3293409	1937270	2801499

Note: Data source in respect of Imports and Exports is DGCIS, M/o Commerce and Industry.

Table 27: Top Five Export Destinations of selected Petrochemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
ACRYLIC FIBRE	KENYA	7993.367	6903.733
	IRAN	7252.885	9513.181
	ETHIOPIA	2395.251	1796.921
	SOUTH AFRICA	873.166	2224.231
	U S A	858.461	3467.07
	Product Total	19373.13	23905.136
NYLON FILAMENT YARN	BRAZIL	928.399	1952.764
	TURKEY	675.219	1050.907
	NEW ZEALAND	549.261	1612.031
	AUSTRALIA	416.044	1045.761
	BANGLADESH PR	415.513	764.127
	Product Total	2984.436	6425.59
NYLON INDUSTRIAL YARN/TYRE CORD	U ARAB EMTS	987.378	1542.956
	MEXICO	483.248	648.041
	U S A	468.72	709.723
	BANGLADESH PR	380.41	464.572
	CHILE	299.641	385.847
	Product Total	2619.397	3751.139
POLYESTER FILAMENT YARN	TURKEY	143810.589	140352.015
	BRAZIL	101747.04	81573.993
	EGYPT A RP	37962.054	30199.514
	BANGLADESH PR	29075.471	37334.649
	ARGENTINA	24638.219	21687.713
	Product Total	337233.373	311147.884
POLYESTER STAPLE FIBRE	BANGLADESH PR	40394.408	21678.628
	U S A	28791.364	18946.767
	TURKEY	26859.917	17809.969
	NEPAL	25521.81	14745.282
	INDONESIA	18134.862	8946.744
	Product Total	139702.361	82127.39
POLYPROPYLENE FILAMENT YARN	MEXICO	159.208	196.941
	NIGERIA	110.338	145.457
	MALAYSIA	65.995	109.769
	ETHIOPIA	51.239	69.455
	NEPAL	48.611	67.088
	Product Total	435.391	588.71
POLYPROPYLENE STAPLE FIBRE	U S A	5893.767	5147.931
	BANGLADESH PR	1483.938	1437.886
	SAUDI ARAB	458.571	568.928
	NEPAL	234.696	328.423
	AUSTRALIA	66.368	80.323
	Product Total	8137.34	7563.491
Elastomeric/Spandex Filament Yarn	BRAZIL	499.358	1568.501
	TURKEY	259.582	890.147
	CHINA P RP	252.141	495.148
	BANGLADESH PR	114.963	350.758
	ARGENTINA	89.818	310.817
	Product Total	1215.862	3615.371
ACRYLONITRILE	U ARAB EMTS	4172.001	3262.278
	OMAN	2778	2969.312
	TURKEY	1580	1920.528
	BANGLADESH PR	3.04	6.374
	THAILAND	0.2	19.232
	Product Total	8533.241	8177.724
	CHINA P RP	6171	4154.125
	SAUDI ARAB	20	21.006

Table 27: Top Five Export Destinations of selected Petrochemicals during 2020-21

PRODUCT (1)	COUNTRY (2)	QUANTITY(MT) (3)	VALUE(RS.Lakhs) (4)
CAPROLACTUM	INDONESIA	14.7	21.798
	NIGERIA	11	10.365
	UGANDA	5.6	9.115
	Product Total	6222.3	4216.409
MONO EHYLENE GLYCOL	CHINA P RP	286352	77428.662
	U S A	10164.022	7735.913
	EGYPT A RP	6182	2786.52
	INDONESIA	5346	4461.135
	TAIWAN	4862.005	3732.276
	Product Total	312906.027	96144.506
PURIFIED TEREPHTHALIC ACID	TURKEY	49214.6	15057.981
	OMAN	33713	11044.861
	CHINA P RP	23054	6796.271
	SOUTH AFRICA	19160.005	6565.986
	SAUDI ARAB	4465	1520.436
	Product Total	129606.605	40985.535
LOW DENSITY POLYETHYLENE	CHINA P RP	8473.501	5650.987
	TURKEY	7404.96	6742.308
	EGYPT A RP	2838.425	2729.865
	OMAN	2022.21	1953.237
	PORTUGAL	1862	1741.662
	Product Total	22601.096	18818.059
HIGH DENSITY POLYTHYLENE	CHINA P RP	270997.968	149234.877
	VIETNAM SOC REP	41812.866	25768.058
	NEPAL	31747.418	23848.965
	KENYA	8180.434	5865.279
	BANGLADESH PR	7778.51	5226.949
	Product Total	360517.196	209944.128
POLYESTYRENE	BANGLADESH PR	6564.777	4610.832
	HONG KONG	4481	2784.44
	CHINA P RP	2372.7	2693.946
	SPAIN	2192	1244.368
	SRI LANKA DSR	1917.227	1505.494
	Product Total	17527.704	12839.08
POLYPROPYLENE (INC. CO-POLYMER)	CHINA P RP	387538.501	225135.132
	TURKEY	102274.235	73778.662
	VIETNAM SOC REP	57771.025	37726.85
	BANGLADESH PR	46200.341	29056.008
	NEPAL	42329.174	32400.341
	Product Total	636113.276	398096.993
EXPANDABLE POLYESTYRENE	INDONESIA	308	252.859
	VIETNAM SOC REP	249.81	280.989
	TAIWAN	132	125.987
	U ARAB EMTS	96.48	110.303
	NEPAL	44.5	50.39
	Product Total	830.79	820.528
POLY VINYL CHLORIDE	CHINA P RP	15962	7306.789
	NEPAL	492.088	510.849
	TURKEY	161	215.716
	SRI LANKA DSR	143	173.793
	IRAN	55	62.938
	Product Total	16813.088	8270.085
LINEAR LOW DENSITY POLYTHYLENE	CHINA P RP	57589.191	32058.96
	KENYA	17004.162	11685.14
	BANGLADESH PR	11014	6869.519
	NEPAL	8378.504	6005.406

Table 27: Top Five Export Destinations of selected Petrochemicals during 2020-21

PRODUCT (1)	COUNTRY (2)	QUANTITY(MT) (3)	VALUE(RS.Lakhs) (4)
	GHANA	5640	4027.742
	Product Total	99625.857	60646.767
STYRENE BUTADIENE RUBBER	THAILAND	9115.115	6322.066
	CHINA P RP	8707.789	4900.404
	VIETNAM SOC REP	4208.75	2767.572
	SRI LANKA DSR	2199.557	2213.711
	U ARAB EMTS	2130.713	1240.939
	Product Total	26361.924	17444.692
POLY BUTADIENE RUBBER	CHINA P RP	17217.9	9304.594
	THAILAND	2321.34	2076.92
	SRI LANKA DSR	2189.985	2265.911
	VIETNAM SOC REP	942.9	766.735
	BANGLADESH PR	240.545	284.479
	INDONESIA	141.785	91.634
	Product Total	23054.455	14790.273
ETHYL PROPYLENE DIMERS	TURKEY	334.109	983.336
	VIETNAM SOC REP	293.287	841.786
	BANGLADESH PR	260.188	200.372
	U ARAB EMTS	79.393	109.587
	U S A	77.192	384.783
	Product Total	1044.169	2519.864
ETHYL VINYL ACETATE	NEPAL	522.575	668.494
	U ARAB EMTS	192.14	406.224
	KENYA	100.9	121.642
	BANGLADESH PR	83.98	130.43
	NIGERIA	43.88	145.166
	Product Total	943.475	1471.956
NITRILE BUTADIENE RUBBER	MALAYSIA	3031.22	2975.06
	INDONESIA	207	236.557
	U ARAB EMTS	147.355	182.486
	THAILAND	137.955	211.87
	U S A	127.46	338.495
	Product Total	3650.99	3944.468
BUTYL RUBBER	CHINA P RP	15304.56	14601.349
	KOREA RP	3138.63	3479.937
	SRI LANKA DSR	1248.412	1671.633
	THAILAND	1227.14	1348.142
	BANGLADESH PR	1093.675	1225.162
	Product Total	22012.417	22326.223
LINEAR ALKYL BENZENE	BANGLADESH PR	495	519.322
	NEPAL	187.349	162.973
	ANGOLA	100	82.117
	U ARAB EMTS	59.508	73.025
	SRI LANKA DSR	30	44.391
	Product Total	871.857	881.828
ETHYLENE OXIDE	VIETNAM SOC REP	278.22	233.614
	MALAYSIA	272.136	214.639
	THAILAND	240.06	386.482
	INDONESIA	144	111.181
	BANGLADESH PR	15.74	25.256
	Product Total	950.156	971.172
ABS RESIN	CHINA P RP	156.962	232.587
	U S A	110.943	161.667
	U ARAB EMTS	34.2	47.01
	NEPAL	33.895	69.084
	AUSTRALIA	26.05	21.364

Table 27: Top Five Export Destinations of selected Petrochemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
	Product Total	362.05	531.712
POLYMETHYL METHACRYLATE	NEPAL	1606.707	1364.418
	BANGLADESH PR	553.905	585.808
	GERMANY	223.908	845.82
	KENYA	214.33	165.392
	ISRAEL	150.16	162.078
	Product Total	2749.01	3123.516
STYRENE ACRYLONITRILE	NIGERIA	160.09	78.232
	CANADA	23.94	37
	PHILIPPINES	23.5	33.988
	U ARAB EMTS	9.98	35.576
	SAUDI ARAB	8	11.708
	Product Total	225.51	196.504
POLYESTER CHIPS/PET CHIPS	BAHARAIN IS	54056	32150.839
	U ARAB EMTS	24993	14092.431
	NIGERIA	21189.05	11912.236
	MEXICO	21100	12750.18
	TURKEY	12083.675	6876.116
	Product Total	133421.725	77781.802
POLYTETRAFLUOROETHYLENE(PTFE)	GERMANY	3092.359	21519.148
	U S A	2755.305	19164.353
	ITALY	1379.008	7634.833
	CHINA P RP	787.057	4429.98
	TURKEY	722.29	5544.116
	Product Total	8736.019	58292.43
BUTADIENE	MALAYSIA	62040	25898.062
	KOREA RP	44221	19598.63
	TAIWAN	25327	12813.377
	CHINA P RP	20713	4464.105
	INDONESIA	14166	8437.762
	Product Total	166467	71211.936
ETHYLENE	INDONESIA	55106	28708.647
	QATAR	25741	15710.525
	OMAN	12072.047	7468.791
	CHINA P RP	9975	5811.116
	THAILAND	1	5.037
	Product Total	102895.047	57704.116
PROPYLENE	INDONESIA	10034	4482.097
	EGYPT A RP	5250	1636.235
	UGANDA	0.001	0.129
	Product Total	15284.001	6118.461
BENZENE	SAUDI ARAB	766369.96	286901.339
	CHINA P RP	154143.008	50918.797
	BELGIUM	139539	55458.622
	SPAIN	139435.196	54238.01
	U S A	106983.688	36696.84
	Product Total	1306470.852	484213.608
MIXED XYLENE	QATAR	499.8	277.412
	NEPAL	17.106	15.723
	SAUDI ARAB	12	25.766
	U ARAB EMTS	3.05	4.234
	SRI LANKA DSR	1.68	4.458
	Product Total	533.636	327.593
ORTHO-XYLENE	CHINA P RP	129683.52	47974.081
	TAIWAN	74001.4	32041.054
	BELGIUM	55337.48	26096.917

