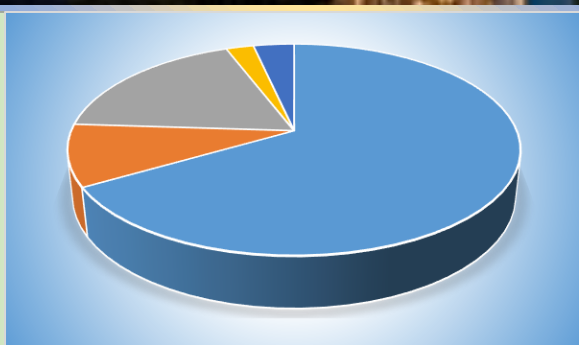
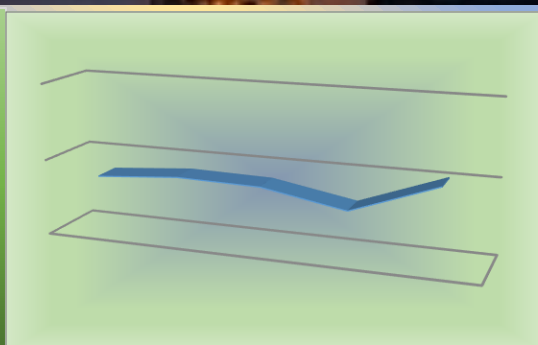
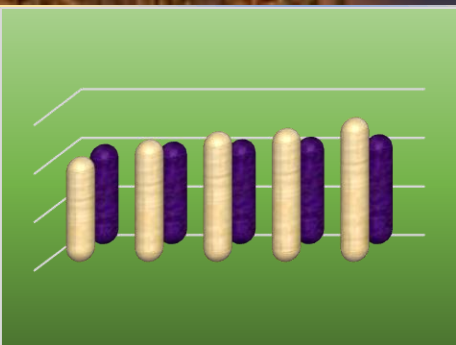




CHEMICAL AND PETROCHEMICAL STATISTICS AT A GLANCE – 2018



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



डी वी सदानंद गौड़ा
D.V. Sadananda Gowda
ಡಿ.ಎ. ಸದಾನಂದ ಗೌಡ



सांख्यिकी एवं कार्यक्रम कार्यान्वयन
तथा रसायन एवं उर्वरक मंत्री
भारत सरकार
Minister of Statistics & Programme
Implementation and
Chemicals & Fertilizers
GOVERNMENT OF INDIA



MESSAGE

The Department of Chemicals and Petrochemicals is actively working for promotion of the Chemical and Petrochemical sector in the country. The share of this sector in manufacturing is quite significant and therefore its contribution to development of the National Economy is very important. Since this sector has numerous forward and backward linkages, it is called the backbone of the industrial sector of the country, by providing building blocks for many downstream industries. It has also significant role in agricultural development of the country, in terms of fertilizers, agro-chemicals, irrigation etc.

2. I am very happy to note that the Department of Chemicals & Petrochemicals is bringing out the Annual Statistical Publication "Chemical & Petrochemical Statistics at a Glance-2018".

3. I appreciate the excellent work done by the officers of the Department of Chemicals & Petrochemicals in this regard.

My best wishes to all concerned.

March, 2019

(D.V. Sadananda Gowda)



पी. राघवेन्द्र राव

सचिव

P. RAGHAVENDRA RAO
Secretary



सत्यमेव जयते



एक कदम स्वच्छता की ओर

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रसायन और उर्वरक मंत्रालय

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Message

Department of Chemicals and Petrochemicals is endeavouring to address issues and concerns faced by the Chemical Industry to ensure more conducive and hassle-free environment. The Department, under its promotional role, is committed to support industry through perspective planning for achieving excellence and sustainable growth of the sector to boost National Economy.

2. I am indeed happy to know that the statistical Publication "Chemical & Petrochemical Statistics at a Glance-2018" is being brought out by the Statistics & Monitoring Division of Department of Chemicals and Petrochemicals.

3. I appreciate the efforts of the officers of Statistics and Monitoring Division led by Shri Rakesh Kumar Kamra, Deputy Director General, Department of Chemicals & Petrochemicals in bringing out the above publication.

Congratulations to all.

(P. Raghavendra Rao)

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सत्यमेव जयते



एक कदम स्वच्छता की ओर

भारत सरकार
रसायन और उर्वरक मंत्रालय
रसायन और पेट्रोसायन विभाग
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Foreword

I am happy to bring out the statistical Publication "Chemical & Petrochemical Statistics at a Glance- 2018" as compiled by Statistics & Monitoring Division under the Department of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers. S&M Division besides compiling Statistics on Selected Major Chemicals and Petrochemicals for internal use in perspective planning, also caters to the requirement of data for All India Index of Industrial Production brought out on monthly basis by Central Statistics Office, Ministry of Statistics & Programme Implementation. The Statistics presented in this publication includes inter alia Production. Installed capacity, Consumption, Import and Export in respect of Selected Chemicals and Petrochemicals.

2. I express my sincere thanks to all the data providers to this Department. I sincerely acknowledge and express my gratitude to Ministries / Departments/ Organizations viz. M/o Statistics & PI, M/o Commerce & Industry, M/o PNG, DGFT, DGCI&S and DIPP, etc. for providing valuable input for this publication through their websites.

3. I also place on record my appreciation for the efforts put in by Shri Karan Singh Tanwar Research Officer, Shri Rajat, Research Officer (Trainee), Shri Darshan Singh, Senior Statistical Officer, Shri Rakesh Kumar and Shri Manoj Kumar, Junior Statistical Officers. My thanks are also due to Divisions of this Department for providing valuable inputs and cooperation towards compilation of this publication.

4. The finalization of this Publication in the present form is accredited to inspiration and guidance provided by Shri P. Raghavendra Rao, Secretary, Department of Chemicals & Petrochemicals.

5. I hope this publication will be useful to planners, policy makers, academicians and researchers. Suggestions/ Comments are most welcome for bringing out improvement in the next year publication.

March, 2019
New Delhi

(Rakesh Kumar Kamra)
Deputy Director General

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Introduction

Rakesh Kumar Kamra^a

a : Dy. Director General, Head – S&M Division

Chemical and Petrochemical sector is one of the pioneering sectors having bearing on day to day needs of the society. Presence of Chemicals and Petrochemicals can be seen in everyday life of the people at large. Chemical Industry contribute significantly for the economic development and growth of various key Sectors in the country such as automotive, construction, electronics, health care, textiles and FMCG. Government initiatives such as Make in India, Skill India, Digital India, Swatch Bharat Abhiyan etc. will accelerate growth of Chemical Industry. The share of Gross Value Added (GVA) of this sector in GVA of Manufacturing Sector is about **7.99%** while it is **1.34%** in National GVA¹. Output from Chemical Sector has grown with CAGR of 5.65% while output for Manufacturing Sector has grown at 5.3% CAGR during the period 2011-12 to 2016-17(**Table 48**). GVA of Chemical Sector has grown with 5.38% CAGR while GVA of Manufacturing Sector has grown with CAGR of 7.8% during the period 2011-12 to 2016-17(**Table 46**).

2. The Statistics and Monitoring (S&M) Division of the Department compiles statistics of selected Major Chemicals and Petrochemicals from Large and Medium Scale units supplying monthly data on production and installed capacity. S&M Division also derives estimates of consumption with the help of production and foreign trade data. The data in respect of Export and Import of Chemicals and

¹ *National Accounts Statistics 2018, CSO , Ministry of Statistics & PI*

Petrochemical items monitored by DCPC is from the statistics compiled by DGCIS under the Ministry of Commerce and Industry.

3. The publication has 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 2013-14 to 2017-18.

Chapter 1 besides defining Basic Chemicals, Specialty Chemicals & Agrochemicals, 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 2013-14 to 2017-18 in Production, Installed Capacity, Import and Export for various groups under Major Chemical and Major Petrochemical along with brief analysis. At the end in the Appendices Section, Statistical tables presenting information inter-alia on Production, Installed Capacity, Capacity Utilization, Imports/ Exports along with their growth rates during 2010-11 to 2017-18 have also been provided. Detailed table on Foreign Trade, FDI, IIP, WPI etc. related to Chemical and Petrochemical Sector have also been included in the Appendices Section.

4. The production of Selected Major Chemicals (Group-wise) and selected Major Petrochemicals (Group-wise) is generally found to be growing consistently

over the years. The annual growth during 2017-18 over preceding year is 8.14% with CAGR of 2.80 % over a period of 8 years, in case of Major Chemicals. The annual growth of Basic Major Petrochemicals is 1.01% over preceding year with CAGR of 3.95% during the same period. The CAGR is higher in production of Basic Major Petrochemicals as compared to CAGR in production of Major Chemicals.

5. Installed Capacity utilization in case of basic Major Chemicals is 79 % (2017-18) while it is 85% in case of Basic Major Petrochemicals. The utilization of installed capacity is in the range of 80% - 82% for **Major Chemicals** like **Alkali** and **Inorganic Chemicals**, whereas it is in the range of 63- 71% in case of **Organic Chemicals**, **Pesticides (Technical Grade)** and **Dyes and Pigments (2017-18)**. Micro study of the sector indicates huge unutilized installed capacity in case of **Organic Chemicals (29%)**, **Pesticides (Technical Grade) (35%)**, **Synthetic Rubber (28%)**, **Dyes and Pigments (24%)** and **Performance Plastics (29%)**.

6. Among **Selected Major Chemicals** (Group-wise), for **Inorganic Chemicals** and **Organic Chemicals** there is a substantial import into the country. About 48 % of Domestic demand for **Inorganic Chemicals** is met through import while it is 68% in case of **Organic Chemicals** (*Table 1*) . Amongst **Inorganic Chemicals**, two products, namely, **Carbon Black** (Rs.1436 crore) and Calcium **Carbonate** (Rs.645 crore) have imports of more than Rs. 500 crores. (*Table 17*). Amongst **Organic Chemicals**, five products, namely, **Acetic Acid** (Rs.2906 crore), **Acetone** (Rs.749 crore), **Phenol** (Rs.2028 crore), **Methanol** (Rs.4000 crore) and **Aniline** (Rs.589 crore) have more than Rs. 500 crore of imports into the country (*Table 17*).

7. Amongst **Selected Basic Major Petrochemicals** (Group-wise) for **Polymers**, **Synthetic Rubber** and **Synthetic Detergent Intermediate**, there is a substantial import into the country. About 37% of domestic demand for **Polymers** is met

through import while it is as high as 70% in case of **Synthetic Rubber**. In case of **Synthetic Detergent Intermediate**, about 22% of domestic demand is met through imports (*Table 6*). Amongst **Polymers**, three products, namely, **High Density Polyethylene** (Rs. 8406 crore), **Polypropylene** (Rs. 7620 crore) and **Poly Vinyl Chloride** (Rs. 11237 crore) have import of more than Rs. 5000 crore (*Table 25*) . Amongst **Synthetic Rubber**, four products, namely, **Styrene Butadiene Rubber** (SBR) (Rs. 1613 crore), Poly **Butadiene Rubber** (Rs. 1226 crore), **Ethyl Vinyl Acetate** (Rs. 1845 crore), and **Poly Rubber** (Rs. 1510 crore) which have import of more than Rs. 1000 crore into the country (*Table 25*). Amongst **Synthetic Detergent Intermediates**, one product, namely, **Linear Alkyl Benzene** (Rs. 1637 crore) has import of more than Rs. 1000 crore into the country (*Table 25*). Amongst Selected Basic Major Petrochemicals (Group – wise), in case of **Performance Plastics**, **major** portion of domestic production is exported (about 61% of domestic production) (*Table 6*). Amongst **Performance Plastics**, there is one product, namely, **PET chips (Polyester Chips)** (Rs. 6553 crore) has a export of more than Rs. 5000 crore. (*Table 24*)

8. The trade deficit during 2017-18 (i.e. net import) in Chemicals and Petrochemicals Sector (comprising chapters 28, 29, 32,38,39,4002,54 and 55 of HS code) is Rs. 98,653 Crore as per figures available on DGCIS portal, as on 31.07.2018 (*Table 12 A*). The trade deficit in respect of selected Major Chemicals and Petrochemical Products, being monitored by DCPC & which are basically intermediate in nature, is around Rs. 37,326 Crore as per figures derived from the data received from DGCIS, Kolkata. (*Tables 15 & 23*).

9. In respect of Major Chemicals at group level, it is observed , on the basis of products monitored by this Department that Alkali Chemicals, Organic Chemicals and Inorganic Chemicals are **trade deficit**, whereas Pesticides (Technical Grade and

formulation both); and Dyes & Pigments are **trade surplus**, during 2017-18 (*Table 18*). However, in respect of Major Petrochemicals at group level Polymers, Fiber Intermediates, Synthetic rubber, Synthetic Detergent Intermediates and Other Petro-based Chemicals are **trade deficit**, whereas Synthetic Fibre, Performance Plastics, Aromatics and Olefins are **trade surplus** during the same period (*Table 26*). This aggregates to overall **trade surplus** in Major Chemicals and overall **trade deficit** in Major Petrochemicals resulting in to **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
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 Classification
NIY	Nylon Industrial Yarn
ONCB	Ortho Nitro Chloro Benzene
PAN	Phthalic Anhydride
PBR	Poly Butadiene Rubber
PBT	Polybutylene Terephthalate
PET	Polyethylene terephthalate
PIB	Polyisobutylene
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
IV	Pesticides (Technical Grade)	Isobutyl Benzene	
		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
		Pretilachlor Technical	Lambda Cyhalothrin
		Phenthoate	Permethrin Tech
		Imidacaloprid 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	Azo Dyes	Acid Direct Dyes (other than AZO)
		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
	Napthols	Other Dyes

Major Petrochemicals			
A. Basic Major Petrochemicals			
Sl.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
		Polyestylene	Polypropylene (Inc. Co-Polymer)
		Expandable Polyestylene	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	Epichlohydrine	Iso Butylene	
Metaxylene	Methyl Isobutyl Ketone	PBT	
PET	PIB	Polycarbonate	
Propylene Oxide	Propylene Glycol	Polyvinyl Acetate Resin	
Unsaturated Polyster Resin	Methyl Methacrylate	Iso-Butanol	
Ethyl Benzene	C4-Raffinate	Cellulose Acetate Butyrate	
Cellulose Acetate Sheet	Cellulose Nitrate Sheet	Melamine Moulding Powder	
Polyacetal Resin	Phthalic Anhydride	Styrene	
Vinyl Actate Monomer	Isopropanol	Polyol	

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 by the Department of Chemicals & Petrochemicals 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, Central Statistics Office (CSO), New Delhi.
(v) Wholesale Price Index	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 fiber.
(vii) Chemicals and Petrochemicals (Narrow definition)	The Chemicals and Petrochemical products that are 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.