Table 27: Top Five Export Destinations of selected Petrochemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
	ITALY	36449	15930.785
	NETHERLAND	8800	3794.262
	Product Total	304271.4	125837.099
TOLUENE	CHINA P RP	9618	4454.123
	KENYA	1454.726	775.337
	UGANDA	1426.187	747.355
	U ARAB EMTS	1010.104	951.199
	NIGERIA	994	482.407
	Product Total	14503.017	7410.421
PARAXYLENE	CHINA P RP	1461389	591051.985
	MALAYSIA	471319.44	193532.831
	INDONESIA	391393.863	160015.693
	U S A	243015.48	100402.1
	THAILAND	76156.5	30961.352
	Product Total	2643274.283	1075963.961
ETHYLENE DICHLORIDE	U ARAB EMTS	14556	3292.305
	EGYPT A RP	13405	2482.424
	THAILAND	9358	2784.492
	SAUDI ARAB	90	42.136
	ITALY	2.75	2.604
	Product Total	37411.75	8603.961
BUTANOL	U ARAB EMTS	392.92	556.751
	BELGIUM	204	257.398
	VIETNAM SOC REP	119.26	127.13
	QATAR	98	82.541
	U S A	85.14	140.377
	Product Total	899.32	1164.197
OXO ALCOHOL	NETHERLAND	305.245	345.805
	CHINA P RP	302	145.151
	U S A	91.689	500.843
	JAPAN	28	29.02
	MYANMAR	3.001	2.861
	Product Total	729.935	1023.68
2-ETHYL HEXANOL	TURKEY	1195.05	1166.227
	U ARAB EMTS	157.35	175.941
	BRUNEI	24.55	29.701
	QATAR	14.01	16.915
	NEPAL	9.52	10.44
	Product Total	1400.48	1399.224
VINYL CHLORIDE MONOMER	OMAN	0.15	0.796
	U S A	0.002	0.333
	UZBEKISTAN	0.001	0.151
	Product Total	0.153	1.28
EPICHLHYDRINE	IRAN	35.52	59.041
	SOUTH AFRICA	10.09	21.654
	U ARAB EMTS	10.082	18.388
	U S A	2.258	191.793
	TAIWAN	0.045	2.011
	Product Total	57.995	292.887
ISO BUTYLENE	SAUDI ARAB	3948	1883.08
	CHINA P RP	2100	710.224
	Product Total	6048	2593.304
METAXYLENE	BELGIUM	8.97	46.717
	DENMARK	8.7	810.03
	CONGO D. REP.	0.04	0.203
	INDONESIA	0.004	0.066

Table 27: Top Five Export Destinations of selected Petrochemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
	U ARAB EMTS	0.002	0.057
	Product Total	17.716	857.073
METHYL ISOBUTYL KETONE	U ARAB EMTS	451.912	607.823
	NIGERIA	73.755	63.29
	KENYA	37.833	46.358
	VIETNAM SOC REP	26.4	57.672
	NEPAL	24.769	36.539
	Product Total	614.669	811.682
PIB	CHINA P RP	4676.19	3474.062
	SINGAPORE	2324	1704.308
	U ARAB EMTS	678.58	723.184
	THAILAND	610.18	426.843
	IRAN	158.4	237.54
	Product Total	8447.35	6565.937
POLYCARBONATE	SINGAPORE	1278.238	2353.222
	KOREA RP	1272.996	1052.605
	ITALY	527.4	536.43
	BELGIUM	412	353.618
	MALAYSIA	309.324	182.893
	Product Total	3799.958	4478.768
PROPYLENE OXIDE	SINGAPORE	0.05	0.107
	THAILAND	0.014	0.165
	MYANMAR	0.01	0.227
	U ARAB EMTS	0.002	0.001
	LITHUANIA	0	0.026
	Product Total	0.076	0.526
PROPYLENE GLYCOL	IRAN	2072.905	2276.759
	U ARAB EMTS	333.623	246.217
	SINGAPORE	199.085	253.755
	NEPAL	166.39	228.806
	U S A	91	150.803
	Product Total	2863.003	3156.34
POLYVINYL ACETATE RESIN	U S A	1304.163	1694.346
	NIGERIA	1012.5	396.434
	TURKEY	721.6	935.551
	U ARAB EMTS	576.508	348.23
	TANZANIA REP	547.79	330.663
	Product Total	4162.561	3705.224
UNSATURATED POLYESTER RESIN	BANGLADESH PR	1797.088	3029.95
	CHINA P RP	1598.265	3720.461
	NEPAL	1594.815	1561.652
	U ARAB EMTS	1166.03	2242.597
	QATAR	1158.315	1549.163
	Product Total	7314.513	12103.823
CELLULOSE ACETATE BUTYRATE	SYRIA	5	7.134
	BANGLADESH PR	4	29.541
	SRI LANKA DSR	0.151	1.008
	VIETNAM SOC REP	0.115	0.699
	U ARAB EMTS	0.025	0.157
	Product Total	9.291	38.539
CELLULOSE ACETATE SHEET	THAILAND	22.008	71.841
	NEPAL	3.199	29.728
	ITALY	0.006	0.05
	Product Total	25.213	101.619
	KENYA	1.84	9.266
	NEPAL	1.604	1.51

Table 27: Top Five Export Destinations of selected Petrochemicals during 2020-21

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
(1)	(2)	(3)	(4)
CELLULOSE NITRATE SHEET	CAMEROON	0.274	1.354
	SOUTH AFRICA	0.1	0.516
	TANZANIA REP	0.058	0.275
	Product Total	3.876	12.921
MELAMINE MOULDING POWDER	NEPAL	18366.492	3239.041
	GHANA	640.15	350.737
	GABON	538.9	366.828
	SRI LANKA DSR	316.75	166.869
	INDONESIA	306.605	367.212
	Product Total	20168.897	4490.687
POLYACETAL RESIN	CHINA P RP	262.464	452.277
	U S A	74.325	140.433
	BANGLADESH PR	62.14	97.762
	NEPAL	54.675	70.037
	THAILAND	38.35	87.267
	Product Total	491.954	847.776
PHTHALIC ANHYDRIDE	U ARAB EMTS	9673.006	5278.888
	SAUDI ARAB	4195	2524.279
	EGYPT A RP	4060	1680.088
	TUNISIA	2022	1254.306
	BANGLADESH PR	835	522.768
	Product Total	20785.006	11260.329
STYRENE	KOREA RP	13581	4074.177
	U ARAB EMTS	2264.691	1793.128
	SRI LANKA DSR	1118.84	855.787
	KENYA	172.44	149.086
	NEPAL	111.99	90.282
	Product Total	17248.961	6962.46
VINYL ACTATE MONOMER	U ARAB EMTS	479	305.503
	BANGLADESH PR	410.2	258.054
	SRI LANKA DSR	294.245	214.014
	KENYA	199.12	128.391
	NEPAL	113.3	115.699
	Product Total	1495.865	1021.661
ISOPROPANOL	U ARAB EMTS	1363.972	1285.381
	U S A	818.476	1275.751
	IRAN	816.6	824.522
	NETHERLAND	541.801	511.152
	EGYPT A RP	498.44	682.028
	Product Total	4039.289	4578.834
POLYOL	SINGAPORE	3237.89	48718.913
	CHINA P RP	404.47	737.61
	SAUDI ARAB	376.567	468.51
	BANGLADESH PR	361.523	556.607
	NEPAL	325.069	505.762
	Product Total	4705.519	50987.402

Note: Data source in respect of Imports and Exports is DGCI, M/o Commerce and Industry.

Table 28: Top Five Import Destinations of selected Petrochemicals during 2020-21

PRODUCT (1)	COUNTRY (2)	QUANTITY(MT) (3)	VALUE(RS.Lakhs) (4)
ACRYLIC FIBRE	THAILAND	8806.251	10632.239
	TURKEY	8433.909	9751.446
	GERMANY	7712.207	9950.221
	NEPAL	3863.947	7241.309
	JAPAN	3319.758	5307.193
	Product Total		32136.072
NYLON FILAMENT YARN	CHINA P RP	12309.216	20659.064
	VIETNAM SOC REP	1247.691	1958.971
	TAIWAN	873.266	1717.856
	KOREA RP	589.177	987.606
	SRI LANKA DSR	434.746	1564.61
	Product Total		15454.096
NYLON INDUSTRIAL YARN/TYRE CORD	CHINA P RP	4997.36	7028.976
	INDONESIA	1502.01	2354.365
	LITHUANIA	850.672	1287.626
	TAIWAN	809.588	1461.85
	TURKEY	335.786	461.678
	Product Total		8495.416
POLYESTER FILAMENT YARN	CHINA P RP	193405.214	144182.896
	INDONESIA	18356.625	17785.65
	KOREA RP	6098.625	7244.011
	MALAYSIA	4276.348	2872.233
	TAIWAN	3762.285	4847.329
	Product Total		225899.097
POLYESTER STAPLE FIBRE	CHINA P RP	40640.376	29279.444
	KOREA RP	12794.764	11123.768
	THAILAND	10134.221	6911.804
	INDONESIA	9352.007	6920.982
	TAIWAN	3686.757	3250.301
	Product Total		76608.125
POLYPROPYLENE FILAMENT YARN	TURKEY	234.715	305.52
	U S A	184.473	544.12
	SAUDI ARAB	160.789	222.94
	TAIWAN	75.6	103.912
	CHINA P RP	29.594	74.86
	Product Total		685.171
POLYPROPYLENE STAPLE FIBRE	SAUDI ARAB	1478.507	1455.763
	CHINA P RP	393.504	454.761
	U ARAB EMTS	105	103.089
	KOREA RP	78.56	128.754
	BELGIUM	74.077	118.02
	Product Total		2129.648
Elastomeric/Spandex Filament Yarn	KOREA RP	2775.152	10972.735
	VIETNAM SOC REP	1917.114	7290.706
	CHINA P RP	1834.855	9160.355
	SINGAPORE	1632.876	10362.503
	THAILAND	369.614	1810.013
	Product Total		8529.611
ACRYLONITRILE	NETHERLAND	33980.24	30064.171
	U S A	33483.344	26277.803
	KOREA RP	26864.16	27573.933
	BELGIUM	12676	11196.344
	CHINA P RP	11153	11482.976
	Product Total		118156.744
CAPROLACTUM	KOREA RP	24464	25815.575
	RUSSIA	12300	10874.5
	BELGIUM	8383.501	7386.787
	THAILAND	5824.001	4919.591
	JAPAN	2256.033	2110.531