Limitations:

The data presented in this publication heavily draws on the narrow definition of chemicals and petrochemicals. The choice of adopting this narrow definition is guided by the availability of authentic detailed data with the Department of Chemicals and Petrochemicals.

Disclaimer :

Though due care has been taken in compiling this Publication, the possibility of errors and omissions remains. Users of the information contained in this Publication are urged to verify it independently. The Department of Chemicals and Petrochemicals will not bear any liability for any loss or injury arising out of the use of the information contained in this.

Chapter 1

An Overview of Chemical and Petrochemical Sector

The chemical industry is the main stay 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. Petrochemicals constitute a very important segment of world chemicals market, with a share of nearly 40 per cent. 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 that deal in a variety of downstream products. Also, the industry offers alternatives, which serve as substitutes for natural products and hence, 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 is permissible under the automatic route, through the RBI. Manufacture of most chemical products, inter-alia, covering organic / inorganic, dyestuffs & pesticides, is de-licenced. 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 licencing 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 fibres, 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. Indian exports of agrochemicals have shown an impressive growth over the last five years. There are many pesticide formulators spread over the country and India is the 4th largest producer of agrochemicals after USA, Japan and China. This industry is net export earning & contributes significantly to the foreign exchange basket of the country.

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 the 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 and development of this sector. Continued R&D efforts in the part of the industry helps to improve their quality standards, obtain higher yields resulting in 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 284.83 million MT in 2017-18 (as per 4th Advance Estimates of 2017-18). 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 anesthetic 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 6.3 million tonne in 2010-11 to 9.28 million tonne in 2017-18 (CAGR of 5.58%) while its consumption has increased from 8.02 million tonne to 12.83 million tonne (CAGR of 8.46%).

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. Examples 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.¹

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 9412 thousand tonne in 2012-13 to 10362 thousand tonne in 2017-18. Off take of natural gas for petrochemical sector has increased from 2486 million standard cubic meter to 4024 million standard cubic meter during the same period.

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. There are two naphtha, two gas based and seven dual feed cracker complexes in the country with a combined annual ethylene capacity of 7.27 million MT.

15. 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

¹ Dr. G.N.Sarkar, Advanced Petrochemicals, First Edition, Khanna Publishers, New Delhi

need to modernize and upgrade the existing manufacturing processes, improve the quality of existing products and make them safe for environment and human health.

16. Commissioning of new installed Capacity

16.1 IOCL Refinery at Paradip, Odhisa has been commissioned on 8th February 2016 with a refining capacity at 15 MMTPA. Indmax fluid-catalytic-cracking (FCC) unit with designed capacity of 857 KTPA, installed at Paradip Refinery produce both Ethylene & propylene streams, which will be further processed in the upcoming petrochemical units to produce Mono Ethylene Glycol (MEG) & Polypropylene. The Polypropylene unit with installed capacity of 680 KTA is expected to be commenced by end of April, 2019. MEG unit is expected to be commissioned by October, 2021.

16.2 Assam Gas Cracker Project (AGCP) implemented by Brahmaputra Cracker and Polymer Limited (BCPL) at Lepetkata was commissioned on 2nd January 2016 and dedicated to the Nation by Hon'ble prime Minister of India on 5th February 2016. The dual feed Cracker Complex is designed to produce 220 of LLDPE-HDPE and 60 KTA of PP. At present BCPL is operating at more than 100% capacity.

16.3 ONGC Petro additions Ltd. (OPaL), a JV of ONGC, GAIL, and Gujarat State Petroleum Corp., has commissioned a grassroots mega petrochemical complex at the Dahej PCPIR. The complex's main Dual Feed Cracker Unit has the capacity to produce 1100 KTPA Ethylene, 400 KTPA Propylene and the Associated Units consists of Pyrolysis Gasoline Hydrogenation Unit, Butadiene Extraction Unit and Benzene Extraction Unit. The Polymer plants of OPaL has 2X360 KTPA of LLDPE/HDPE Swing unit, 340 KTPA of Dedicated HDPE and 340 KTPA of PP. The Project commenced its production from March 2017.

16.4 Reliance Industries has commissioned a dual feed off gas cracker on January 2, 2018, at Jamnagar refinery with 1.5-million m.t./year ethylene plant capacity which will crack refinery off-gases. The new Jamnagar cracker will raise Reliance's total ethylene capacity to 3.58 million MT/Year. Reliance industries are expected to commence commercial production of Iso Butylene Isoprene Rubber (IIR)/Halo Butyl Rubber (HBR) by June 2019, which will be import substitution activity.

17. 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.

Chapter 2

Global Scenario

As per the European Chemical Industry Council Report-2018 (**Cefic- 2018**) world chemicals (excluding pharmaceuticals) sales in 2017 are valued at 3475 Euro billion. India ranks 4th in Asia and 6th in world with chemicals sales valued at 101 Euro billion in 2017. India's Capital spending in World Chemicals (excluding pharmaceuticals) is valued at 4.3 Euro billion in 2017, as compared to 2.2 Euro billion in 2007. India's chemical R&D spending is valued at 1.6 Euro billion in 2017, as compared to 0.6 Euro billion in 2007. Top ten countries in World Chemical sales during 2017 are as under:

Rank	Country	Sales in 2017 (in Euro Billion)
1	China	1293
2	European Union (EU)	542
3	USA	466
4	Japan	154
5	South Korea	122
6	India	101
7	Taiwan	70
8	Brazil	67
9	Russia	61
10.	Indonesia	43

Source: cefic report 2018

2. As per UN Comtrade Database for 2017, India ranks 13th in the world exports of chemicals (excluding pharmaceutical products) and ranks 6th in the world imports of chemicals (excluding pharmaceutical products). India's exports of chemicals (excluding pharmaceutical products) was 32.03 US\$ billion in 2017. India's share in World exports of chemicals (excluding pharmaceutical products) was 2.26% in 2017. India's imports of chemicals (excluding pharmaceutical products) was 50.48 US\$ billion in 2017. India's share in World imports of chemicals (excluding pharmaceutical products) was 3.43% in 2017.

Chapter 3

Important Economic Indicators

According to the National Accounts Statistics 2018, brought out by the Central Statistics Office (CSO), Chemical and Chemical products sector, excluding pharmaceuticals (Industry Division 20 of NIC 2008), accounted for 1.41% of the GVA for All Economic Activity in 2016-17 while its share in the GVA of Manufacturing Sector (at 2011-12 prices) was 7.76%. During the period between 2011-12 to 2016-17, GVA of Chemical Sector at constant prices has grown at a CAGR of 5.38% while GVA of Manufacturing Sector grew at CAGR of 7.8%. The average Indices of Industrial Production (IIP) for the Chemical and Chemical products (Industry Division 20 of NIC 2008) for the year 2017-18 stood at 116.1, which is 0.3% lower 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 2016-17 was Rs. 6,83,538 crores and it is 7.7% 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 2016-17 was Rs. 10,81,265 crores and it is 12.1% of the Total Value of Output of Manufacturing sector. As per the data of six years, i.e. between 2011-12 to 2016-17, real growth rate in Output of Chemical Industry excluding Pharmaceuticals Industry (i.e. Industry Division 20) is 5.6% while it is 7.45 % for Chemical Industry including Pharmaceutical Industry {i.e. Industry Division 20 & 21}. Growth in Value of Output for Manufacturing Sector during the same period is 5.3%.

2. The exports and imports data of 2017-18 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. 73,204 crore, Man-made staple fibres accounted Rs. 8,554 crore, Man-Made Filaments accounted Rs. 8,446 crore and Tanning or Dyeing accounted Rs. 5,995 crore in **net exports** while Fertilizers (chapter 31 HS code) accounted Rs 29,423 crore, Plastic and Articles thereof (Chapter 39 HS code) accounted Rs. 48,485 crore, Organic Chemicals (Chapter 29 HS code) accounted Rs. 28,455 crore, Inorganic Chemicals (Chapter 28 HS code) accounted Rs 27,753 crore, Miscellaneous Chemical Products (Chapter 38

HS code) accounted Rs. 10,439 crore and Synthetic Rubber and Factice (4002 HS code) accounted Rs. 6,116 crores in the **net imports** during 2017-18. {**Table No. 12A**}

3. As per Annual Survey of Industries (Factory Sector), 2015-16, top seven States, namely, Gujarat (27.2%), Maharashtra (20.0%), Uttarakhand (9.4%), Himachal Pradesh (6.2%), Telangana (4.7%), Tamil Nadu (4.6%) and Uttar Pradesh (3.7%), contributed 75.9% in the Gross Value Added (GVA) for the Chemical & Chemical products Sector (Industry Division 20 of NIC 2008) and seven States, namely, Gujarat (31.7%), Maharashtra (17.7%), Tamil Nadu (6.0%), Uttarkhand (5.1%) Uttar Pradesh (4.9%), West Bengal (4.2%) and Himachal Pradesh (3.7%), contributed 73.4% in the Value of Output. {**Table 50**}

4. The exports of chemicals & petrochemicals (excluding pharmaceutical products and fertilizers) has increased from Rs. 102,207 crores in 2010-11 to Rs. 219,206 crore in 2017-18. The percentage share of the exports of chemicals & petrochemicals (excluding pharmaceutical products and fertilizers) in the total national exports increased from 9.0% to 11.2% during the same period. {**Table 11**}

At the product level, the following products accounted more than Rs. one thousand crore in the exports in 2017-18.

(Rs. Crore)			
Paraxylene	10027	Other Insecticides	3935
Polyester Filament Yarn	7303	Other Fungicide Nes	3292
Benzene	6624	Other Pesticides	2165
Polyester Chips/Pet Chips	6553	Menthol	1840
Pigment Emulsion	4413	Azo Dyes	1818
Other Herbicides-Anti Sprouting Products	4251	Polyester Staple Fibre	1694
Reactive Dyes	4131	Linear Low Density Polyethylene	1636
Polypropylene (Inc. Co-Polymer)	3976	High Density Polyethylene	1556

5. The imports of Chemicals & Petrochemicals (excluding Pharmaceutical products and fertilizers) has increased from Rs. 138,731 crores in 2010-11 to Rs. 317,859 crores in 2017-18. The percentage share of the imports of Chemicals & Petrochemicals (excluding Pharmaceutical products and fertilizers) in the total national imports increased from 8.2% to 10.6% during the same period {**Table 11**}. At the product level, the following products accounted for more than Rs. thousand crores in the imports in 2017-18.

(Rs. Crore)

Poly Vinyl Chloride	11237	Polycarbonate	2562	Butyl Rubber	1510
High Density Polyethylene	8407	Vinyl Chloride Monomer	2473	Carbon Black	1436
Polypropylene (Inc. Co-Polymer)	7621	Other Insecticides	2395	Other Pesticides	1400
Styrene	6547	Purified Terephthalic Acid	2374	ABS Resin	1312
Mono Ethylene Glycol	5847	Phenol	2028	Polybutadiene Rubber	1227
Para xylene	5041	Toluene	1949	Vinyl Acetate Monomer	1172
Methanol	4000	Ethyl Vinyl Acetate	1845	Polyester /Pet Chips	1136
Low Density Polyethylene	3990	Acrylonitrile	1727	Soda Ash	1118
Linear Low Density Polyethylene	3357	Linear Alkyl Benzene	1637	Ethylene Dichloride	1085
Nylon-6	2999	Styrene Butadiene Rubber	1613	Polyester Filament Yarn	1008
Acetic Acid	2906	Caustic Soda	1534	Other Herbicides-Anti Sprouting Products	1004
Polyol	2816				

6. The net imports of Chemicals & Petrochemicals (excluding Pharmaceutical products and fertilizers) has increased from Rs. 36,524 crores in 2010-11 to Rs. 98,653 crore in 2017-18. The percentage share of the net imports of Chemicals & Petrochemicals (excluding Pharmaceutical products and fertilizers) in the total national net imports increased from 6.7% to 9.4% during the same period. At the product level, the following products accounted more than Rs. thousand crore in the net imports in 2017-18. { **Table 12(a) , 18 & 26** }

(Rs. Crore)

Poly Vinyl Chloride	11177	Toluene	1921
High Density Polyethylene	6851	Ethyl Vinyl Acetate	1832
Styrene	6508	Linear Low Density Polyethylene	1721
Mono Ethylene Glycol	4942	Acrylonitrile	1708
Methanol	3972	Linear Alkyl Benzene	1629
Polypropylene (Inc. Co-Polymer)	3644	Butyl Rubber	1503
Low Density Polyethylene	3106	Purified Terephthalic Acid	1489
Acetic Acid	2852	ABS Resin	1308
Nylon-6	2651	Styrene Butadiene Rubber	1249
Polycarbonate	2508	Poly Butadiene Rubber	1153
Vinyl Chloride Monomer	2473	Vinyl Acetate Monomer	1040
Polyol	2426	Ethylene Dichloride	1019
Phenol	1931		

The following products accounted more than Rs. one thousand crore in the total net exports in 2017-18: -

(Rs. Crore)

Benzene	6623	Other Herbicides-Anti Sprouting Products	3247
Polyester Filament Yarn	6295	Other Fungicide Nes	2307
Polyester Chips/Pet Chips	5417	Azo Dyes	1781
Paraxylene	4986	Menthol	1754
Pigment Emulsion	3886	Other Insecticides	1539
Reactive Dyes	3884		

7. Chemical Sector (including Pharmaceutical) in India is mainly in the Organised Sector {i.e. 99.5% GVA of Chemical Sector (including Pharmaceutical) comes from the organized Sector (Table 45)}. 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 2014-15 and 2015-16 are given in the table below:

Class	Description	Total Output (Rs. Crore)	
		2014-15	2015-16
2011	Manufacture of basic chemicals	129394	126784
2012	Manufacture of fertilizers and nitrogen compounds	110442	124352
2013	Manufacture of plastics and synthetic rubber in primary forms	70231	101482
2021	Manufacture of pesticides and other agrochemical products	39873	44970
2022	Manufacture of paints, varnishes and similar coatings, printing ink and mastics	41020	42338
2023	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations	98316	85910
2029	Manufacture of other chemical products n.e.c.	50378	67363
2030	Manufacture of man-made fibres	17589	16017
Total		557244	609216

Source: - Annual Survey of Industries 2014-15 and 2015-16 (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 has been compiled and notified by the Directorate General of Foreign Trade, Ministry of Commerce and Industry, Government of India in January 2017. It has different sectors of the Economy / Trade divided into 21 sections and 98 Chapters.

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 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	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 under the 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. The subsequent versions of this document were brought out by CSO as NIC- 70, NIC- 87 and NIC- 1998. It is during 1998 that 4-digit system of International Standard Industrial Classification (ISIC- 3) was followed in toto 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 to also align it with the base year of other macroeconomic indicators like the Gross Domestic Product (GDP), Wholesale Price Index (WPI).
2. IIP in the revised series will continue 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

Sl 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 Fertilisers	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 which had 620 items (397 item groups) 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 has been decided to include data on electricity generation figures from these sources in the new series. This inclusion is being 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 will now be 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 will be 14 as compared to 15 in the current series. This is on account of the fact that data on 'Iodised Salt' in the new series will be provided by the Department of Industrial Policy and Promotion (DIPP) as O/o Salt Commissioner is 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 has undergone a change on account of the MCDR Amendment Rules, 2016 resulting in 27 non-metallic minerals being designated as minor minerals and which are 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 Govt. 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 center 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 2001=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 the following month) for each of the selected 78 centers 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.

**The base of the index is being revised to 2015=100 to replace the existing base of the index.*

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.

New Features of WPI

- In the new 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 new WPI conceptually closer to 'Producer Price Index'.
- A new "WPI Food Index" will be 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 new 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 has been 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 2013-14 to 2017-18

This Chapter has been included in this publication to highlight important trends of the sector during the last five years i.e. 2013-14 to 2017-18, through graphical presentation with brief analysis. The graphical presentation containing tables alongside displays trend during the said period in respect of Production, Installed Capacity, Export, Import and Net Export/Net Import relating to various groups under Major Chemicals and Major Petrochemicals along with compound annual growth rate (CAGR) during the period from 2013-14 to 2017-18. 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 2017-18.

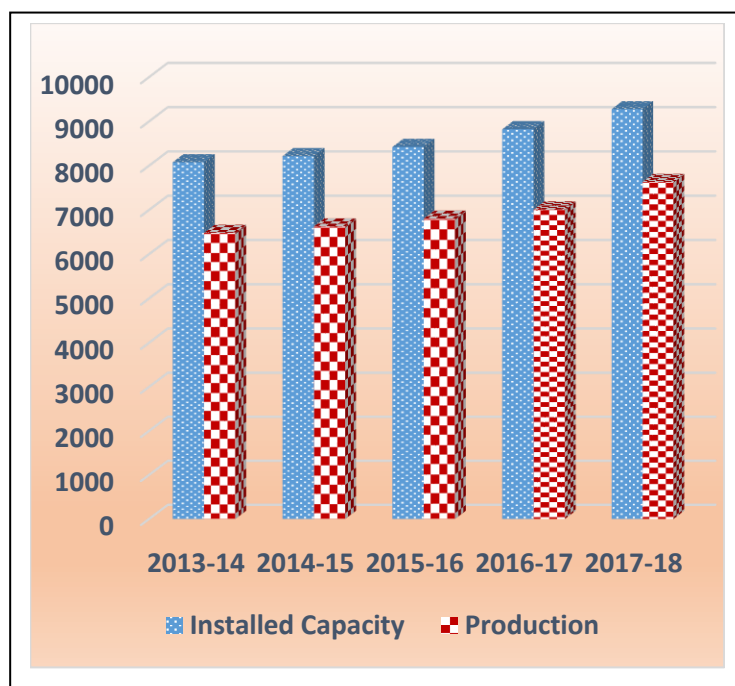
2. This Publication contains detailed tables in Appendices Section showing group-wise, product-wise, year-wise information pertaining to Selected Major Chemicals and Petrochemicals along with top five import and export destinations. The information relating to exchange rates of Indian rupees' vis-a-vis US\$, World export of Chemicals by top ten countries -2017, 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 2010-11 to 2017-18. CAGR in these tables has also been reflected over the period of 8 years.

Alkali Chemicals

Installed Capacity-Production

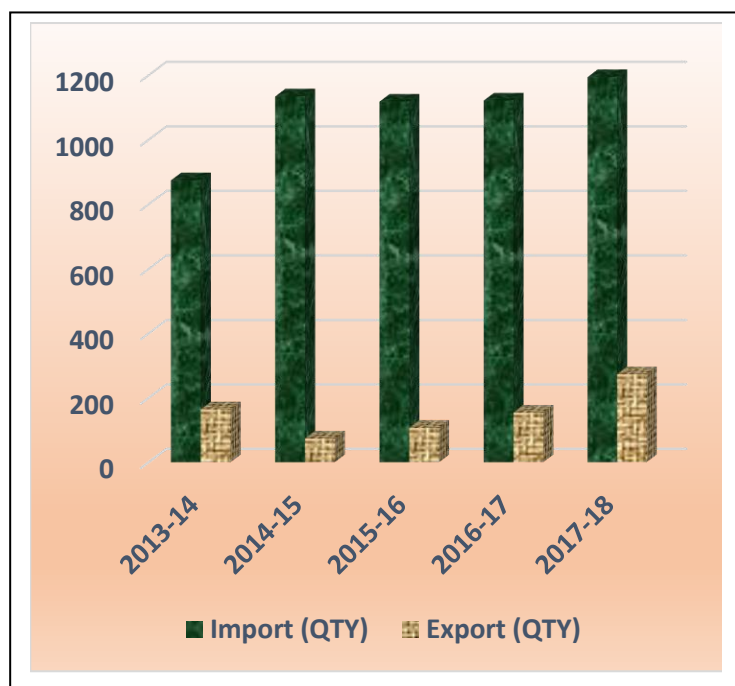
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	8075	6481
2014-15	8214	6625
2015-16	8422	6802
2016-17	8822	7009
2017-18	9274	7631
CAGR (%)	3.5	4.2



It is evident from the graph that both installed capacity and production of Alkali Chemicals has shown increasing trend during the period. 2017-18 data revealed that about 13.9% of demand for Alkali Chemicals in the country is met through Imports.

Quantity Imported-Quantity Exported

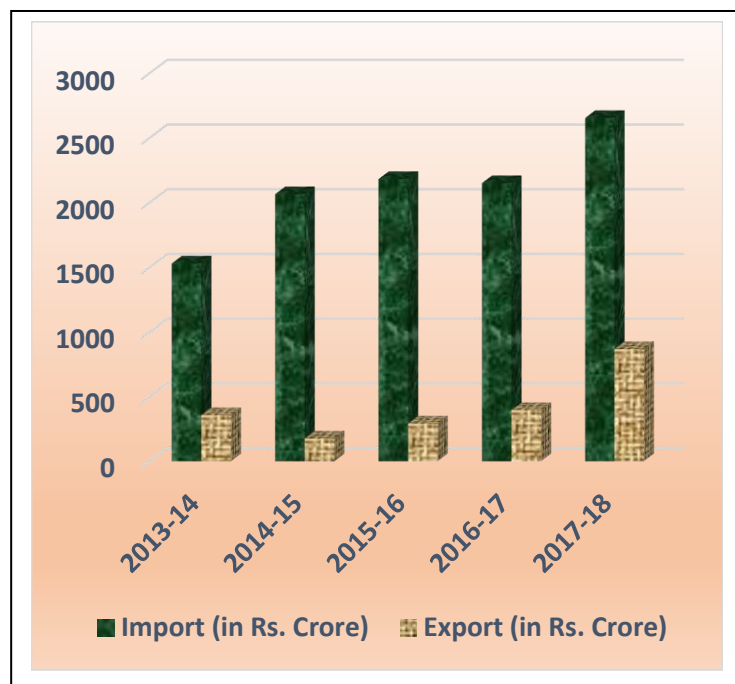
Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	874	164
2014-15	1134	74
2015-16	1118	107
2016-17	1121	154
2017-18	1194	273
CAGR (%)	8.1	13.6



Alkali Chemicals

Value of Import- Value of Export

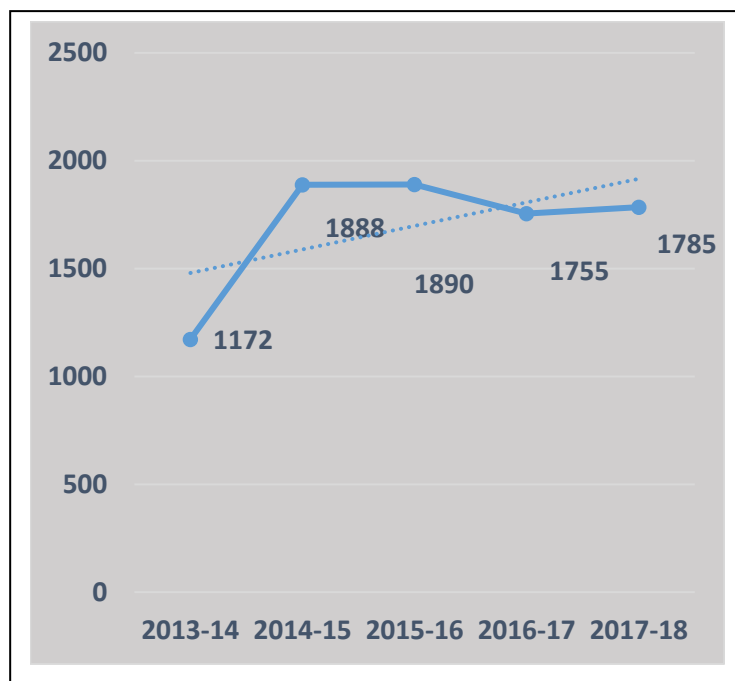
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	1530	357
2014-15	2065	177
2015-16	2182	292
2016-17	2151	396
2017-18	2653	869
CAGR (%)	14.8	24.9



Import of Alkali Chemicals in the country has increased with 14.8% CAGR during the period.

Net Import

Year	Net Import (Rs. in Crore)
2013-14	1172
2014-15	1888
2015-16	1890
2016-17	1755
2017-18	1785
CAGR (%)	11.1

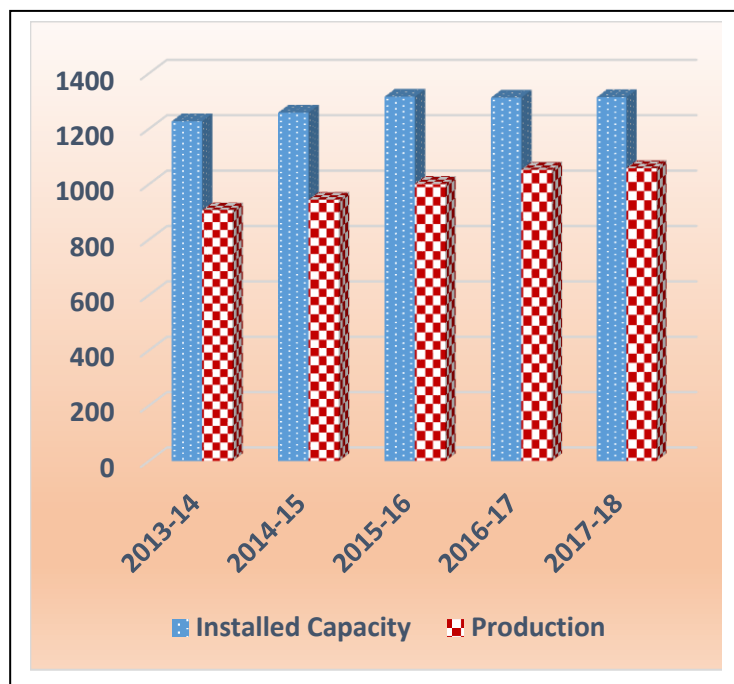


India is net importer of Alkali Chemicals but it has shown in general a declining trend since 2016-17.

Inorganic Chemicals

Installed Capacity-Production

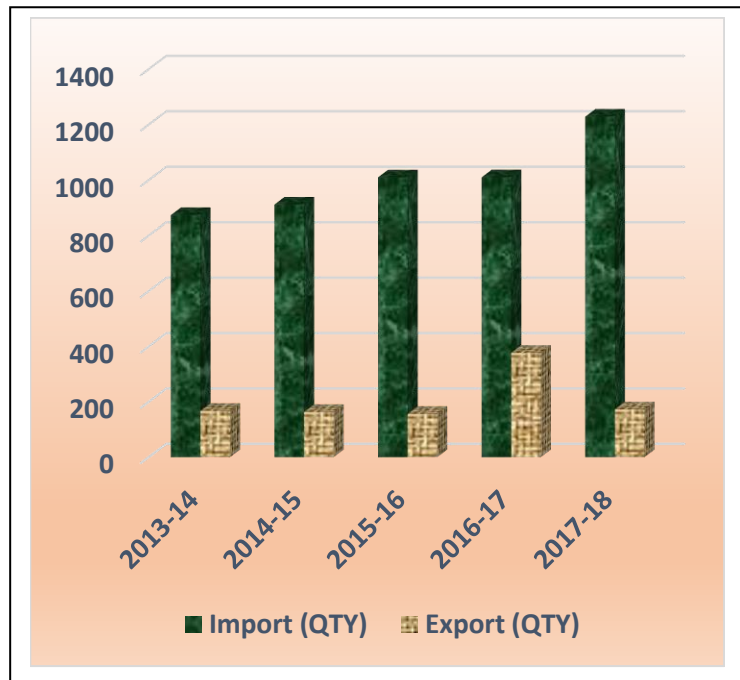
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	1228	906
2014-15	1259	944
2015-16	1316	1002
2016-17	1313	1053
2017-18	1315	1058
CAGR (%)	1.7	4.0



It is seen from the graph that production of Inorganic Chemicals during the period has increased with a CAGR of 4%.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	874	167
2014-15	912	164
2015-16	1010	157
2016-17	1010	378
2017-18	1229	173
CAGR (%)	8.9	0.8

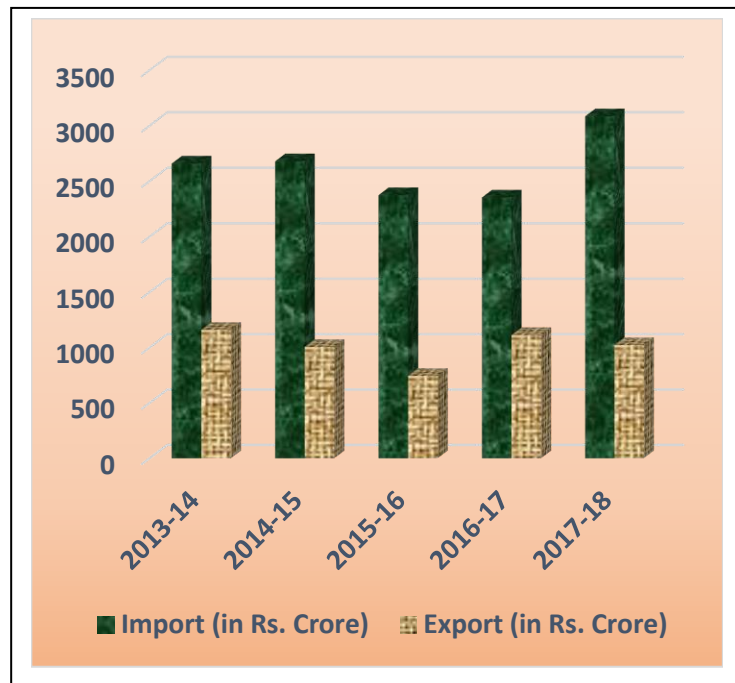


2017-18 data revealed that about 58 % of domestic demand for Inorganic Chemicals is met through imports.