Table 28: Top Five Import Destinations of selected Petrochemicals during 2020-21

PRODUCT (1)	COUNTRY (2)	QUANTITY(MT) (3)	VALUE(RS.Lakhs) (4)
	Product Total	53227.535	51106.984
DIMETHYL TEREPHTHALATE	TURKEY	1093	555.554
	KOREA RP	594	317.79
	JAPAN	36	20.998
	GERMANY	20.009	12.393
	CHINA P RP	16	74.544
	Product Total	1759.009	981.279
MONO EHYLENE GLYCOL	KUWAIT	396112.812	142574.222
	SAUDI ARAB	123081.56	45073.946
	U S A	23614.063	6026.891
	SINGAPORE	20650.728	8052.306
	U ARAB EMTS	17085.79	7174.258
	Product Total	580544.953	208901.623
PURIFIED TEREPHTHALIC ACID	TAIWAN	166008	66237.483
	CHINA P RP	151047.56	61573.845
	THAILAND	148338	55151.008
	KOREA RP	63984	27260.62
	BELGIUM	42667.123	14340.787
	Product Total	572044.683	224563.743
LOW DENSITY POLYETHYLENE	U ARAB EMTS	39970.444	30807.645
	U S A	35564.654	23480.655
	SAUDI ARAB	32519.806	23984.043
	BELGIUM	25623.271	25451.75
	SINGAPORE	17854.247	15035.028
	Product Total	151532.422	118759.121
HIGH DENSITY POLYTHYLENE	U ARAB EMTS	291704.85	226432.899
	U S A	105630.057	72932.974
	QATAR	99974.666	74080.685
	SAUDI ARAB	65598.283	46667.224
	SINGAPORE	37902.848	31884.561
	Product Total	600810.704	451998.343
POLYESTYRENE	KOREA RP	18933.975	21111.951
	U ARAB EMTS	18722.03	14454.359
	TAIWAN	7729.382	7385.978
	THAILAND	4883.243	4158.484
	U S A	3011.652	10643.18
	Product Total	53280.282	57753.952
POLYPROPYLENE (INC. CO-POLYMER)	SAUDI ARAB	197034.505	149790.522
	U ARAB EMTS	191514.062	150078.378
	SINGAPORE	173608.437	162793.778
	KOREA RP	64516.98	63774.117
	THAILAND	52617.13	52612.484
	Product Total	679291.114	579049.279
EXPANDABLE POLYESTYRENE	KOREA RP	1221	1113.046
	CHINA P RP	1212.7	1087.259
	TAIWAN	1162.003	1023.311
	U ARAB EMTS	848.5	618.196
	U S A	86.999	159.243
	Product Total	4531.202	4001.055
POLY VINYL CHLORIDE	JAPAN	92654.457	61611.626
	TAIWAN	80132.872	60072.969
	KOREA RP	41304.647	29849.558
	THAILAND	40369.635	33567.483
	CHINA P RP	30878.326	26872.639
	Product Total	285339.937	211974.275
LINEAR LOW DENSITY POLYTHYLENE	U ARAB EMTS	61460.86	42048.342
	SINGAPORE	37133.781	25749.116
	U S A	30107.402	17632.449
	MALAYSIA	20600.85	12132.769

Table 28: Top Five Import Destinations of selected Petrochemicals during 2020-21

PRODUCT (1)	COUNTRY (2)	QUANTITY(MT) (3)	VALUE(RS.Lakhs) (4)
	SAUDI ARAB	20219.612	14742.632
	Product Total	169522.505	112305.308
STYRENE BUTADIENE RUBBER	KOREA RP	57713.872	57516.57
	RUSSIA	21272.232	6125.896
	POLAND	18323.706	16690.795
	SINGAPORE	7215.78	11502.716
	JAPAN	6033.146	7684.948
	Product Total	110558.736	99520.925
POLY BUTADIENE RUBBER	KOREA RP	41576.31	40513.607
	SINGAPORE	12330.285	14113.117
	RUSSIA	11887.1	10751.049
	SAUDI ARAB	7985.68	6993.891
	GERMANY	7799.049	7853.86
	Product Total	81578.424	80225.524
ETHYL PROPYLENE DIMERS	U S A	10176.197	11102.78
	KOREA RP	8037.896	10714.328
	JAPAN	7381.255	11030.237
	BELGIUM	3956.561	4241.037
	SAUDI ARAB	3220.85	3408.384
	Product Total	32772.759	40496.766
ETHYL VINYL ACETATE	KOREA RP	74727.247	82410.878
	SAUDI ARAB	43291.501	43387.422
	U S A	13867.809	13286.966
	THAILAND	12915.49	14255.402
	BELGIUM	11673.7	12623.183
	Product Total	156475.747	165963.851
NITRILE BUTADIENE RUBBER	RUSSIA	122943.268	3729.808
	KOREA RP	13185.639	15930.107
	JAPAN	8721.663	12378.782
	BELGIUM	2255.517	3809.754
	MALAYSIA	2247.384	3386.164
	Product Total	149353.471	39234.615
BUTYL RUBBER	RUSSIA	32673.16	46726.703
	SINGAPORE	19724.5	29365.389
	U S A	14291.021	20784.837
	U K	7029.656	13904.961
	JAPAN	6299.578	11701.738
	Product Total	80017.915	122483.628
LINEAR ALKYL BENZENE	SAUDI ARAB	141504.37	112587.074
	QATAR	42737	32260.46
	SPAIN	32763.502	30109.227
	THAILAND	23017.61	19954.511
	U ARAB EMTS	8426.11	4940.283
	Product Total	248448.592	199851.555
ETHYLENE OXIDE	U S A	13.037	306.416
	ARGENTINA	0.5	8.888
	BELGIUM	0.3	1.692
	CHINA P RP	0.3	14.383
	Product Total	14.137	331.379
ABS RESIN	KOREA RP	66401.126	84749.027
	TAIWAN	12343.075	17598.13
	SAUDI ARAB	6708.86	7012.183
	THAILAND	3996.189	6245.128
	MALAYSIA	2578.766	3565.412
	Product Total	92028.016	119169.88
POLYMETHYL METHACRYLATE	KOREA RP	13547.661	20853.736
	SINGAPORE	6398.023	7657.534
	SAUDI ARAB	5390.36	5952.863
	CHINA P RP	1447.817	1676.915

Table 28: Top Five Import Destinations of selected Petrochemicals during 2020-21

PRODUCT (1)	COUNTRY (2)	QUANTITY(MT) (3)	VALUE(RS.Lakhs) (4)
	U ARAB EMTS	1058.085	1138.133
	Product Total	27841.946	37279.181
STYRENE ACRYLONITRILE	KOREA RP	6772.1	7187.798
	JAPAN	2170.05	2261.192
	THAILAND	1015.745	1388.087
	BELGIUM	929.458	1056.023
	MALAYSIA	745.55	888.107
	Product Total	11632.903	12781.207
POLYESTER CHIPS/PET CHIPS	CHINA P RP	53420.52	32858.395
	TAIWAN	26303.633	14482.3
	VIETNAM SOC REP	24046	13701.914
	U ARAB EMTS	13199.81	6199.209
	THAILAND	6597.79	3976.675
	Product Total	123567.753	71218.493
POLYTETRAFLUOROETHYLENE (PTFE)	CHINA P RP	808.741	4256.722
	U S A	759.062	5172.453
	KOREA RP	413.111	1538.69
	NETHERLAND	278.531	2821.576
	ITALY	276.486	1399.508
	Product Total	2535.931	15188.949
BUTADIENE	KOREA RP	15.13	24.247
	CHINA P RP	10	40.905
	GERMANY	3.962	37.905
	HONG KONG	0.25	4.476
	JAPAN	0.009	0.077
	Product Total	29.351	107.61
ETHYLENE	U ARAB EMTS	26412.469	16842.613
	SAUDI ARAB	6731.822	4245.303
	MALAYSIA	3404.106	4977.439
	SINGAPORE	3325	2275.478
	HONG KONG	16.265	123.966
	Product Total	39889.662	28464.799
PROPYLENE	U ARAB EMTS	3032	1902.375
	CHINA P RP	908.765	3394.635
	THAILAND	2.653	16.06
	HONG KONG	0.368	3.61
	U S A	0.228	6.53
	Product Total	3944.014	5323.21
BENZENE	SAUDI ARAB	11491	4567.406
	IRAN	7720	3663.337
	GERMANY	0.386	6.534
	U S A	0.242	15.709
	JAPAN	0.107	0.564
	Product Total	19211.735	8253.55
MIXED XYLENE	U ARAB EMTS	446.4	196.585
	BELGIUM	28.413	29.933
	GERMANY	22.583	28.254
	KOREA RP	16.035	8.934
	INDONESIA	10.013	24.312
	Product Total	523.444	288.018
ORTHO-XYLENE	IRAN	6770	2862.262
	SPAIN	4438.011	1639.279
	TURKEY	3410	1529.213
	SINGAPORE	3007	1698.63
	U ARAB EMTS	3007	1449.003
	Product Total	20632.011	9178.387
TOLUENE	THAILAND	174061	69050.094
	KOREA RP	150314.575	61282.486
	SINGAPORE	103619.72	41754.322

Table 28: Top Five Import Destinations of selected Petrochemicals during 2020-21

PRODUCT (1)	COUNTRY (2)	QUANTITY(MT) (3)	VALUE(RS.Lakhs) (4)
	U ARAB EMTS	41913	16293.244
	IRAN	40014	13269.43
	Product Total	509922.295	201649.576
PARAXYLENE	JAPAN	282357.005	124059.651
	SINGAPORE	272682	118317.742
	KUWAIT	49024	20186.979
	OMAN	20386.109	9789.047
	THAILAND	10496.979	4116.292
	Product Total	634946.093	276469.711
	ETHYLENE DICHLORIDE	SAUDI ARAB	277234.902
U S A		185814.384	46004.691
QATAR		88117.692	17060.67
KOREA RP		44265.484	11530.381
GERMANY		25412.973	7244.643
Product Total		620845.435	147597.149
BUTANOL	MALAYSIA	9806.06	6030.775
	U S A	9657.112	5696.48
	SOUTH AFRICA	9183	5154.103
	RUSSIA	3423.624	2851.877
	SINGAPORE	3169.005	1634.916
	Product Total	35238.801	21368.151
OXO ALCOHOL	MALAYSIA	909.39	1182.064
	SINGAPORE	722.213	1046.274
	THAILAND	710.19	1045.766
	INDONESIA	301.7	448.585
	JAPAN	68.682	93.405
	Product Total	2712.175	3816.094
2-ETHYL HEXANOL	NETHERLAND	14628	10397.448
	SINGAPORE	14366.635	9725.962
	BELGIUM	9664	7383.451
	MALAYSIA	7762	4793.158
	INDONESIA	2501	1672.42
	Product Total	48921.635	33972.439
VINYL CHLORIDE MONOMER	QATAR	322344.633	208487.308
	JAPAN	63300.141	41157.635
	FRANCE	55329	34323.988
	INDONESIA	29904	23471.274
	CHINA P RP	8959	7851.387
	Product Total	479836.774	315291.592
EPICHLHYDRINE	THAILAND	33732.301	34877.837
	FRANCE	4809.71	4578.363
	TAIWAN	4710.8	5555.023
	KOREA RP	3595.215	4068.132
	BELGIUM	2351.91	2543.146
	Product Total	49199.936	51622.501
ISO BUTYLENE	TAIWAN	1786	1163.042
	CHINA P RP	12	14.88
	THAILAND	7.206	32.524
	U S A	0.563	8.063
	GERMANY	0.023	0.678
	Product Total	1805.792	1219.187
METAXYLENE	JAPAN	2336.63	2123.592
	TAIWAN	319.03	302.354
	THAILAND	53.74	56.471
	CHINA P RP	1.415	1.342
	GERMANY	0.156	8.094
	Product Total	2710.971	2491.853
	KOREA RP	18192.708	20932.615
	U S A	5898.759	5015.356