Inorganic Chemicals

Value of Import- Value of Export

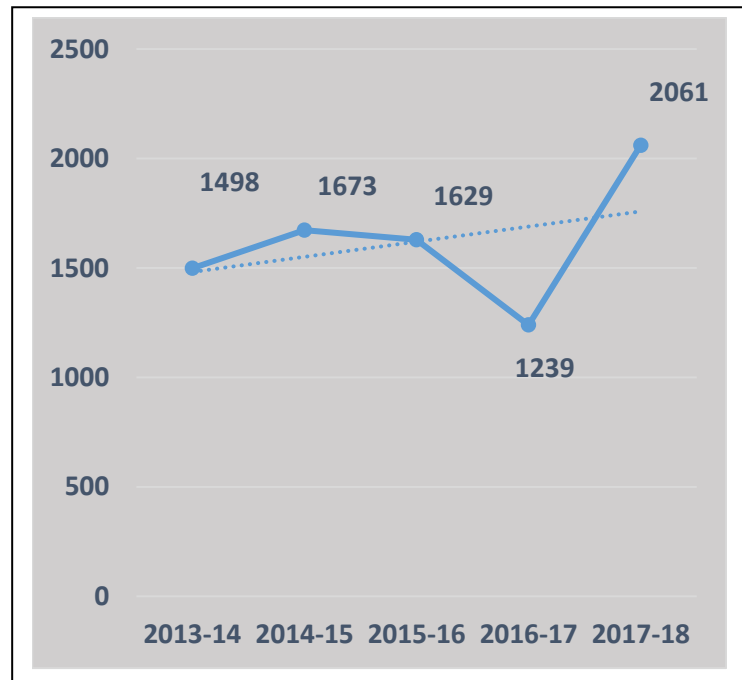
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	2658	1160
2014-15	2679	1006
2015-16	2374	745
2016-17	2352	1113
2017-18	3084	1023
CAGR (%)	3.8	-3.1



Value of Exports fluctuated between Rs 2374 crore and Rs 3084 crore while value of imports of Inorganic Chemicals fluctuated between Rs 745 crore and Rs 1160 crore during the period.

Net Import

Year	Net Import (Rs. in Crore)
2013-14	1498
2014-15	1673
2015-16	1629
2016-17	1239
2017-18	2061
CAGR (%)	8.3

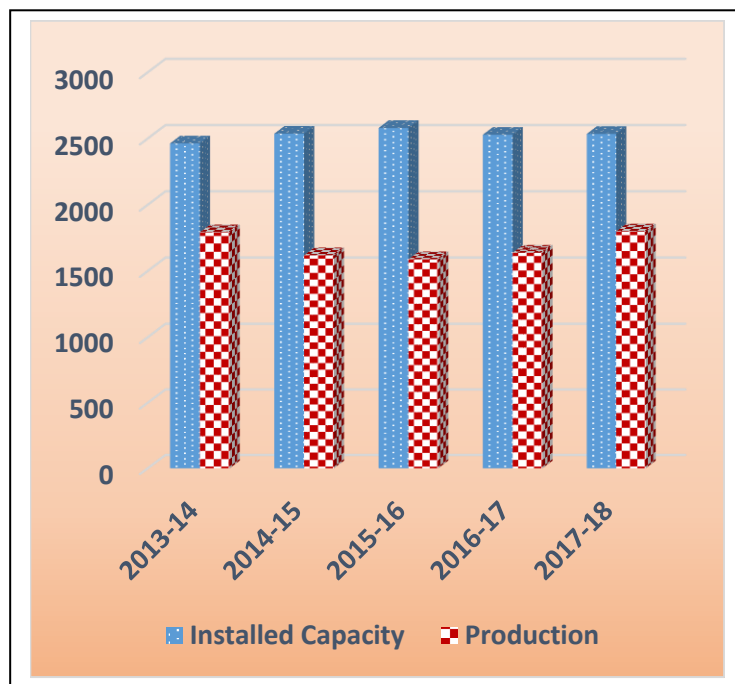


Country is net importer of Inorganic Chemicals and Net Import has fluctuated between Rs 1239 crores and Rs 2061 crore during the period 2013-14 to 2017-18.

Organic Chemicals

Installed Capacity-Production

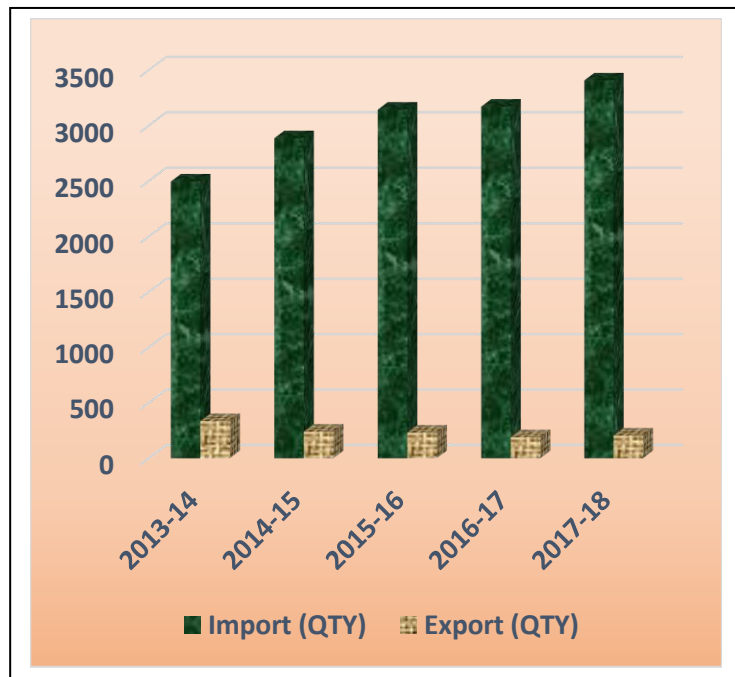
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	2463	1792
2014-15	2537	1619
2015-16	2580	1589
2016-17	2529	1638
2017-18	2535	1799
CAGR (%)	0.7	0.1



About 30% of installed capacity for Organic Chemicals remained unutilized. Production of Organic Chemicals during the year 2017-18 is 1799 in thousand MT as against installed capacity of 2535 in thousand MT. It is evident from the graph that installed capacity has shown in general an increasing trend while production has fluctuated between 1589 thousand MT and 1799 thousand MT during the period.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	2496	335
2014-15	2886	241
2015-16	3143	232
2016-17	3170	190
2017-18	3407	205
CAGR (%)	8.1	-11.6

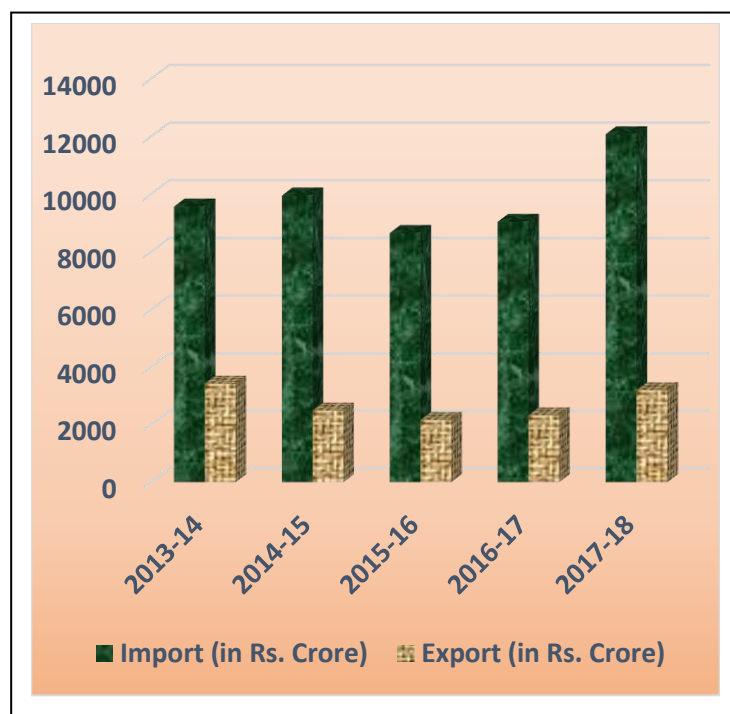


2017-18 data reveals that 68% of domestic demand of organic chemicals in the country is met through import and import has steadily increased during the period with 8.1% CAGR.

Organic Chemicals

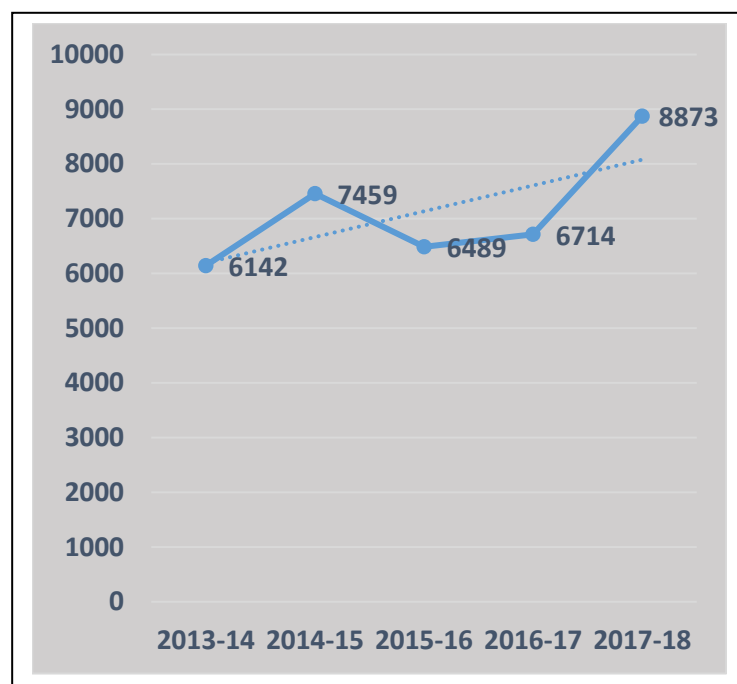
Value of Import- Value of Export

Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	9572	3431
2014-15	9954	2495
2015-16	8657	2168
2016-17	9044	2329
2017-18	12077	3205
CAGR (%)	6.0	-1.7



Net Import

Year	Net Import (Rs. in Crore)
2013-14	6142
2014-15	7459
2015-16	6489
2016-17	6714
2017-18	8873
CAGR (%)	9.6

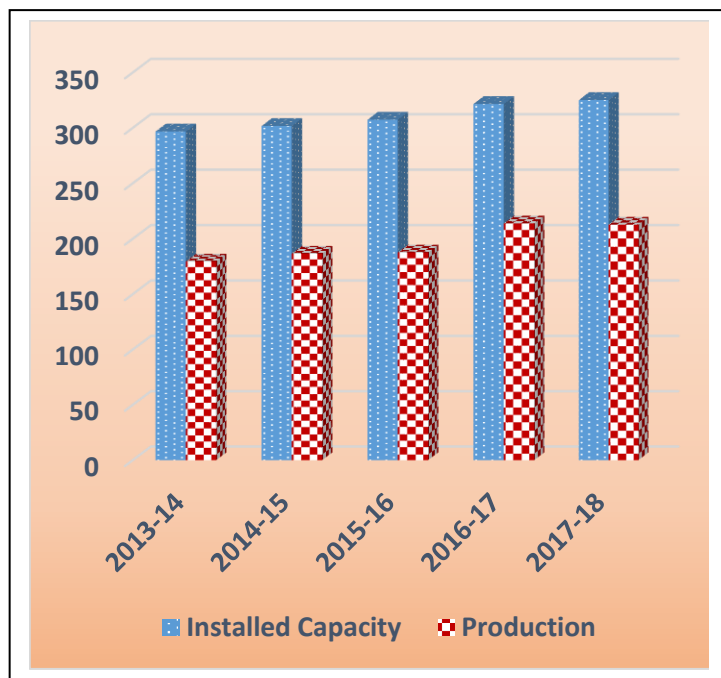


Country is a net importer of Organic Chemicals. Net import has fluctuated between Rs 6142 crore and Rs 8873 crore during the period.

Pesticides

Installed Capacity-Production (Technical Grade)

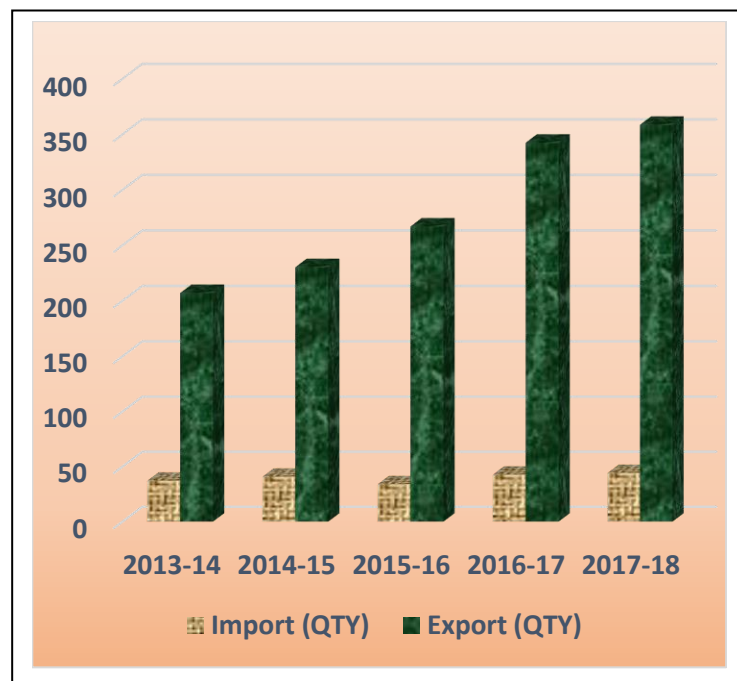
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	297	179
2014-15	302	186
2015-16	307	188
2016-17	322	214
2017-18	325	213
CAGR (%)	2.3	4.4



About 35% of Installed Capacity of Pesticides (Technical Grade) remained unutilized during 2017-18 in the country. It is evident from the graph that both installed capacity and production of Pesticides (Technical Grade) has maintained increasing trend during the period except for the year 2017-18.