Table 28: Top Five Import Destinations of selected Petrochemicals during 2020-21

PRODUCT (1)	COUNTRY (2)	QUANTITY(MT) (3)	VALUE(RS.Lakhs) (4)
METHYL ISOBUTYL KETONE	SOUTH AFRICA	3700.5	3369.841
	JAPAN	1276.387	1181.288
	NETHERLAND	1229.12	1015.542
	Product Total	30297.474	31514.642
PIB	KOREA RP	8985.56	8925.197
	MALAYSIA	3023.22	3022.858
	U S A	2941.892	3094.7
	FRANCE	601.918	1022.276
	BRAZIL	211.38	169.226
	Product Total	15763.97	16234.257
POLYCARBONATE	THAILAND	73081.418	97144.843
	KOREA RP	43883.144	77396.734
	U S A	15643.128	19755.635
	SPAIN	12232.558	17221.945
	SAUDI ARAB	11150.625	14362.264
	Product Total	155990.873	225881.421
PROPYLENE OXIDE	SINGAPORE	6187.56	5754.231
	SAUDI ARAB	6153	9354.436
	KOREA RP	2952.35	4045.834
	TAIWAN	1733.09	2167.958
	JAPAN	280.018	398.587
	Product Total	17306.018	21721.046
PROPYLENE GLYCOL	SINGAPORE	17308.214	16876.883
	SAUDI ARAB	12171.2	9193.02
	CHINA P RP	8687.866	7955.693
	KOREA RP	8120.25	8045.296
	THAILAND	5498.571	5557.315
	Product Total	51786.101	47628.207
POLYVINYL ACETATE RESIN	GERMANY	1481.055	1779.907
	CHINA P RP	1025.771	1208.845
	BELGIUM	382.801	554.893
	INDONESIA	223.92	161.796
	MALAYSIA	139.88	128.258
	Product Total	3253.427	3833.699
UNSATURATED POLYESTER RESIN	CHINA P RP	14255.498	15410.686
	TAIWAN	12050.807	10380.708
	MALAYSIA	7277.981	10488.045
	SAUDI ARAB	2986	2138.718
	KOREA RP	2653.146	4868.313
	Product Total	39223.432	43286.47
ETHYL BENZENE	CHINA P RP	237.6	238.885
	U S A	134.851	107.459
	NETHERLAND	61.717	77.851
	KOREA RP	36.045	39.132
	SINGAPORE	15.54	4.731
	Product Total	485.753	468.058
CELLULOSE ACETATE BUTYRATE	U S A	19.052	14.06
	Product Total	19.052	14.06
CELLULOSE ACETATE SHEET	ITALY	652.8	357.666
	CHINA P RP	549.883	587.865
	HONG KONG	72.292	56.658
	JAPAN	24	12.854
	TAIWAN	11.451	37.535
	Product Total	1310.426	1052.578
CELLULOSE NITRATE SHEET	BELGIUM	339.796	76.417
	U K	337.47	82.502
	POLAND	186.91	50.192
	GERMANY	136.984	46.411
	GREECE	101.456	28.179

Table 28: Top Five Import Destinations of selected Petrochemicals during 2020-21

PRODUCT (1)	COUNTRY (2)	QUANTITY(MT) (3)	VALUE(RS.Lakhs) (4)
	Product Total	1102.616	283.701
MELAMINE MOULDING POWDER	THAILAND	2941.659	3357.53
	CHINA P RP	2750.54	2862.119
	TAIWAN	1891.54	2316.303
	JAPAN	1274.848	1767.086
	NORWAY	1029.68	1457.625
	Product Total	9888.267	11760.663
POLYACETAL RESIN	MALAYSIA	13018.435	16157.386
	KOREA RP	11632.676	13413.673
	THAILAND	9477.888	9612.216
	U S A	4220.956	4549.92
	SINGAPORE	3183.266	3988.712
	Product Total	41533.221	47721.907
PHTHALIC ANHYDRIDE	KOREA RP	37025	20756.099
	TAIWAN	33412.001	18153.065
	CHINA P RP	18322.392	12609.181
	THAILAND	12512.18	6846.71
	RUSSIA	12199.65	7262.75
	Product Total	113471.223	65627.805
STYRENE	U S A	205610.212	138070.997
	SINGAPORE	148674.884	89782.973
	KUWAIT	142982	83904.903
	SAUDI ARAB	111063	65824.706
	KOREA RP	47606	28611.593
	Product Total	655936.096	406195.172
VINYL ACTATE MONOMER	SINGAPORE	85775.941	55399.306
	SAUDI ARAB	29134.246	17066.44
	KOREA RP	12741.71	8287.496
	CHINA P RP	10686.15	7473.826
	MALAYSIA	25.745	15.481
	Product Total	138363.792	88242.549
ISOPROPANOL	CHINA P RP	53303.242	49603.008
	KOREA RP	36708.84	32303.956
	U S A	28814.694	23376.9
	TAIWAN	23335.632	20293.251
	SINGAPORE	15920.901	13636.795
	Product Total	158083.309	139213.91
POLYOL	CHINA P RP	45811.342	64746.248
	U ARAB EMTS	40930.802	2361.041
	KOREA RP	19393.324	28770.34
	SINGAPORE	17487.946	28819.876
	THAILAND	14553.222	25772.304
	Product Total	138176.636	150469.809

Note: Data source in respect of Imports and Exports is DGCI, M/o Commerce and Industry.

Table 29: Exchange Rates of Indian Rupee vis-a-vis US\$

Month	Rs./US\$
(1)	(2)
March 2021	72.79
February 2021	72.76
January 2021	73.11
December 2020	73.59
November 2020	74.22
October 2020	73.46
September 2020	73.48
August 2020	74.67
July 2020	74.99
June 2020	75.73
May 2020	75.66
April 2020	76.24
March 2020	74.35
February 2020	71.49
January 2020	71.31
December 2019	71.19
November 2019	71.45
October 2019	71.04
September 2019	71.33
August 2019	71.15
July 2019	68.81
June 2019	69.44
May 2019	69.77
April 2019	69.43
March 2019	69.48
February 2019	71.22
January 2019	70.73
December 2018	70.73
November 2018	71.85
October 2018	73.63
September 2018	72.22
August 2018	69.55
July 2018	68.69
June 2018	67.79
May 2018	67.54
April 2018	65.64

*Note : Worked out on the basis of average daily exchange rates, as notified by RBI. Source: 1. <https://www.rbi.org.in>
2. <https://www.fbil.org.in>*

Table - 30 : World Exports of Chemicals by top 10 countries- 2020

HS Code		Rank										World Export
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
28	Country	China	USA	Germany	Japan	Rep. of Korea	Netherlands	Canada	Brazil	Dem. Rep. of the Congo	France	
	Trade Value	15208	11544	10733	6820	5278	4197	4172	3384	3144	3132	114206
29	Country	China	Ireland	USA	Switzerland	Germany	Belgium	India	Rep. of Korea	Japan	Netherlands	
	Trade Value	56963	40692	35078	25491	24869	20541	17427	15374	14913	14882	378058
30	Country	Germany	Switzerland	Ireland	USA	Belgium	France	Italy	Netherlands	United Kingdom	Denmark	
	Trade Value	99258	88354	65605	61235	45825	37972	36034	34059	24956	19113	672638
31	Country	Russian Federation	China	Canada	USA	Morocco	Belarus	Netherlands	Germany	Belgium	Qatar	
	Trade Value	6995	6567	5191	4532	3381	2910	2023	1926	1591	1320	53325
32	Country	Germany	China	USA	Japan	Netherlands	United Kingdom	Italy	France	India	Spain	
	Trade Value	12332	7833	7168	4619	4556	3325	3209	3000	2924	2886	77879
38	Country	USA	Germany	China	Netherlands	France	Japan	United Kingdom	Italy	Rep. of Korea	Singapore	
	Trade Value	32703	27174	22171	13931	12855	12082	8210	7362	6627	5908	222890
39	Country	China	USA	Germany	Rep. of Korea	Japan	Netherlands	Italy	France	Other Asia, nes	Belgium	
	Trade Value	96411	64207	58376	31562	25570	23699	20528	19616	18604	17829	598675
4002	Country	Rep. of Korea	Thailand	USA	Japan	Viet Nam	Russian Federation	Germany	Other Asia, nes	Malaysia	China	
	Trade Value	2501	2434	1962	1946	1569	1256	1178	1151	938	726	20636
54	Country	China	Other Asia, nes	Rep. of Korea	India	Japan	Italy	USA	Turkey	Germany	Netherlands	
	Trade Value	18194	2044	1983	1635	1616	1602	1406	1334	1261	1076	41459

Table - 30 : World Exports of Chemicals by top 10 countries- 2020

HS Code		Rank										World Export
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
55	Country	China	USA	Indonesia	Rep. of Korea	India	Turkey	Japan	Thailand	Austria	Germany	
	Trade Value	10062	1849	1573	1392	1277	1179	1046	1005	965	933	29466
All Chemicals	Country	China	Germany	USA	Switzerland	Ireland	Netherlands	Belgium	France	Italy	Japan	
	Trade Value	247349	238041	221683	122790	112363	98928	98499	88761	80509	76239	2209231
All Chemicals excluding Pharmaceuticals	Country	China	USA	Germany	Japan	Rep. of Korea	Netherlands	Belgium	France	Ireland	Italy	
	Trade Value	234134	160448	138784	68731	67506	64869	52674	50789	46758	44474	1536593

@-Includes all products covered under the HS code 28,29,30,31,32,38,39, 4002,54 and 55

Chapter 28: Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes;

Chapter 29: Organic Chemicals; Chapter30: Pharmaceutical products; Chapter 31: Fertilizers ;

Chapter 32: Tanning or Dyeing Extracts; Tannins and their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and other Mastics Inks;

Chapter 38: Miscellaneous Chemical Products; Chapter 39: Plastics and articles thereof;

4002: Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any pro;

Chapter 54: Man-made Filaments and Chapter 55: Man-made staple fibres

Source : <http://comtrade.un.org/> (UN Comtrade Database)

Table 31: World Imports of Chemicals by top 10 countries - 2020

HS Code		Rank										World Export
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
28	Country	China	USA	Rep. of Korea	Germany	India	Japan	Canada	France	Netherlands	Russian Federation	
	Trade Value	11119	10740	7395	6241	6192	5825	4388	3872	3236	3070	115151
29	Country	USA	China	Germany	India	Belgium	Italy	Japan	France	Rep. of Korea	Netherlands	
	Trade Value	55882	45770	37977	18155	17884	16692	15808	14869	12094	11728	401623
30	Country	USA	Germany	Switzerland	Belgium	China	France	Japan	Italy	United Kingdom	Netherlands	
	Trade Value	139518	67148	40286	36935	34927	28891	28642	28543	26106	21323	689568
31	Country	Brazil	India	USA	China	France	Australia	Thailand	Canada	Mexico	Indonesia	
	Trade Value	8708	7177	5795	2922	1895	1686	1509	1457	1451	1337	62054
32	Country	Germany	China	USA	France	Netherlands	Italy	Rep. of Korea	Canada	United Kingdom	Mexico	
	Trade Value	6535	4855	4333	3718	3176	2529	2479	2274	2267	2217	76682
38	Country	China	USA	Germany	Netherlands	France	Rep. of Korea	United Kingdom	Italy	Other Asia, nes	Japan	
	Trade Value	18978	18106	17637	10934	9452	7777	7511	7468	6240	6118	227080
39	Country	China	USA	Germany	France	Mexico	United Kingdom	Italy	Canada	Viet Nam	Netherlands	
	Trade Value	72433	62465	41862	23002	21865	18459	18439	15964	15903	15687	589432
4002	Country	China	USA	Malaysia	Thailand	Germany	India	Viet Nam	Indonesia	Brazil	Turkey	
	Trade Value	7532	1169	1070	1033	952	724	648	542	496	495	21725
54	Country	Viet Nam	China	Turkey	USA	Germany	Indonesia	Italy	Brazil	Egypt	Rep. of Korea	
	Trade Value	2884	2308	1801	1786	1370	1178	1164	1023	864	851	32410