Quantity Imported-Quantity Exported (Technical Grades & Formulations)

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	37	207
2014-15	41	230
2015-16	34	267
2016-17	43	342
2017-18	44	358
CAGR (%)	4.4	14.7

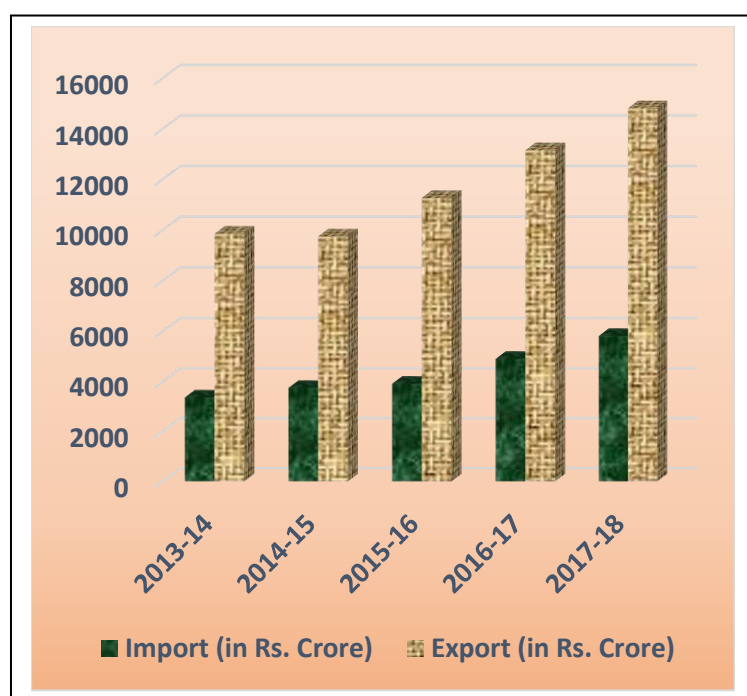


Export of Pesticides (Technical and formulations both) has increased with a CAGR of 14.7% during the period.

Pesticides

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

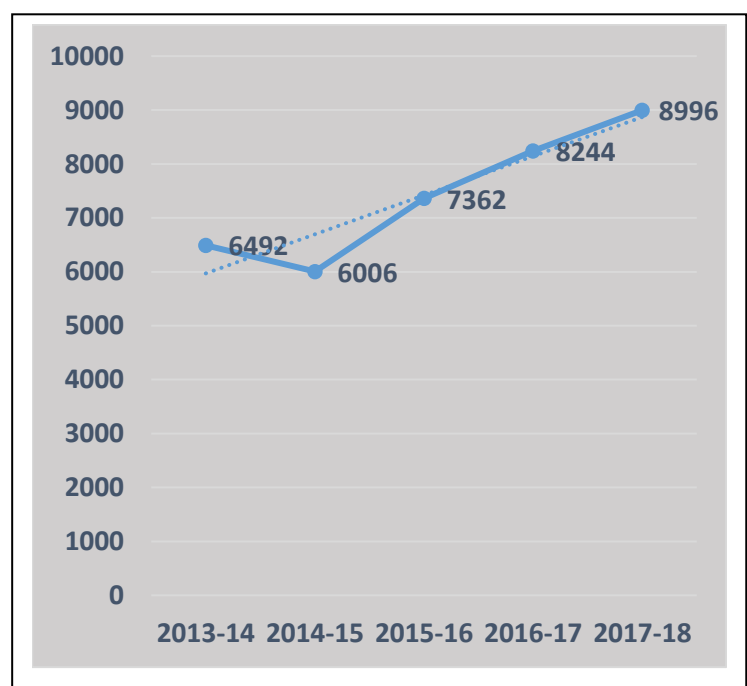
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	3360	9852
2014-15	3741	9747
2015-16	3907	11269
2016-17	4906	13150
2017-18	5814	14810
CAGR (%)	14.7	10.7



During the period value of Export of Pesticides (Technical and formulations both) is very high compared to Import but both have maintained increasing trend.

Net Export (Technical Grades & Formulations)

Year	Net Export (Rs. in Crore)
2013-14	6492
2014-15	6006
2015-16	7362
2016-17	8244
2017-18	8996
CAGR (%)	8.5

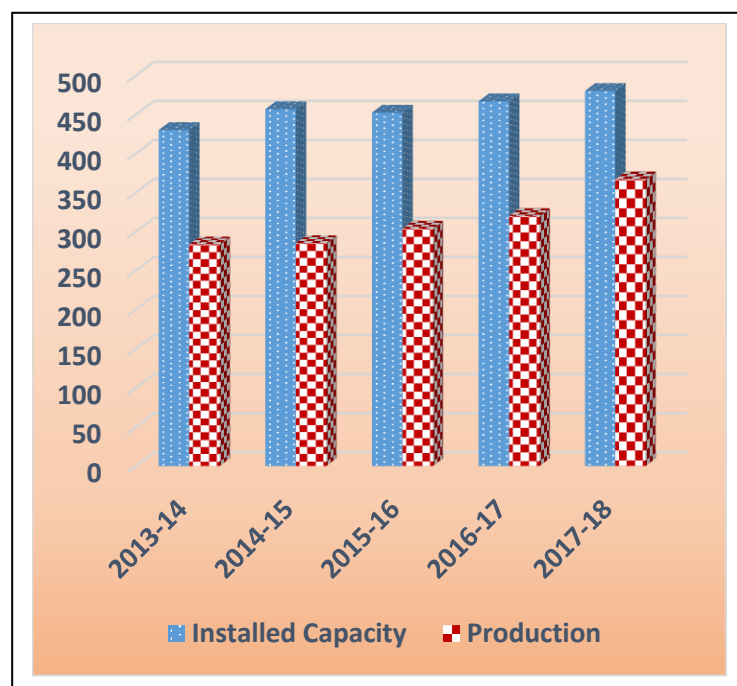


India is a net exporter of Pesticides both for Technical and formulations and it is increasing with CAGR of 8.5% since 2014-15.

Dyes and Pigments

Installed Capacity-Production

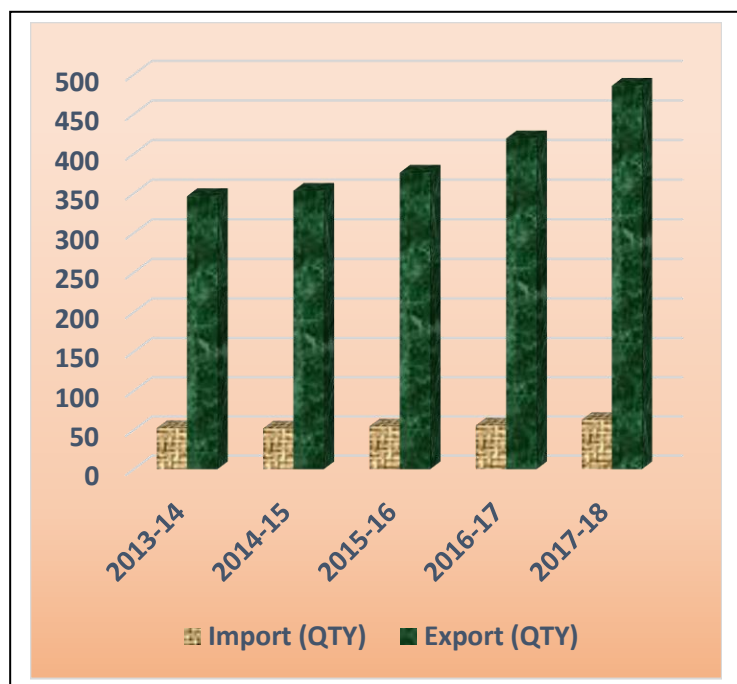
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	430	284
2014-15	457	285
2015-16	452	304
2016-17	467	320
2017-18	480	367
CAGR (%)	2.8	6.7



Installed capacity utilization in case of Dyes and Pigments was 66% in the year 2013-14 which has improved to 76% in the year 2017-18.

Quantity Imported-Quantity Exported

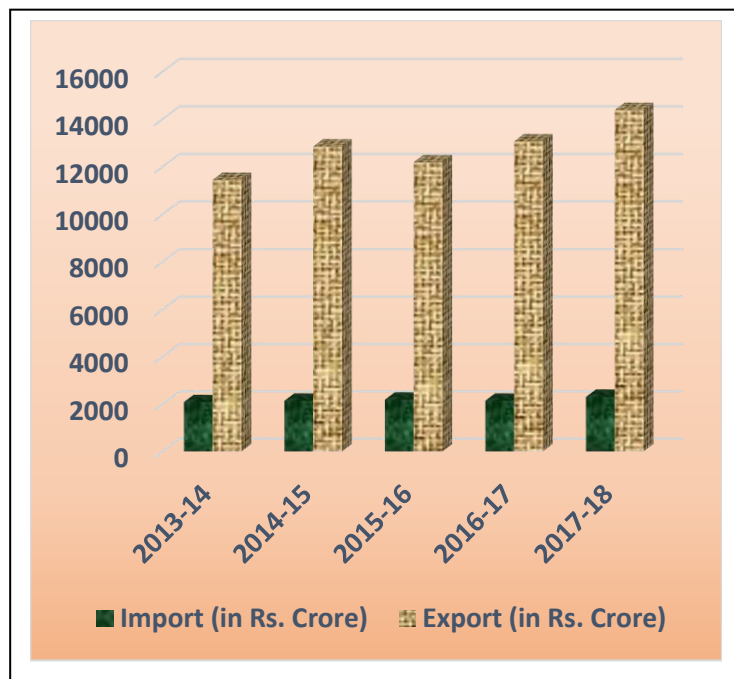
Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	52	347
2014-15	52	353
2015-16	55	376
2016-17	56	419
2017-18	63	486
CAGR (%)	4.7	8.8



Dyes and Pigments

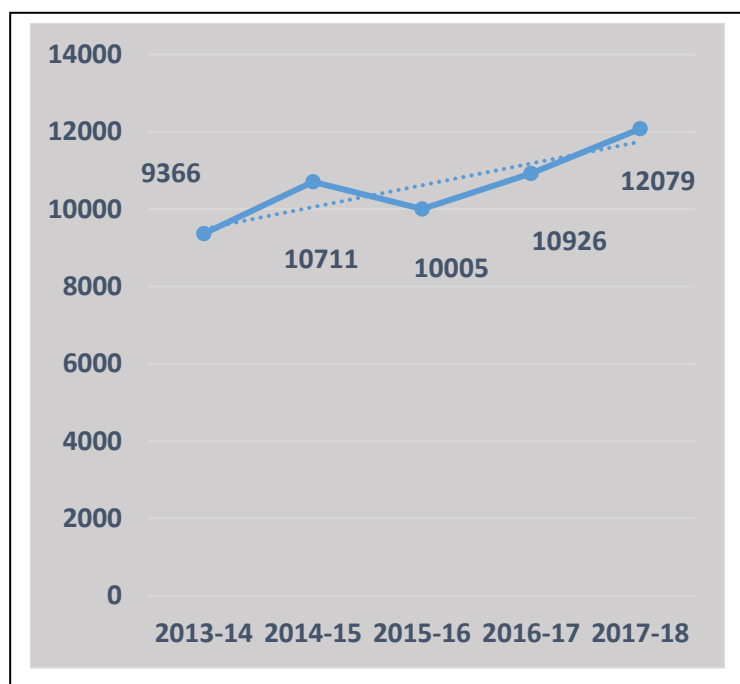
Value of Import- Value of Export

Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	2090	11456
2014-15	2147	12858
2015-16	2193	12198
2016-17	2149	13075
2017-18	2314	14393
CAGR (%)	2.6	5.9



Net Export

Year	Net Export (Rs. in Crore)
2013-14	9366
2014-15	10711
2015-16	10005
2016-17	10926
2017-18	12079
CAGR (%)	6.6

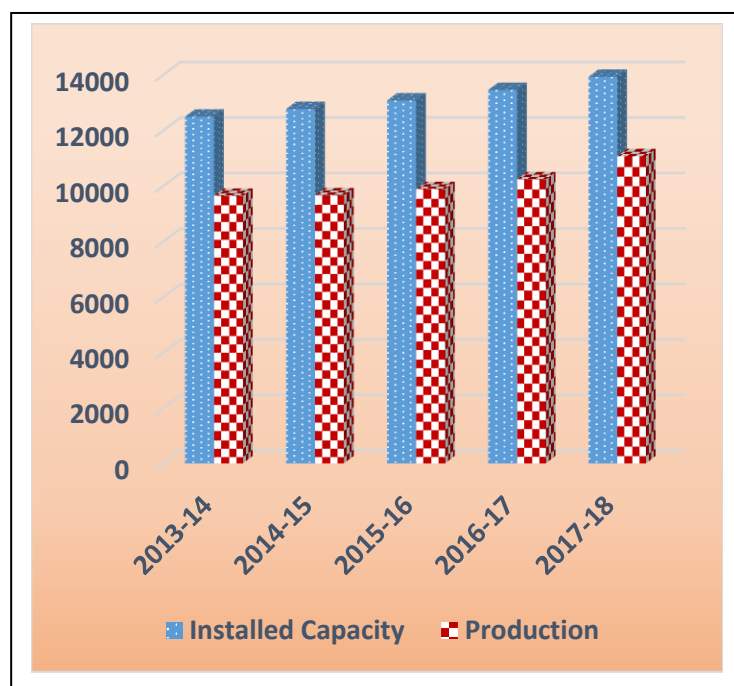


In case of Dyes and Pigments, there is a net export of Rs. 12079 crore during the year 2017-18. Net Export in case of Dyes & Pigments has increased with a CAGR of 6.6% during the trend.