Table 31: World Imports of Chemicals by top 10 countries - 2020

HS Code		Rank										World Export
		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
55	Country	Viet Nam	China	USA	Germany	Turkey	Cambodia	Italy	Indonesia	India	Myanmar	
	Trade Value	2327	1702	1500	1396	1309	897	887	841	747	746	27507
All Chemicals	Country	USA	China	Germany	France	Italy	Belgium	Japan	United Kingdom	Netherlands	Switzerland	
	Trade Value	301294	202546	182180	87377	79141	76451	74774	68501	68167	58490	2243231
All Chemicals excluding Pharmaceuticals	Country	China	USA	Germany	France	India	Italy	Netherlands	Japan	Rep. of Korea	Mexico	
	Trade Value	167619	161776	115032	58485	53098	50598	46844	46133	43597	43190	1553662

@-Includes all products covered under the HS code 28,29,30,31,32,38,39, 4002,54 and 55

Chapter 28: Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes;

Chapter 29: Organic Chemicals; Chapter30: Pharmaceutical products; Chapter 31: Fertilizers ;

Chapter 32: Tanning or Dyeing Extracts; Tannins and their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and other Mastics Inks;

Chapter 38: Miscellaneous Chemical Products; Chapter 39: Plastics and articles thereof;

4002: Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any pro;

Chapter 54: Man-made Filaments and Chapter 55: Man-made staple fibres

Source : <http://comtrade.un.org/> (UN Comtrade Database)

Table 32: India's share in World Exports and Imports of Chemicals -2020

Value in US\$ Million

HS Code	Commodity	Export				Import			
		Trade Value		% of World Export	Rank in the World	Trade Value		% of World Import	Rank in the World
		India	World			India	World		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
28	INORGANIC CHEMICALS	1612	114206	1.41	19	6192	115151	5.38	5
29	ORGANIC CHEMICALS	17427	378058	4.61	7	18155	401623	4.52	4
30	PHARMACEUTICAL PRODUCTS	18427	672638	2.74	11	2477	689568	0.36	40
31	FERTILISERS.	118	53325	0.22	49	7177	62054	11.57	2
32	TANNING OR DYEING	2924	77879	3.75	9	1723	76682	2.25	17
38	MISCELLANEOUS CHEMICAL PRODUCTS.	4889	222890	2.19	13	5661	227080	2.49	15
39	PLASTIC AND ARTICLES THEREOF	6598	598675	1.10	24	11975	589432	2.03	13
4002	SYNTHETIC RUBBER AND FACTICE	1277	20636	6.19	24	724	21725	3.33	6
54	MAN-MADE FILAMENTS	106	41459	0.25	4	745	32410	2.30	13
55	MAN-MADE STAPLE FIBRES	1635	29466	5.55	5	747	27507	2.72	9
All Chemicals @		55012	2209231	2.49	13	55575	2243231	2.48	11
Chemicals (excluding Pharmaceutical Products)		36585	1536593	2.38	12	53098	1553662	3.42	5
Total of All HS Code Commodities		275489	17436902	1.58	21	367980	17287885	2.13	13

@-Includes all products covered under the HS code 28,29,30,31,32,38,39, 4002,54 and 55

Chapter 28: Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes; Chapter 29: Organic Chemicals; Chapter 30: Pharmaceutical products; Chapter 31: Fertilizers ; Chapter 32: Tanning or Dyeing Extracts; Tannins and their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and other Mastics; Inks; Chapter 38: Miscellaneous Chemical Products; Chapter 39: Plastics and articles thereof; 4002: Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any pro; Chapter 54: Man-made Filaments and Chapter 55: Man-made staple fibres

Source : <http://comtrade.un.org/> (UN Comtrade Database)

Section – IV

Foreign Direct Investment (FDI)

Table 33: Sectors Attracting Highest FDI Equity Inflows during 2018-19 to 2020-21

Rs.in crores (US\$ in million)

Ranks	Sector	2018-19 (April – March)	2019-20 (April – March)	2020-21 (April – March)
(1)	(2)	(3)	(4)	(5)
1.	SERVICES SECTOR **	63,909 (9,158)	55,429 (7,854)	37,542 (5,060)
2.	COMPUTER SOFTWARE & HARDWARE	45,297 (6,415)	54,250 (7,673)	1,94,291 (26,145)
3.	TELECOMMUNICATIONS	18,337 (2,668)	30,940 (4,445)	2,884 (392)
4.	TRADING	30,963 (4,462)	32,406 (4,574)	19,349 (2,608)
5.	CONSTRUCTION DEVELOPMENT: Townships, housing, built-up infrastructure and construction- development projects	1,503 (213)	4,350 (617)	3,117 (422)
6.	AUTOMOBILE INDUSTRY	18,309 (2,623)	19,753 (2,824)	12,115 (1,637)
7.	CHEMICALS (OTHER THAN FERTILIZERS)	13,685 (1,981)	7,492 (1,058)	6,300 (847)
8.	CONSTRUCTION (INFRASTRUCTURE) ACTIVITIES	15,927 (2,258)	14,510 (2,042)	58,240 (7,875)
9.	DRUGS & PHARMACEUTICALS	1,842 (266)	3,650 (518)	11,015 (1,490)
10	METALLURGICAL INDUSTRIES		14,970 (2,101)	10,002 (1,340)

Note: (i)** Services sector includes Financial, Banking, Insurance, Non-Financial / Business, Outsourcing, R&D, Courier, Tech. Testing and Analysis, Other

(ii) FDI Sectoral data has been revalidated / reconciled in line with the RBI, which reflects minor changes in the FDI figures (increase/decrease) as compared to the earlier published sectoral data.

(iii) Source: <https://dipp.gov.in>

Section – V

**Index of Industrial Production
(IIP)**

Table 34: Monthly Production Growth in 'Chemicals and Chemical Products' vis-a-vis Manufacturing Sector during April 2020 to March 2021 (Based on Index of Industrial Production with Base year: 2011-12)

Period	Chemicals and chemical products	Manufacturing	General
Weight	7.87	77.63	100.00
Production Growth (%)			
Apr-20	-47.6	-62.3	-53.9
May-20	80.9	100.5	67.0
Jun-20	22.3	26.9	19.6
Jul-20	4.2	10.6	9.3
Aug-20	-2.7	0.2	-0.6
Sep-20	5.6	6.6	5.9
Oct-20	2.0	4.3	4.4
Nov-20	-5.9	-2.7	-2.2
Dec-20	9.5	8.2	8.4
Jan-21	-0.2	-1.7	-0.6
Feb-21	-9.6	-5.1	-4.9
Mar-21	7.5	10.5	12.1
Index of Industrial Production (Base : 2011-12=100)			
Mar-20	101.1	111.6	117.2
Apr-20	53.0	42.1	54.0
May-20	95.9	84.4	90.2
Jun-20	117.3	107.1	107.9
Jul-20	122.2	118.5	117.9
Aug-20	118.9	118.7	117.2
Sep-20	125.5	126.5	124.1
Oct-20	128.0	132.0	129.6
Nov-20	120.4	128.5	126.7
Dec-20	131.8	139.0	137.4
Jan-21	131.6	136.6	136.6
Feb-21	119.0	129.7	129.9
Mar-21	127.9	143.3	145.6

Source: Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation

Table 35: Annual Production Growth in Chemicals and Chemical Products Vis -a-Vis Manufacturing Sector during 2015-16 to 2020-21 (Based on Index on Industrial Production with Base year: 2011-12)

Years	Chemicals and Chemical Products	Manufacturing	General
Weight	7.9	77.6	100.0
Production Growth (%)			
2015-16	4.1	2.8	3.3
2016-17	2.5	4.4	4.6
2017-18	-0.3	4.6	4.4
2018-19	2.5	3.9	3.8
2019-20	-0.4	-1.4	-0.8
2020-21	-2.1	-9.6	-8.4
Index of Industrial Production (Base: 2011-12=100)			
2014-15	109.2	112.7	111.0
2015-16	113.7	115.9	114.7
2016-17	116.5	121.0	120.0
2017-18	116.1	126.6	125.3
2018-19	119.0	131.5	130.1
2019-20	118.5	129.6	129.0
2020-21	116.0	117.2	118.1

Source: Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation

Table 36: Weights of Products Covered under Chemical and Chemical Products (Industry Division 20 of NIC- 2008) in the Index of Industrial Production (IIP) for Manufacturing Sector

NIC 2008	Item groups	Weights (in %)	Name of Source Agencies
(1)	(2)	(3)	(4)
20111	Oxygen	0.0423	DIPP
20112	Acetic Acid	0.0191	DCPC
20112	Phosphoric acid	0.0157	DIPP
20112	Purified Terephthalic Acid (PTA)	0.3512	DCPC
20112	Sulphuric Acid	0.0479	DIPP
20114	Dyes and pigments	0.2355	DCPC
20115	ABS resin	0.0188	DCPC
20116	Calcium Carbonate	0.0572	DCPC
20116	Caustic soda (sodium hydroxide)	0.1638	DCPC
20116	Ethyl acetate	0.0571	DCPC
20116	Isopropyl alcohol	0.0178	DCPC
20116	Monoethylene glycol, MEG	0.0413	DCPC
20116	Soda ash/ washing soda	0.1200	DCPC
20116	Titanium dioxide	0.0362	DCPC
20116	Zinc sulphate	0.0150	DIPP
20118	Aromatic Chemicals	0.0806	DIPP
20119	Aniline	0.0154	DCPC
20119	Butadiene	0.0335	DCPC
20119	Catalyst, chemical	0.0415	DIPP
20119	Expandable Polystyrene , EPS (thermocool)	0.0521	DCPC
20119	Fatty Acid	0.0254	DIPP
20119	Linear Alkyl Benzene	0.0563	DCPC
20119	Liquid chlorine	0.0595	DCPC
20119	Phthalic anhydride, PAN	0.0353	DCPC
20119	Polyol	0.0636	DCPC
20119	Sodium Silicate	0.0204	DIPP
20121	Urea	0.5590	D/o Fertilizers
20122	NPK fertilizers	0.3897	D/o Fertilizers
20123	Ammonia	0.2101	DIPP
20123	Ammonium nitrate	0.0118	DIPP
20123	Ammonium sulphate	0.0261	DIPP
20123	Formaldehyde	0.0121	DCPC
20123	Nitric Acid	0.0181	DIPP
20129	Diammonium Phosphate (DAP)	0.0761	D/o Fertilizers
20129	Superphosphate	0.0332	D/o Fertilizers
20131	Polyester chips or Polyethylene terephthalate(PET) chips	0.1108	DCPC
20131	Polymers (incl. Polyethylene, PVC, Poly propylene)	0.5954	DCPC
20131	PTFE (TEFLON)	0.0244	DCPC
20132	Caprolactam	0.0457	DCPC
20132	Synthetic rubber (incl. PBR, SBR)	0.0295	DCPC
20211	Detergent powder and washing powder	0.2578	DIPP
20211	Pesticides-technical grade	0.2116	DCPC
20221	Paints (all types)	0.3874	DIPP