Total Major Chemicals

Installed Capacity-Production

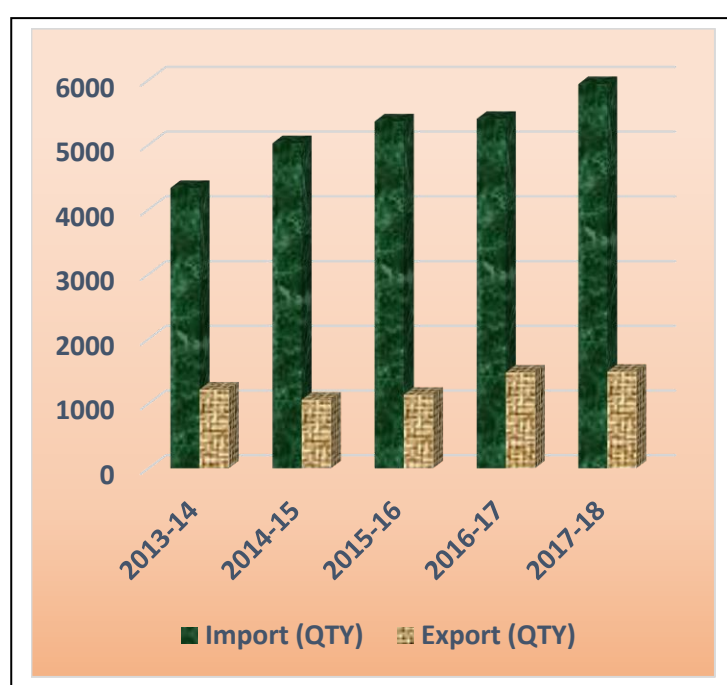
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	12493	9643
2014-15	12768	9660
2015-16	13078	9884
2016-17	13452	10234
2017-18	13929	11068
CAGR (%)	2.8	3.5



Production of Total Major Chemicals during the year 2017-18 is 11068 in thousand MT and it has grown during the period with a CAGR of 3.5%.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	4333	1221
2014-15	5025	1061
2015-16	5360	1138
2016-17	5400	1484
2017-18	5937	1496
CAGR (%)	8.2	5.2

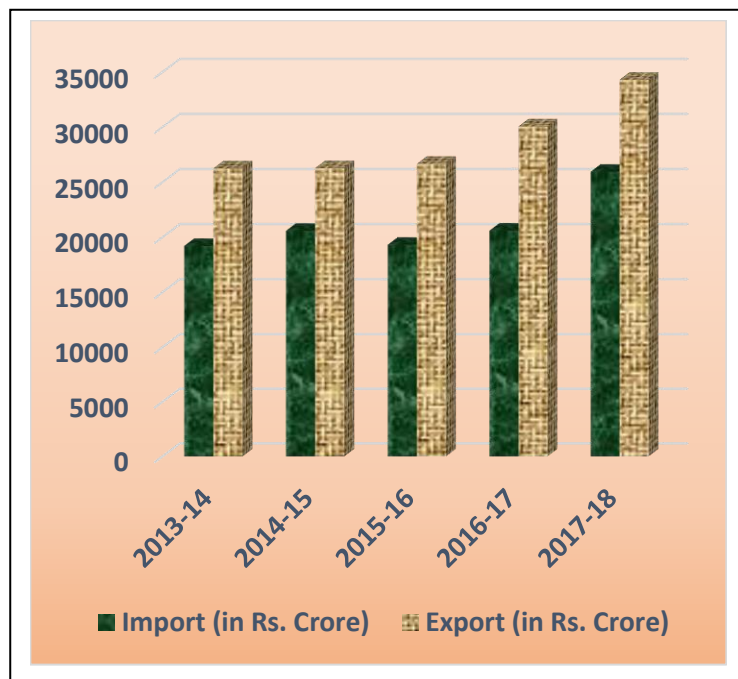


Import in quantity terms have maintained increasing trend during the period, while Export in quantity terms have shown increasing trend since 2014-15.

Total Major Chemicals

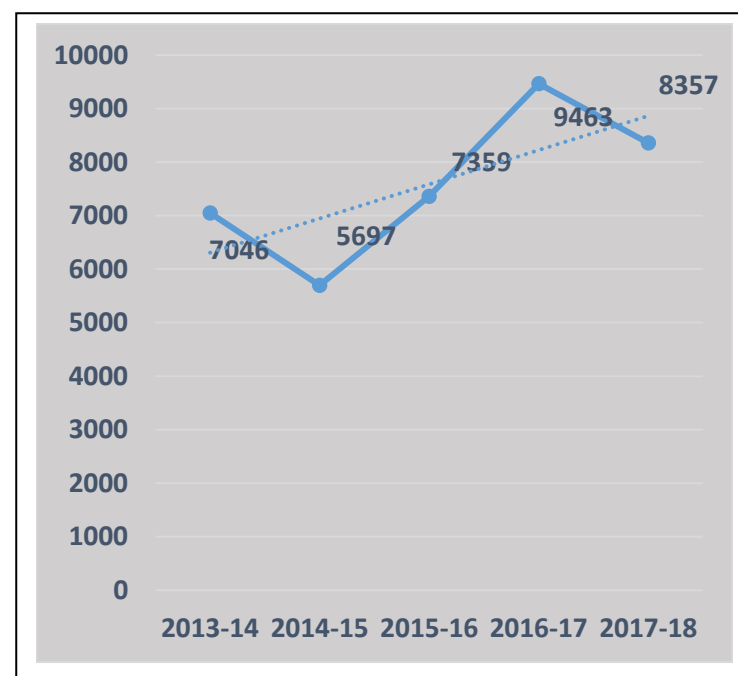
Value of Import- Value of Export

Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	19210	26256
2014-15	20585	26282
2015-16	19313	26671
2016-17	20601	30064
2017-18	25942	34300
CAGR (%)	7.8	6.9



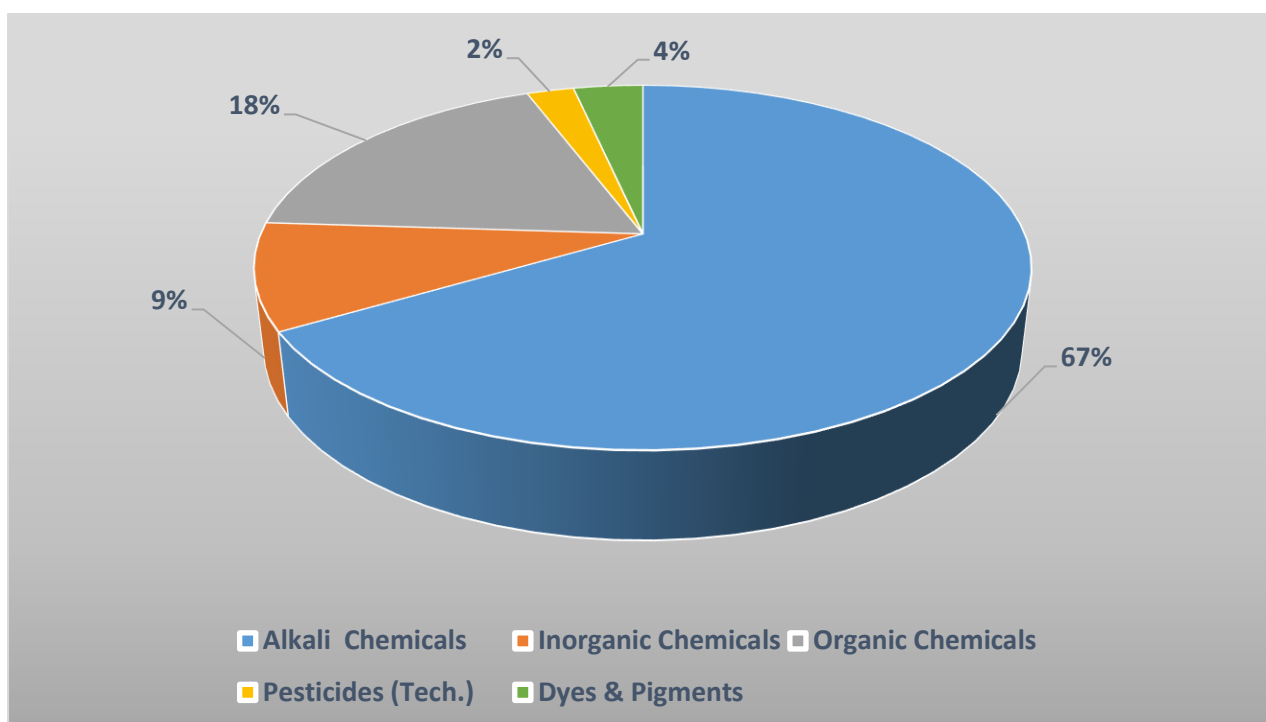
Net Export

Year	Net Export (Rs. in Crore)
2013-14	7046
2014-15	5697
2015-16	7359
2016-17	9463
2017-18	8357
CAGR (%)	4.4

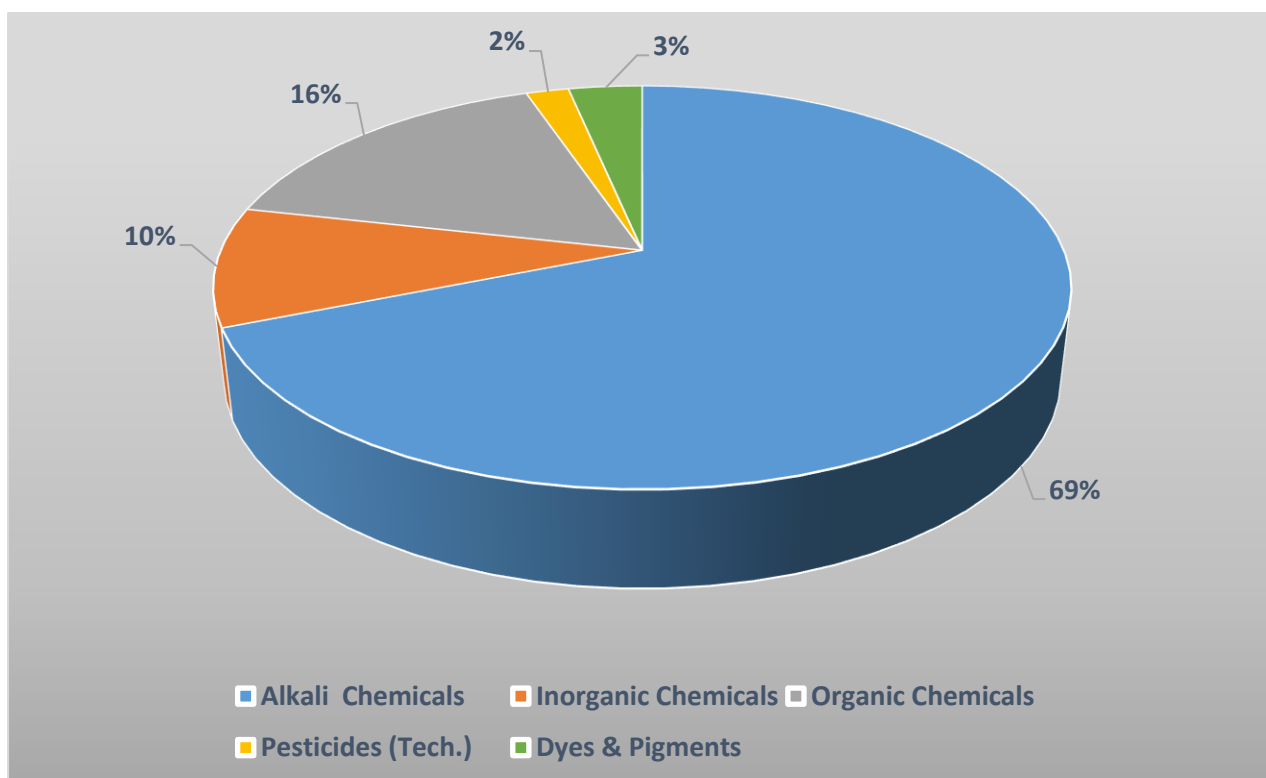


India is a net exporter of Major Chemicals in value terms. For Major Chemicals, there is net export of Rs 8375 crore during 2017-18 and it has shown, in general an increasing trend with slight dip observed in 2014-15 & 2017-18.

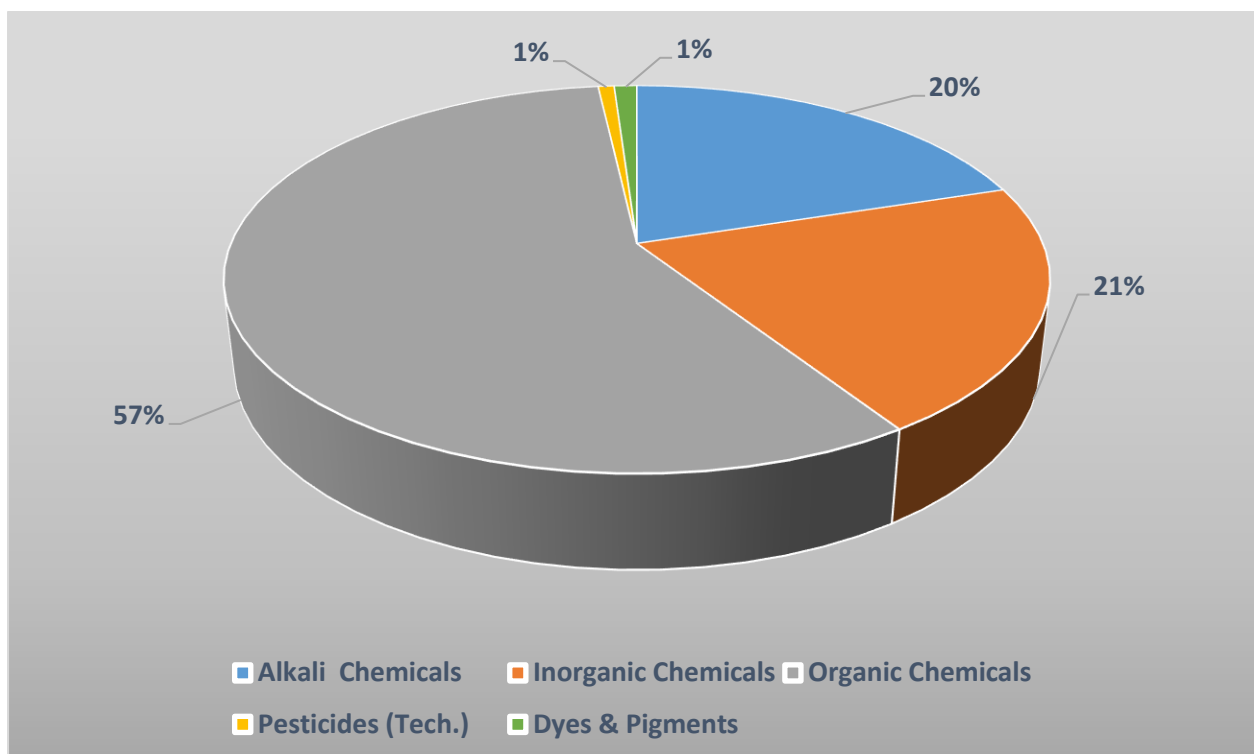
Share of Installed Capacity of Major Chemical Groups during year 2017-18