Table 36: Weights of Products Covered under Chemical and Chemical Products (Industry Division 20 of NIC- 2008) in the Index of Industrial Production (IIP) for Manufacturing Sector

NIC 2008	Item groups	Weights (in %)	Name of Source Agencies
(1)	(2)	(3)	(4)
20221	Varnish (all types)	0.0209	DIPP
20223	Printing ink	0.0795	DIPP
20229	Thinner	0.0110	DIPP
20231	Toilet soap (excl. baby soap)- incl. liquid soap and foam	0.6078	DIPP
20232	Organic surface active agents/ surfactants, except soap (incl. dishwashing soaps, wetting and cleansing agents)	0.1378	DIPP
20233	Detergent cake, washing soap cake/ bar	0.4607	DIPP
20235	Tooth paste	0.3223	DIPP
20236	Hair dye	0.0468	DIPP
20236	Hair oil	0.0556	DIPP
20236	Hair shampoo	0.0929	DIPP
20237	Creams and lotions for topical application	0.1255	DIPP
20238	Agarbatti	0.1706	DIPP
20291	Safety matches (match box)	0.0638	DIPP
20292	Fire works/pyrotechnic articles	0.0366	DIPP
20292	Gun powder, detonators/ prepared explosives	0.0397	DIPP
20293	Fragrances & Oil essentials	0.1967	DIPP
20295	Adhesive formulations other than natural gum	0.3985	DIPP
20295	Gelatin	0.0233	DIPP
20297	Methanol	0.0291	DCPC
20299	Hydrogen Peroxide	0.0500	DCPC
20299	Mosquito coil	0.0215	DIPP
20302	Man-made fibres (incl. Viscose and Artificial Fibres)	0.1614	DCPC & O/o Textile Commissioner

Source: Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation

DIPP: Department of Industrial Policy and Promotion

DCPC: Department of Chemicals and Petrochemicals

Section – VI

Inflation Based on Wholesale Price Index

Table 37: Annual Inflation of Chemicals & Chemical products vis-à-vis other commodities during 2015-16 to 2020-21 (Based on Wholesale Price Index with base year: 2011-12)

Year	All Commodities	Food Articles	Manufactured Products	Chemicals & Chemical Products
Weight	100	15.26	64.23	6.47
Inflation(%)				
2015-2016	-3.69	2.59	-1.80	-3.01
2016-2017	1.73	4.00	1.37	-1.42
2017-2018	2.96	2.07	2.80	1.35
2018-2019	4.26	0.35	3.60	5.87
2019-2020	1.67	8.42	0.34	-1.34
2020-2021	1.31	3.15	2.70	0.60
Wholesale Price Index(Base : 2011-12=100)				
2014-2015	113.90	131.50	111.20	116.10
2015-2016	109.70	134.90	109.20	112.60
2016-2017	111.60	140.30	110.70	111.00
2017-2018	114.90	143.20	113.80	112.50
2018-2019	119.80	143.70	117.90	119.10
2019-2020	121.80	155.80	118.30	117.50
2020-2021	123.40	160.70	121.50	118.20

Source :Office of the Economic Advisor (<http://eaindustry.nic.in>)

Table 38: Monthly Inflation of Chemicals & Chemical Products vis-a-vis Other Commodities during April-2020 to March-2021 (Based on Wholesale Price Index with base year: 2011-12)

Month	All Commodities	Food Articles	Manufactured Products	Chemicals & Chemical Products
(1)	(2)	(3)	(4)	(5)
Apr-20	-1.00	2.18	0.08	-0.26
May-20	-1.43	-0.91	-0.42	0.26
Jun-20	1.53	1.50	0.34	0.17
Jul-20	1.42	3.80	0.08	0.17
Aug-20	0.83	1.05	0.59	0.17
Sep-20	0.74	3.31	0.59	0.00
Oct-20	0.57	1.84	0.25	0.60
Nov-20	1.21	-0.82	1.00	1.20
Dec-20	0.24	-5.29	1.40	1.27
Jan-21	0.88	-3.29	1.62	0.92
Feb-21	1.26	1.09	0.56	1.90
Mar-21	1.41	-0.70	1.51	2.03
Whole Sale Price Index (Base: 2011-12)				
Mar-20	120.4	151.2	118.6	115.5
Apr-20	119.2	154.5	118.7	115.2
May-20	117.5	153.1	118.2	115.5
Jun-20	119.3	155.4	118.6	115.7
Jul-20	121.0	161.3	118.7	115.9
Aug-20	122.0	163.0	119.4	116.1
Sep-20	122.9	168.4	120.1	116.1
Oct-20	123.6	171.5	120.4	116.8
Nov-20	125.1	170.1	121.6	118.2
Dec-20	125.4	161.1	123.3	119.7
Jan-21	126.5	155.8	125.3	120.8
Feb-21	128.1	157.5	126.0	123.1
Mar-21	129.9	156.4	127.9	125.6

Source :Office of the Economic Advisor (<http://eaindustry.nic.in>)

Table 39: WPI (Base year 2011-12) of Chemicals & Chemical Products (Group Wise) during 2015-16 to 2020-21

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DESCRIPTION	WEIGHT	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Chemicals and Chemical Products	6.47	112.60	111.00	112.50	119.10	117.50	118.20
Basic Chemicals	1.43	105.80	104.70	111.20	125.00	119.90	118.60
Fertilizers and Nitrogen Compounds	1.48	121.40	118.70	117.10	121.10	123.10	123.60
plastic and synthetic rubber in primary form	1.00	115.30	113.70	113.00	117.60	112.40	116.70
Pesticides and Other Agrochemical Products	0.45	122.60	116.80	115.30	120.20	122.60	124.40
paints, Varnishes and Similar Coatings, Printing Ink and Mastics	0.49	109.80	108.50	108.60	112.70	114.70	114.90
Soap and Detergents, Cleaning and Polishing Preparations, Perfumes and Toilet Preparations	0.61	112.30	113.70	115.20	116.80	118.60	120.60
Other Chemical Products	0.69	108.40	106.50	110.10	116.60	114.20	115.10
Man-Made Fibres	0.30	93.30	94.10	97.50	104.00	97.90	93.70

Source :Office of the Economic Advisor (<http://eaindustry.nic.in>)

Section – VII

Miscellaneous

Table 40: Growth Rates of Core Industries from 2015-16 to 2020-21 (Base Year 2011-12)

Sector	Weight	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Coal (%)	10.3335	4.8	3.2	2.6	7.4	-0.4	-1.9
Crude Oil (%)	8.9833	-1.4	-2.5	-0.9	-4.1	-5.9	-5.2
Natural Gas (%)	6.8768	-4.7	-1.0	2.9	0.8	-5.6	-8.2
Refinery Products (%)	28.0376	4.9	4.9	4.6	3.1	0.2	-11.2
Fertilizers (%)	2.6276	7.0	0.2	0.0	0.3	2.7	1.7
Steel (%)	17.9166	-1.3	10.7	5.6	5.1	3.4	-8.7
Cement (%)	5.3720	4.6	-1.2	6.3	13.3	-0.9	-10.8
Electricity (%)	19.8530	5.7	5.8	5.3	5.2	0.9	-0.5
Overall Index	100	3.0	4.8	4.3	4.4	0.4	-6.4

Source: Office of The Economic Adviser, DPIIT (<http://eaindustry.nic.in>)

Table 41: Index of Core Industries from 2015-16 to 2020-21 (Base year 2011-12)

Sector	Weight	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Coal	10.3335	118.0	121.8	124.9	134.1	133.6	131.1
Crude Oil	8.9833	97.0	94.5	93.7	89.8	84.5	80.1
Natural Gas	6.8768	67.2	66.5	68.4	69.0	65.1	59.8
Refinery Products	28.0376	114.1	119.7	125.2	129.1	129.4	114.9
Fertilizers	2.6276	106.4	106.6	106.6	107.0	109.8	111.6
Steel	17.9166	120.2	133.1	140.5	147.7	152.6	139.4
Cement	5.3720	123.5	122.0	129.7	147.0	145.7	130.0
Electricity	19.8530	133.8	141.6	149.2	156.9	158.4	157.6
Overall Index	100	115.1	120.5	125.7	131.2	131.6	123.2

Source: Office of Economic Adviser, DPIIT (<http://eaindstry.nic.in>)

Table 42: Consumption of Naphtha, Natural Gas and Fuel Oil

Name of Product	Description	Unit	2016-17	2017-18	2018-19	2019-20	2020-21*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Naphtha	Production	K Tonnes	19946	20006	19786	20679	19403
	Import	K Tonnes	2777	2212	2082	1662	1199
		Value in Rs. Crore	8374	8161	9665	6678	3844
	Export	K Tonnes	8727	8951	6963	8897	6509
		Value in Rs. Crore	24616	29075	28893	31509	18643
	Availability	K Tonnes	13996	13266	14904	13444	14093
	Consumption	K Tonnes	13241	12889	14131	14268	14100
Natural Gas¹	Gross Production	MMSCM	31897	32649	32873	31184	28673
	Net Production	MMSCM	30849	31731	32054	30257	27784
	Import \$	MMSCM	24849	27439	28740	33887	33031
		Value in Rs. Crore	41084	52122	71867	67383	54850
	Availability	MMSCM	55698	59170	60794	64143	60815
	Consumption **	MMSCM	50778	52832	53840	56492	56117
Fuel Oil	Production	K Tonnes	9962	9486	10032	8609	7242
	Import	K Tonnes	925	1213	1419	4583	6454
		Value in Rs. Crore	1848	3231	4782	11791	14312
	Export	K Tonnes	2248	2525	2197	1527	1177
		Value in Rs. Crore	3930	5291	6537	3811	2318
	Availability	K Tonnes	8639	8174	9255	11665	12519
	Consumption	K Tonnes	7150	6721	6564	6302	5586
Naphtha	Fertilizers Sector	K Tonnes	349	368	352	150	66
	Petrochemical Sector	K Tonnes	10351	10011	10602	10875	11339
Natural Gas **	Fertilizer Industries	MMSCM	15429	14676	14987	16115	17781
	Petrochemicals Industry	MMSCM	4170	4024	3386	3569	3072
Fuel Oil (Furnace Oil+LSHS)	Chemicals & allied	K Tonnes	243	248	309	253	237

* Provisional

** Sectorial Sales

\$ Imports of LNG

Net Production = Gross Production-Flared/Losses

Source: Ministry of Petroleum and Natural Gas

Table 43: Important Indicators of Industry Division 20 & 21 (Unincorporated Sector) in 2015-16 (July 2015-June 2016)

Description (1)	Rural (2)	Urban (3)	Rural + Urban (4)
Estimated no. of workers in Industry Division 20 (Unincorporated) of NIC 2008	204480	167540	372020
Estimated no. of workers in Industry Division 21 (Unincorporated) of NIC 2008	12692	9454	22146
Estimated no. of workers in Unincorporated Manufacturing sector	18655607	17385712	36041319
Estimated no. of workers in Unincorporated sector (All activities) #	49867273	61403553	111270826
Estimated no. of enterprises in Industry Division 20 (Unincorporated) of NIC 2008	105985	66721	172706
Estimated no. of enterprises in Industry Division 21 (Unincorporated) of NIC 2008	2935	3410	6345
Estimated no. of enterprises in Unincorporated manufacturing sector	11414431	8250444	19664875
Estimated no. of enterprises in Unincorporated sector (All activities) #	32489670	30902305	63391975
Estimated GVA of Industry Division 20 (Unincorporated) (in Rs. Crore)	780	1552	2332
Estimated GVA of Industry Division 21 (Unincorporated) (in Rs. Crore)	130	143	273
Estimated GVA of Manufacturing Sector (Unincorporated) (in Rs. Crore)	89829	178233	268062
Estimated GVA of Unincorporated sector (All activities) (in Rs. Crore)	344872	807437	1152309
Share of GVA from Industry Division 20 (Unincorporated) in GVA Unincorporated sector (All	0.23	0.19	0.20
Share of GVA from Industry Division 21 (Unincorporated) in GVA Unincorporated sector (All	0.04	0.02	0.02
Share of GVA from Manufacturing sector (Unincorporated) in GVA Unincorporated sector (All	26.05	22.07	23.26
GVA per worker of Industry Division 20 (Unincorporated) sector (in Rs.)	38146	92635	62685
GVA per worker of Industry Division 21 (Unincorporated) sector (in Rs.)	102427	151259	123273
GVA per worker of Manufacturing sector (Unincorporated) (in Rs.)	48151	102517	74376
GVA per worker of unincorporated sector (All Activities) in Rs.	69158	131497	103559
GVA per enterprise of Industry Division 20 (Unincorporated) sector (in Rs.)	73595	232610	135027
GVA per enterprise of Industry Division 21 (Unincorporated) sector (in Rs.)	442930	419355	430260
GVA per enterprise of Manufacturing Sector (Unincorporated) (in Rs.)	78698	216028	136315
GVA per enterprise of Unincorporated Sector (All activities) (in Rs.)	106148	261287	181775

including Manufacturing activities , Noncaptive electricity generation , trading activities and other services (non agricultural enterprises excluding constructions)

Source: NSS Report No. 582 : Economic Characteristics of Unincorporated Non-Agricultural Enterprises excluding constructions in India. NSS 73rd Round (July 2015- June 2016)

Table 44: Employment in Chemicals and Chemical Products (Industry Division 20 of NIC-2008) during 2013-14 to 2018-19

S. No.	Industry	Number of Person Engaged					
		2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Chemicals and Chemicals products (Industry Division 20, NIC 2008)	708401	712994	743438	790263	828315	887240
2	Industries Other than Chemicals and Chemicals products	12829713	13168392	13556272	14120926	14786304	15392971
3	All Industries	13538114	13881386	14299710	14911189	15614619	16280211
Share in Employment (%)							
4	(a) Share of Chemicals and Chemicals products	5.23	5.14	5.20	5.30	5.30	5.45
	(b) Share of Other than C&PC	94.77	94.86	94.80	94.70	94.70	94.55
Growth Rate in Employment (%)							
5	(a) Chemicals and Chemicals products	11.80	0.65	4.27	6.30	4.82	7.11
	(b) Industries Other Than Chemicals and Chemicals products	4.17	2.64	2.95	4.17	4.71	4.10
	(c) All Industries	4.54	2.54	3.01	4.28	4.72	4.26

Note: As per NIC- 2008, Chemicals & Chemical Products are covered under the industry division 20.

Source : Annual Survey of Industries (Factory Sector), Ministry of Statistics & Programme Implementation

Table 45: Gross Value Added from Chemical and Chemical products (Industry Division 20: NIC 2008) and Pharmaceutical; Medicinal Chemicals and Botanical Product (Industry Division 21: NIC 2008) vis-a-vis Manufacturing Sector and All Economic Activities

At Current Prices

(Rs. In Crore)

Description	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Industry Division 20: Chemical and chemical products (Corporate)	133521	192668	207565	223172	245040	241158
Industry Division 20: Chemical and chemical products (Household)	1067	1222	1029	1423	2211	2173
Industry Division 20: Chemical and chemical products (Corporate +Household)	134588	193890	208593	224595	247251	243330
Growth over previous year (%)		44.1	7.6	7.7	10.1	-1.6
Industry Division 21: Pharmaceutical; medicinal chemicals and botanical products (Corporate)	112675	144319	157237	165019	182724	179578
Industry Division 21: Pharmaceutical; medicinal chemicals and botanical products (Household)	625	567	667	585	620	638
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	113300	144886	157904	165604	183344	180216
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	247888	338776	366497	390199	430595	423546
Growth over previous year (%)		36.7	8.2	6.5	10.4	-1.6
Manufacturing (Corporate)	1631823	1850139	2042040	2248880	2457941	2375027
Manufacturing (Household)	246546	296050	291682	317743	347389	337242
Manufacturing (Corporate +Household)	1878369	2146189	2333721	2566623	2805330	2712269
Growth over previous year (%)		14.3	8.7	10.0	9.3	-3.3
GVA at basic prices for All Economic activities	11504279	12574499	13965200	15505665	17161213	18461343
Growth over previous year (%)		9.3	11.1	11.0	10.7	7.6
Share of GVA of Manufacturing sector in GVA for All Economic Activities	16.3	17.1	16.7	16.6	16.3	14.7
Share of GVA of Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20)in GVA for All Economic Activities	1.17	1.54	1.49	1.45	1.44	1.32
Share of GVA of Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21) in GVA for All Economic Activities	2.15	2.69	2.62	2.52	2.51	2.29
Share of GVA of chemical and chemical products (Industry Division 20)in GVA for Manufacturing Sector	7.17	9.03	8.94	8.75	8.81	8.97
Share of GVA of chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)in GVA for Manufacturing Sector	13.20	15.79	15.70	15.20	15.35	15.62

Source: National Accounts Statistics 2021, Ministry of Statistics & Programme Implementation.

Table 46: Gross Value Added from Chemical and Chemical Products (Industry Division 20: NIC 2008) and Pharmaceutical; Medicinal Chemicals and Botanical Product (Industry Division 21: NIC 2008) vis-a-vis Manufacturing Sector and All Economic Activities

At Constant Price (2011-12)

(Rs. In Crore)

Description	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Industry Division 20: Chemical and chemical products (Corporate)	115005	119330	122965	126099	143590	158812
Industry Division 20: Chemical and chemical products (Household)	919	1085	927	1265	1856	1849
Industry Division 20: Chemical and chemical products (Corporate +Household)	115924	120415	123892	127364	145446	160661
Growth over previous year (%)		3.9	2.9	2.8	14.2	10.5
Industry Division 21: Pharmaceutical; medicinal chemicals and botanical products (Corporate)	98406	110119	131359	136154	147955	141067
Industry Division 21: Pharmaceutical; medicinal chemicals and botanical products (Household)	546	478	557	483	502	501
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	98952	110597	131916	136637	148457	141568
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	214876	231012	255808	264001	293903	302228
Growth over previous year (%)		7.5	10.7	3.2	11.3	2.8
Manufacturing (Corporate)	1468900	1643539	1803931	1941557	2041833	1995645
Manufacturing (Household)	215038	260311	250834	267871	284234	273779
Manufacturing (Corporate +Household)	1683938	1903850	2054764	2209428	2326067	2269424
Growth over previous year (%)		13.1	7.9	7.5	5.3	-2.4
GVA at basic prices for All Economic activities	9712133	10491870	11328285	12034171	12744203	13271471
Growth over previous year (%)		8.0	8.0	6.2	5.9	4.1
Share of GVA of Manufacturing sector in GVA for All Economic Activities	17.3	18.1	18.1	18.4	18.3	17.1
Share of GVA of Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20) in GVA for All Economic Activities	1.19	1.15	1.09	1.06	1.14	1.21
Share of GVA of Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21) in GVA for All Economic Activities	2.21	2.20	2.26	2.19	2.31	2.28
Share of GVA of chemical and chemical products (Industry Division 20) in GVA for Manufacturing Sector	6.88	6.32	6.03	5.76	6.25	7.08
Share of GVA of chemical and chemical products, including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21) in GVA for Manufacturing Sector	12.76	12.13	12.45	11.95	12.64	13.32

Source: National Accounts Statistics 2021, Ministry of Statistics & Programme Implementation.

Table 47: Value of Output from Chemicals and Chemical products (Industry Division 20: NIC 2008) and Pharmaceutical; Medicinal Chemicals and Botanical Products (Industry Division 21: NIC 2008) vis-a-vis Manufacturing Sector

At Current Prices

(Rs. In Crore)

Value of Output	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Manufacturing (Corporate)	7803213	7591834	8162260	9032405	10854443	10509487
Manufacturing (Household)	698250	825639	824799	936733	1060700	1037598
Manufacturing (Corporate + Household)	8501463	8417473	8987059	9969138	11915143	11547086
Chemical and chemical products (Corporate) (Industry Division 20)	626716	668344	662125	729330	948677	922194
Chemical and chemical products (Household) (Industry Division 20)	5327	6100	5137	7104	11038	10847
Total Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20)	632043	674444	667262	736434	959715	933042
Pharmaceutical; medicinal chemicals and botanical products --Corporate (Industry Division 21)	257134	300519	318143	325755	395757	385910
Pharmaceutical; medicinal chemicals and botanical products --Household (Industry Division 21)	3121	2833	3330	2922	3095	3185
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	260255	303352	321472	328677	398852	389094
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	892298	977796	988734	1065111	1358567	1322136

Source: National Accounts Statistics 2021, CSO, Ministry of Statistics & Programme Implementation.

Table 48: Value of Output from Chemicals and Chemical Products (Industry Division 20: NIC 2008) and Pharmaceutical; Medicinal Chemicals and Botanical Products (Industry Division 21: NIC 2008) vis-a-vis Manufacturing Sector

At Constant Price (2011-12)

(Rs. In Crore)

Value of Output	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Manufacturing (Corporate)	7057882	7245184	7675612	8200088	9409806	9123760
Manufacturing (Household)	612028	732581	712666	791191	868003	839868
Manufacturing (Corporate + Household)	7669910	7977765	8388278	8991280	10277809	9963628
Chemical and chemical products (Corporate) (Industry Division 20)	539807	593556	596509	648293	796538	784846
Chemical and chemical products (Household) (Industry Division 20)	4588	5417	4628	6315	9268	9232
Total Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20)	544395	598973	601137	654608	805806	794078
Pharmaceutical; medicinal chemicals and botanical products -- Corporate (Industry Division 21)	224571	253175	265783	268775	320451	303150
Pharmaceutical; medicinal chemicals and botanical products -- Household (Industry Division 21)	2725	2387	2782	2411	2506	2502
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	227296	255562	268565	271185	322957	305652
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	771691	854535	869702	925793	1128763	1099730

Source: National Accounts Statistics 2021, Ministry of Statistics & Programme Implementation.