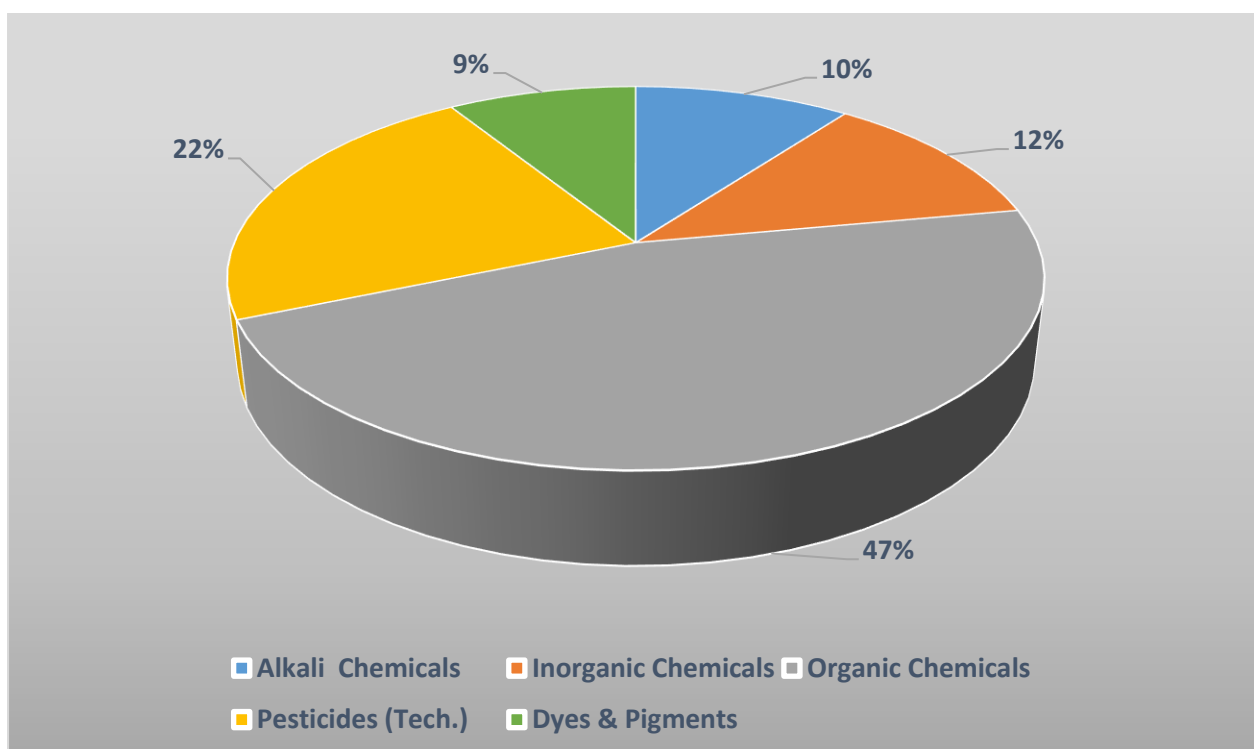
Share of Production of Major Chemical Groups during year 2017-18



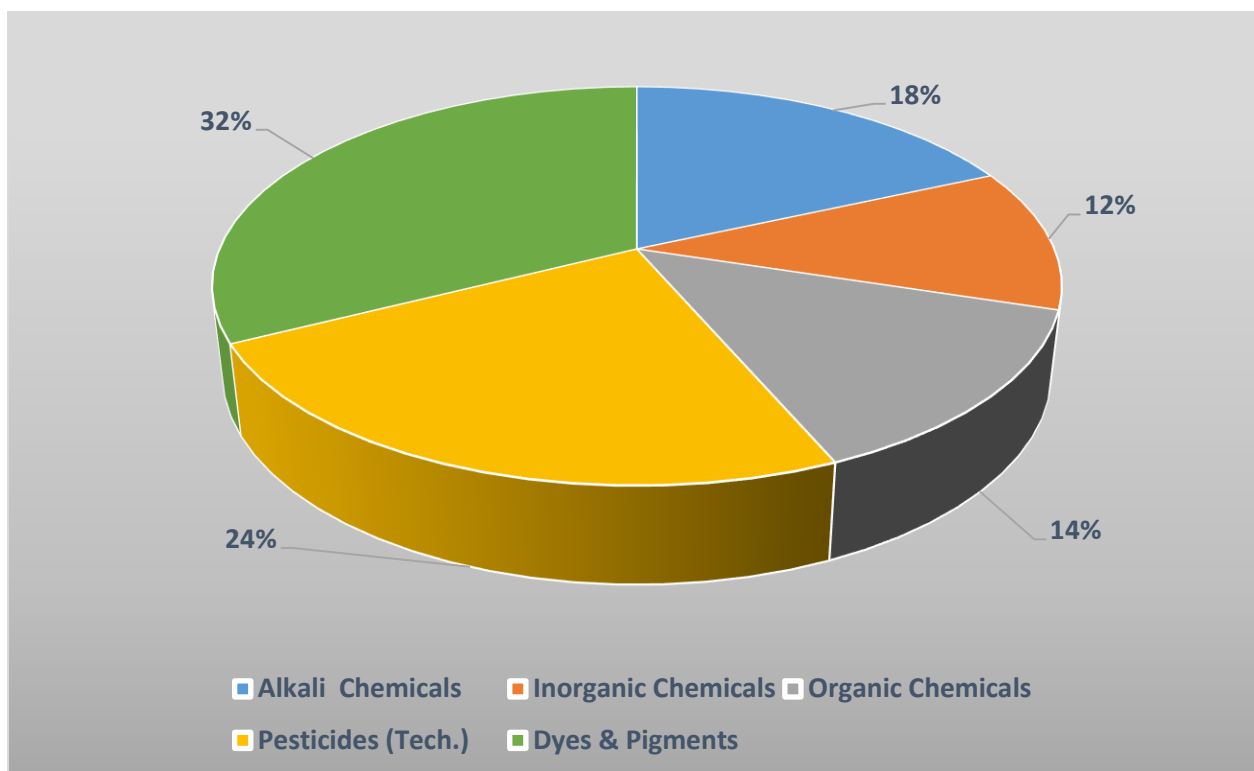
Share of groups under total Import (Qty.) of Major Chemicals during 2017-18



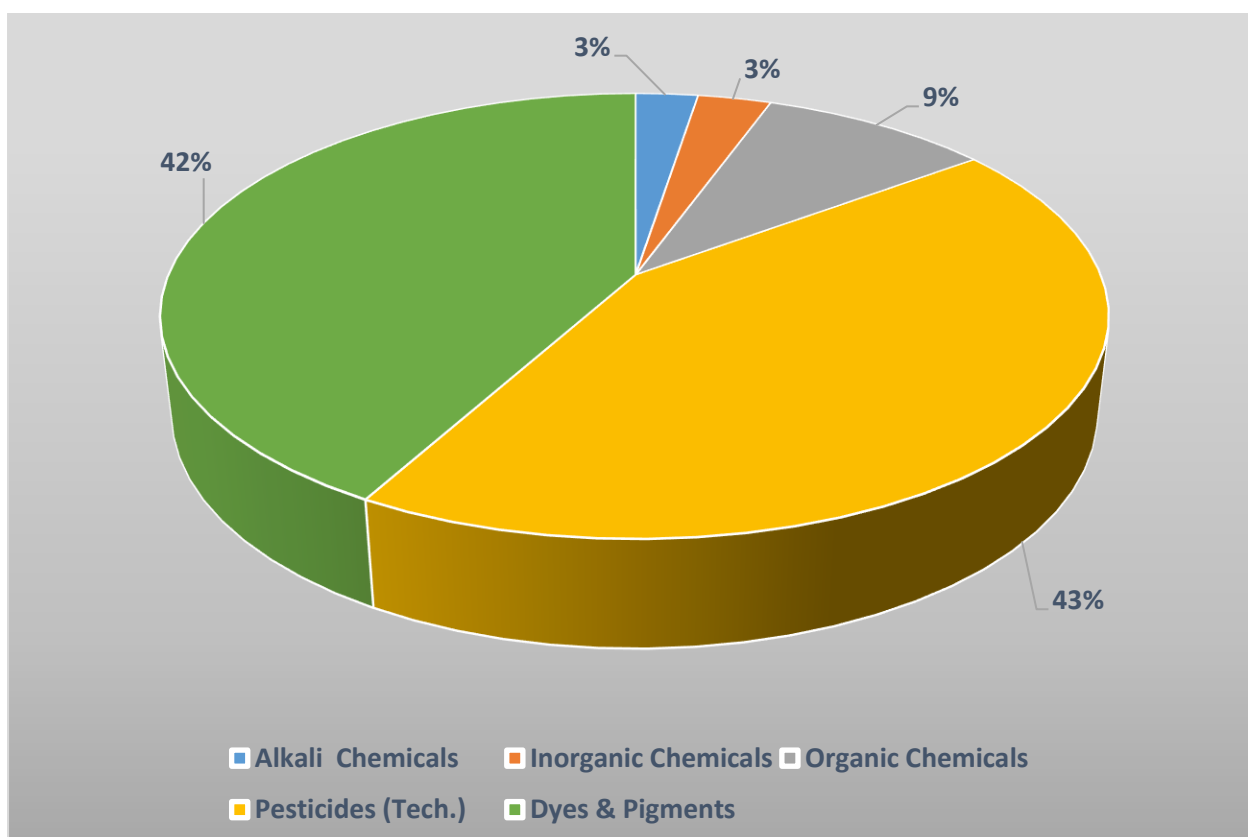
Share of groups under total Import (Value) of Major Chemicals during 2017-18



Share of groups under total Export (Qty.) of Major Chemicals during 2017-18



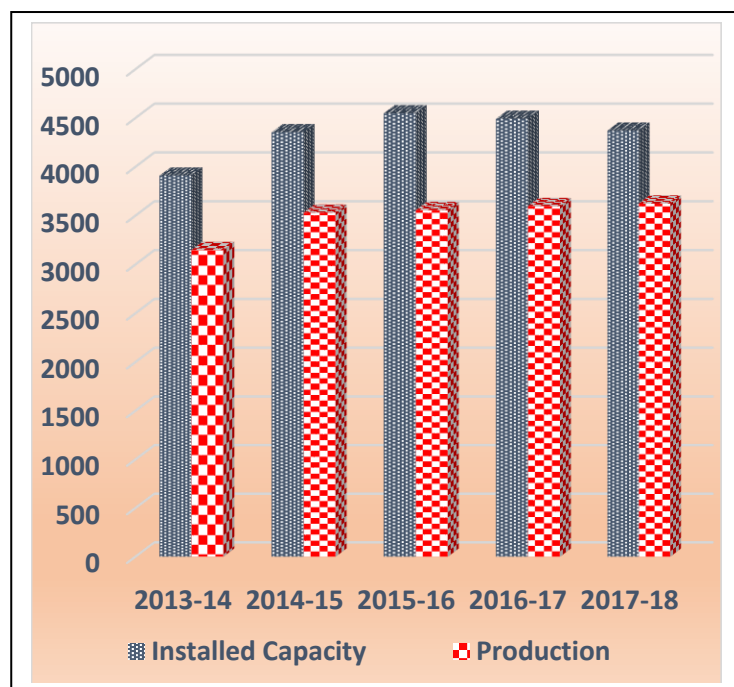
Share of groups under total Export (Value) of Major Chemicals during 2017-18



Synthetic Fibres/Yarn

Installed Capacity-Production

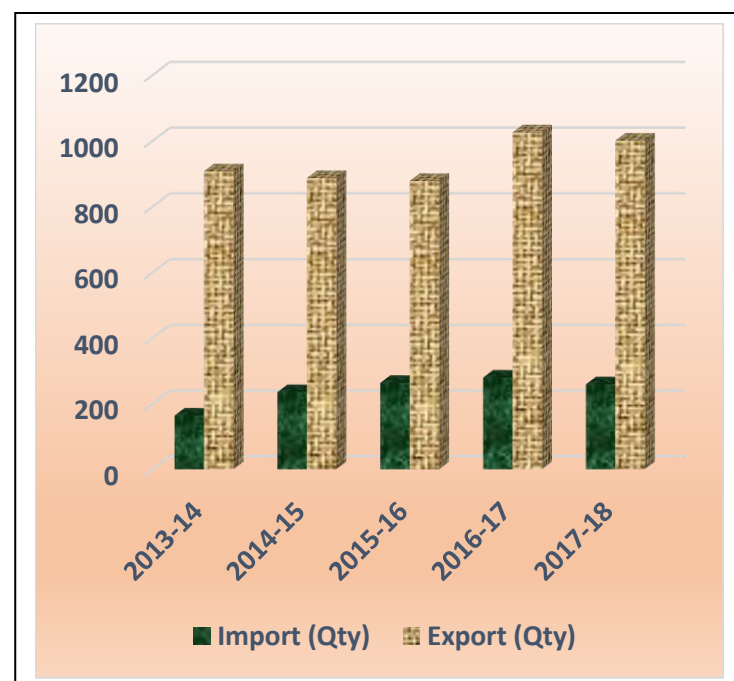
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	3911	3149
2014-15	4355	3532
2015-16	4549	3558
2016-17	4493	3599
2017-18	4371	3625
CAGR (%)	2.8	3.6



Both production of Synthetic Fibres/Yarn and its INSTALLED CAPACITY has increased during the period with CAGR of 3.6% and 2.8% respectively.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	164	908
2014-15	236	887
2015-16	264	878
2016-17	280	1026
2017-18	260	1001
CAGR (%)	12.1	2.5

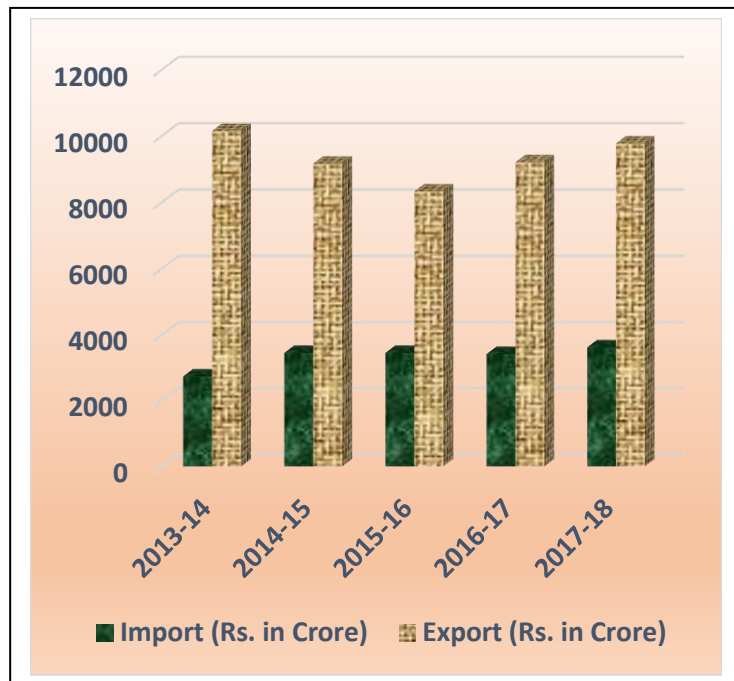


During the period Export of Synthetic Fibre/Yarn is very high compared to its Import. It is evident from the graph that about 28% of the production of Synthetic Fibre /Yarn is exported from the country in the year 2017-18.