Table 49: All India Estimate of Selected Characteristics of Factory Sector for Chemical and Chemical products (Industry Division 20: NIC 2008) , Pharmaceutical; Medicinal Chemicals and Botanical Product (Industry Division 21: NIC 2008) and Manufacture of Megnetic and Optical Media (Industry Division 268)

Description	2014-15	2015-16	2016-17	2017-18	2018-19
Industry Division 20: Chemical and Chemical Products					
No of factories (no.)	11715	12015	12168	12568	12902
No of workers (no.)	519000	541343	588806	614733	666623
Total Output (Rs. crore)	557244	609216	583008	661499	821126
Total Inputs (Rs. crore)	461953	473764	446877	517336	661207
Gross Value Added (Rs. crore)	95292	135452	136131	144163	159919
Industry Division 21: Pharmaceutical; Medicinal Chemicals and Botanical Products					
No of factories (no.)	4908	5036	4946	5051	5161
No of workers (no.)	369196	395988	431732	454024	483238
Total Output (Rs. crore)	231833.53	265742.32	271958.53	285014	342227.15
Total Inputs (Rs. crore)	150713.14	174161.51	174413.61	182832	224273.68
Gross Value Added (Rs. crore)	81120.39	91580.81	97544.92	102182	117953.47
Industry Division 268: Maufacture of Megnetic and Optical Media					
No of factories (no.)	4	5	3	10	15
No of workers (no.)	48	491	200	529	1970
Total Output (Rs. Lakh)	1105	31259	7534	75141	375859
Total Inputs (Rs. Lakh)	760	23350	5819	61256	283135
Gross Value Added (Rs. Lakh)	345	7909	1715	13885	92724

Source: Collated from Annual Survey of Industries 2018-19, Ministry of Statistics & Programme Implementation

Table 50: Statewise Estimate of Selected Characteristics of Factory Sector for Industry Division 20: NIC 2008: Chemicals and Chemical Products

State	No. of Factories				GVA (Rs. Lakh)				Total Output (Rs Lakh)			
	2015-16	2016-17	2017-18	2018-19	2015-16	2016-17	2017-18	2018-19	2015-16	2016-17	2017-18	2018-19
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Andhra Pradesh	401	405	368	394	399763	331177	356689	446176	1940284	2130755	2265003	2509301
Assam	109	129	120	133	251355	216239	264490	223202	594954	495458	789313	757604
Bihar	51	61	44	52	3609	5813	15373	16415	44830	50286	76265	84900
Chhattisgarh	102	113	109	110	10499	16917	8133	8010	92515	137414	85687	201584
Goa	45	45	38	36	206736	162389	137513	72231	986279	659576	701225	747163
Gujarat	2316	2459	2596	2757	3685024	4233550	4499173	5481852	19313596	19379723	22062065	29156214
Haryana	257	305	333	362	253744	295782	301646	371391	1059595	1375643	1507216	1831951
Himachal Pradesh	228	235	208	225	844599	585106	732011	528976	2255720	1723963	1722044	1480706
Jammu & Kashmir	131	126	148	134	212274	218570	211080	235599	843376	741058	701986	975425
Jharkhand	96	107	100	88	85458	121407	114797	82897	294274	301703	529388	317377
Karnataka	567	581	591	659	315071	295813	340167	464619	1540735	1419647	1600629	2079037
Kerala	149	141	139	127	100787	362628	263532	376499	529190	904458	818774	1019809
Madhya Pradesh	278	268	319	314	190960	346909	349899	276016	1294751	1101147	1530984	1451534
Maharashtra	1898	1842	1790	1772	2711485	2278858	2361059	2404081	10805377	9566108	10814777	13079364
Meghalaya	3	4	5	4	4452	4177	2462	1171	9496	8910	4891	4997
Odisha	82	95	104	97	71247	336314	408461	553716	995024	1041620	1188177	1478344
Punjab	156	147	180	165	64196	106447	164390	104209	724185	698169	895038	815753
Rajasthan	308	336	398	372	279905	486262	336071	453739	1994750	2799626	2443874	3441389
Sikkim	4	3	3	3	42560	24694	9299	10771	161410	150743	23123	32609
Tamil Nadu	2588	2521	2639	2679	628206	646481	950622	694678	3669539	2918077	3610434	3582598
Tripura	9	10	8	9	226	70	74	1	438	198	119	78
Uttarkhand	243	219	232	233	1276355	808699	591227	880498	3134378	2091798	2064430	2563120
Uttar Pradesh	675	685	716	721	502485	522193	728207	883256	2974091	2870926	3813975	5049876
West Bengal	322	342	333	355	336783	584589	501561	445340	2585047	2911301	3278063	3360107
Dadra & N Haveli	168	177	167	202	84365	202142	218598	395490	702076	813926	1006494	3163327
Daman & Diu	108	118	152	168	144797	99930	163344	108722	693514	630760	1043393	1105225
Chandigarh	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delhi	77	72	69	95	20789	15696	21407	21751	103882	205669	225011	192024
Puduchery	91	97	96	99	182471	188074	179677	270689	503611	470007	463889	606063
Telagana	548	519	558	532	634399	115427	184446	178966	1066936	693463	874400	1016178
All India	12010	12162	12563	12897	13544600	13612353	14415408	15990961	60913853	58292132	66140667	82103657

Source: Annual Survey of Industries (Factory Sector), Ministry of Statistics & Programme Implementation

NA: Not Available

Table 51: Production, Import, Export, Consumption of Major Chemicals and Petrochemicals and Export as % of Production and Import as % of Consumption

(In Thousand Tonnes)

Group (1)	Description (2)	2013-14 (3)	2014-15 (4)	2015-16 (5)	2016-17 (6)	2017-18 (7)	2018-19 (8)	2019-20 (9)	2020-21 (10)
Major Chemicals	Production	9643	9660	9884	10234	11069	11589	11943	11243
Major Petrochemicals									
A. Basic major Petrochemicals		13410	13448	14905	15510	15670	16269	19041	17938
B. Intermediates		16313	16816	18690	18743	19063	19057	22119	21903
C. Other Petro-based Chemicals		1970	1963	2159	2174	2080	2192	2364	2314
Total Major Chemicals and Petrochemicals		41336	41887	45638	46661	47881	49108	55468	53399
Major Chemicals	Exports	1221	1061	1138	1484	1496	1579	1698	1905
Major Petrochemicals									
A. Basic major Petrochemicals		2616	2254	2743	2956	3293	4095	3719	2681
B. Intermediates		1977	2034	2430	2190	3915	5377	4842	5421
C. Other Petro-based Chemicals		96	124	129	144	193	147	238	171
Total Major Chemicals and Petrochemicals		5909	5473	6440	6773	8897	11198	10497	10179
Major Chemicals	Imports	4333	5025	5360	5400	5937	6379	6557	5983
Major Petrochemicals									
A. Basic major Petrochemicals		4304	5080	5681	5938	6408	6284	5356	4356
B. Intermediates		2950	3253	3245	3540	3180	2845	3323	2786
C. Other Petro-based Chemicals		2204	2373	2740	2651	3255	3227	3543	3069
Total Major Chemicals and Petrochemicals		13791	15730	17026	17529	18780	18735	18780	16194
Major Chemicals	Consumption [§]	12756	13623	14106	14150	15510	16389	16802	15321
Major Petrochemicals									
A. Basic major Petrochemicals		15098	16274	17843	18492	18785	18458	20678	19613
B. Intermediates		17286	18034	19505	20094	18328	16525	20600	19268
C. Other Petro-based Chemicals		4078	4211	4770	4680	5142	5272	5670	5212
Total Major Chemicals and Petrochemicals		49218	52143	56224	57416	57765	56645	63750	59414
Major Chemicals	Exports as % of Production	12.7	11.0	11.5	14.5	13.5	13.6	14.2	16.9
Major Petrochemicals									
A. Basic major Petrochemicals		19.5	16.8	18.4	19.1	21.0	25.2	19.5	14.9
B. Intermediates		12.1	12.1	13.0	11.7	20.5	28.2	21.9	24.7
C. Other Petro-based Chemicals		4.9	6.3	6.0	6.6	9.3	6.7	10.0	7.4
Total Major Chemicals and Petrochemicals		14.3	13.1	14.1	14.5	18.6	22.8	18.9	19.1
Major Chemicals	Imports as % of Consumption	355.1	473.5	470.9	363.9	396.9	403.9	386.1	314.1
Major Petrochemicals									
A. Basic major Petrochemicals		28.5	31.2	31.8	32.1	34.1	34.0	25.9	22.2
B. Intermediates		17.1	18.0	16.6	17.6	17.4	17.2	16.1	14.5
C. Other Petro-based Chemicals		54.0	56.3	57.4	56.6	63.3	61.2	62.5	58.9
Total Major Chemicals and Petrochemicals		28.0	30.2	30.3	30.5	32.5	33.1	29.5	27.3

Note: [§] Derived consumption as Production+ Imports-Exports

Table 52: Exports of All Chemicals as % of Value of Output and Imports of All Chemicals as % of Consumption

(Rs. in Crore)

Item	Code	2015-16	2016-17	2017-18	2018-19	2019-20
Exports of Pharmaceutical products	HS code 30	84481	86705	85447	103240	115473
Exports of Fertilizers	HS code 31	673	466	685	1038	837
Exports of all Chemicals (including Pharmaceutical products and Fertilizers)	HS codes 28,29,30,31,32,38,39,4002,54 and 55	266528	277364	305413	387853	391604
Imports of Pharmaceutical products	HS code 30	10742	11515	12241	14581	16530
Imports of Fertilizers	HS code 31	45973	28754	30108	46457	47397
Imports of Chemicals and Chemical products	HS codes 28,29,30,31,32,38,39,4002,54 and 55	318595	309458	360205	455872	423587
Value of Output of Chemicals and Chemical products at current prices	Industry Division 20 and 21: NIC 2008	977796	988734	1065111	1358567	1322136
Consumption of Chemicals and Chemical products	Value of Output + Imports - Exports	1029863	1020828	1119903	1426586	1354120
Exports of all Chemicals as % of Value of Output		27.3	28.1	28.7	28.5	29.6
Imports of all Chemicals as % of Derived Consumption		30.9	30.3	32.2	32.0	31.3

Chapter 28: Inorganic Chemicals; Organic or Inorganic Compounds of Precious Metals, of Rare-Earth Metals, of Radioactive Elements or of Isotopes; Chapter 29: Organic Chemicals; Chapter 30: Pharmaceutical products; Chapter 31: Fertilizers; Chapter 32: Tanning or Dyeing Extracts; Tannins and their Derivatives; Dyes, Pigments and Other Colouring Matter; Paints and Varnishes; Putty and other Mastics; Inks; Chapter 38: Miscellaneous Chemical Products; Chapter 39: Plastics and articles thereof; 4002: Synthetic rubber and factice derived from oils, in primary forms or in plates, sheets or strip; mixtures of any proChapter 54: Man-made Filaments and Chapter 55: Man-made staple fibres

Note 1: Data source in respect of Imports, Exports (Chapter-wise) is DGCIS Portal

Note 2: Data Source in respect of value of output is National Account Statistics, 2021 (MoSPI)

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