Synthetic Fibres/Yarn

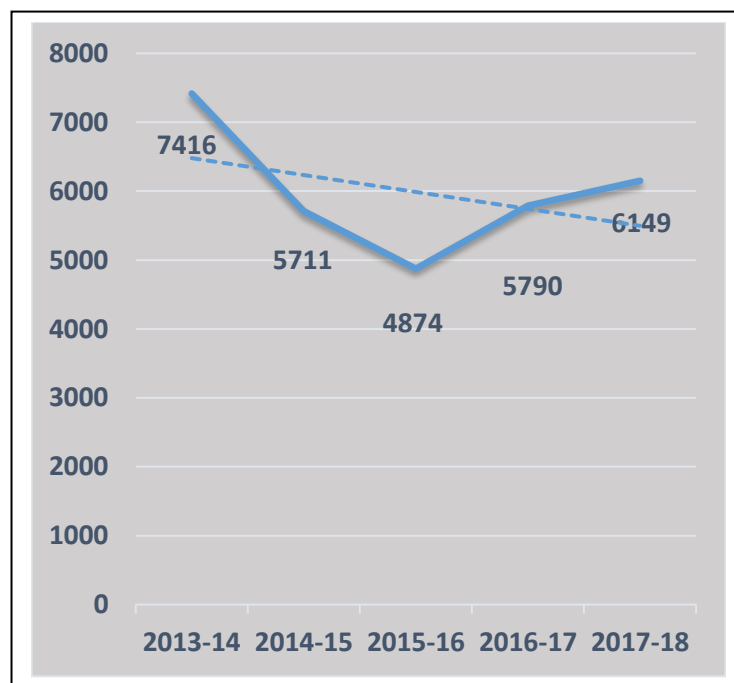
Value of Import- Value of Export

Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	2743	10159
2014-15	3462	9173
2015-16	3464	8338
2016-17	3430	9220
2017-18	3631	9780
CAGR (%)	7.3	-0.9



Net Export

Year	Net Export (Rs. in Crore)
2013-14	7416
2014-15	5711
2015-16	4874
2016-17	5790
2017-18	6149
CAGR (%)	-4.6

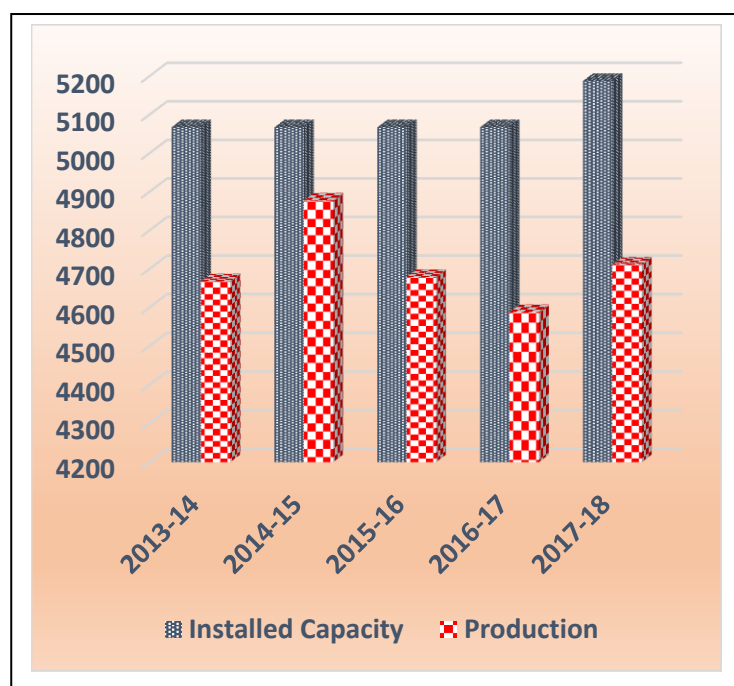


India is a net exporter of Synthetic Fibres/Yarn and in the year 2017-18 its Net Export was to the tune of Rs 6149 crore. It is evident from the graph that during the period, Net Export of Synthetic Fibres/Yarn has shown a declining trend till 2015-16 and then has started increasing thereafter.

Fibre Intermediates

Installed Capacity-Production

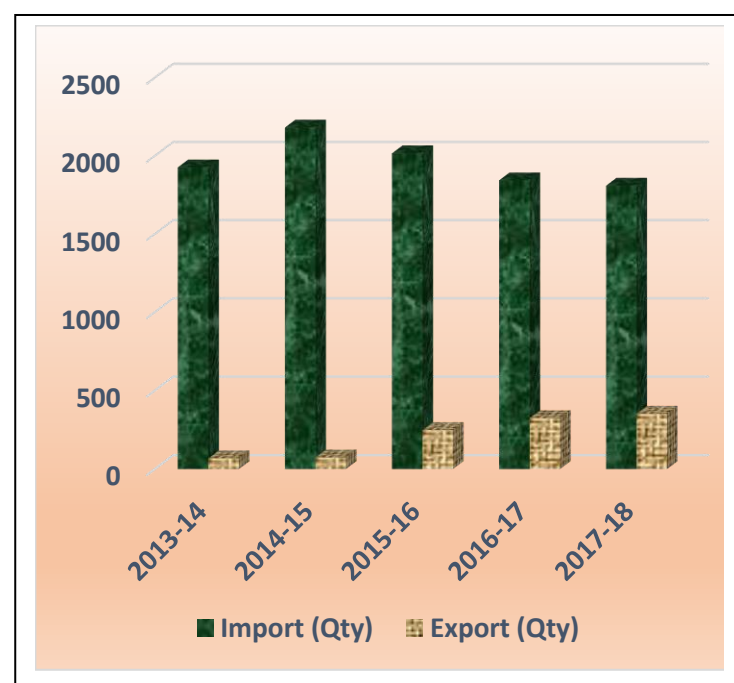
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	5067	4668
2014-15	5067	4877
2015-16	5067	4679
2016-17	5067	4588
2017-18	5187	4711
CAGR (%)	0.6	0.2



It is evident from the graph that production of Fibre Intermediates during the period has fluctuated between 4588 thousand MT and 4711 thousand MT.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	1925	68
2014-15	2180	73
2015-16	2015	248
2016-17	1842	323
2017-18	1808	351
CAGR (%)	-1.6	50.8

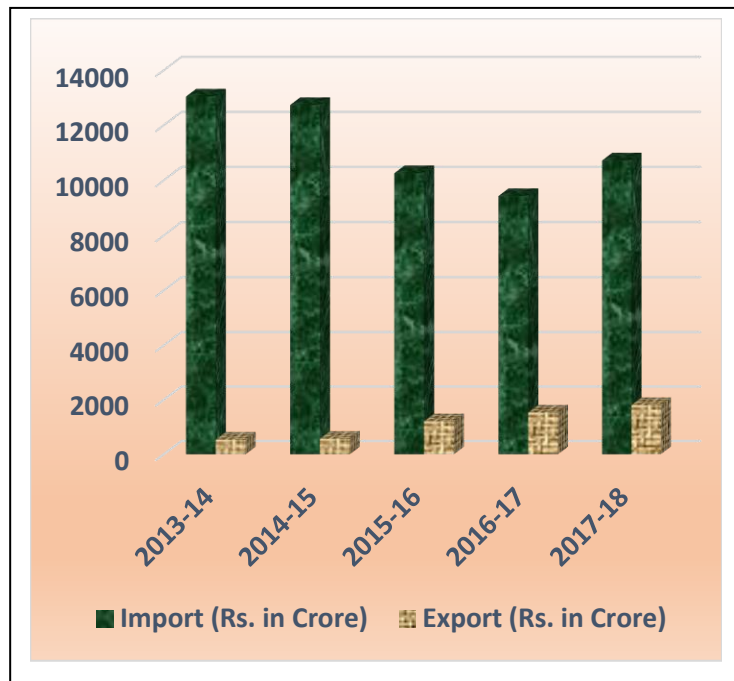


During 2017-18, about 29% of domestic demand for Fibre Intermediates is met through its import.

Fibre Intermediates

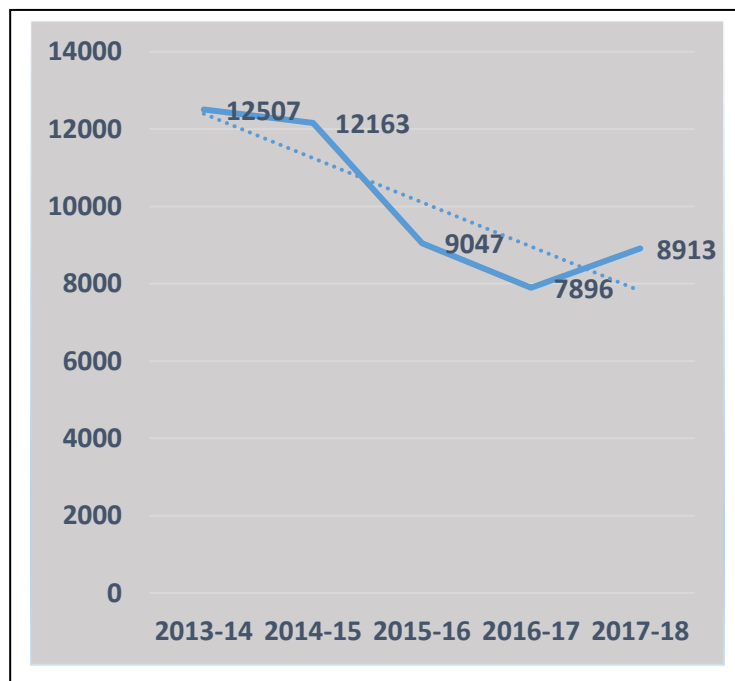
Value of Import- Value of Export

Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	13047	540
2014-15	12737	573
2015-16	10261	1214
2016-17	9431	1536
2017-18	10723	1811
CAGR (%)	-4.8	35.3



Net Import

Year	Net Import (Rs. in Crore)
2013-14	12507
2014-15	12163
2015-16	9047
2016-17	7896
2017-18	8913
CAGR (%)	-8.1

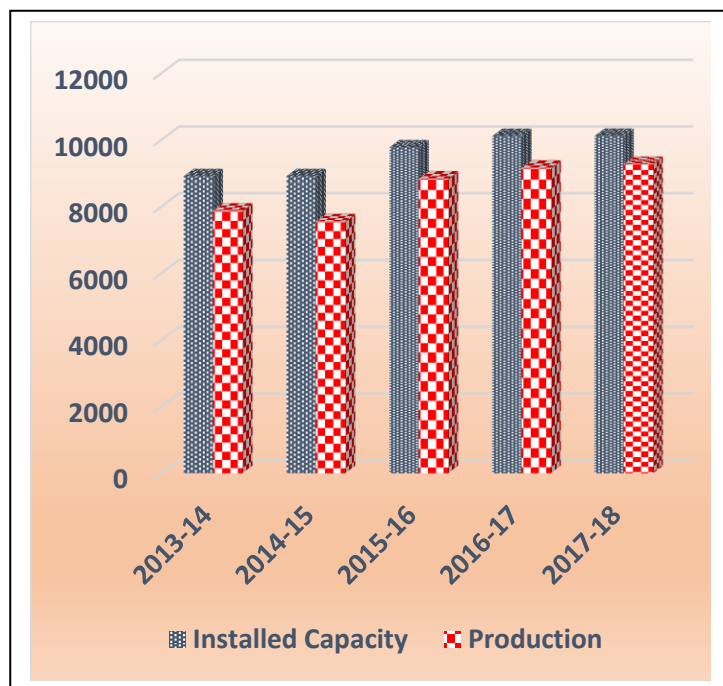


India is a net importer of Fibre Intermediates. There was a net import of Rs 8913 crore in the year 2017-18. It is seen from the graph that Net Import of Fibre Intermediates during the period has shown decreasing trend till 2016-17 and then started rising thereafter.

Polymers

Installed Capacity-Production

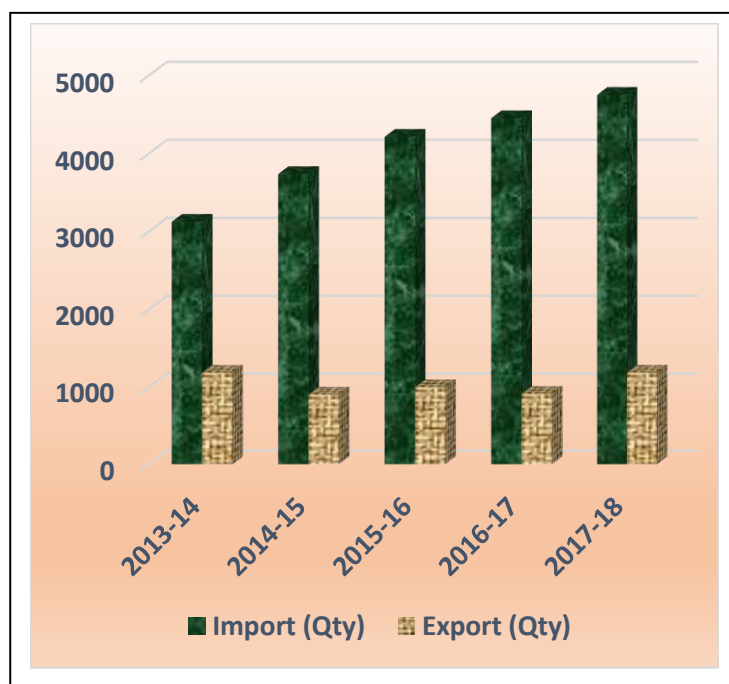
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	8905	7876
2014-15	8905	7558
2015-16	9768	8839
2016-17	10110	9163
2017-18	10112	9276
CAGR (%)	3.2	4.2



It is evident from the graph that both installed capacity and production of Polymers has shown, in general, an increasing trend.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	3125	1188
2014-15	3737	903
2015-16	4214	998
2016-17	4452	912
2017-18	4751	1188
CAGR (%)	11.0	0.0

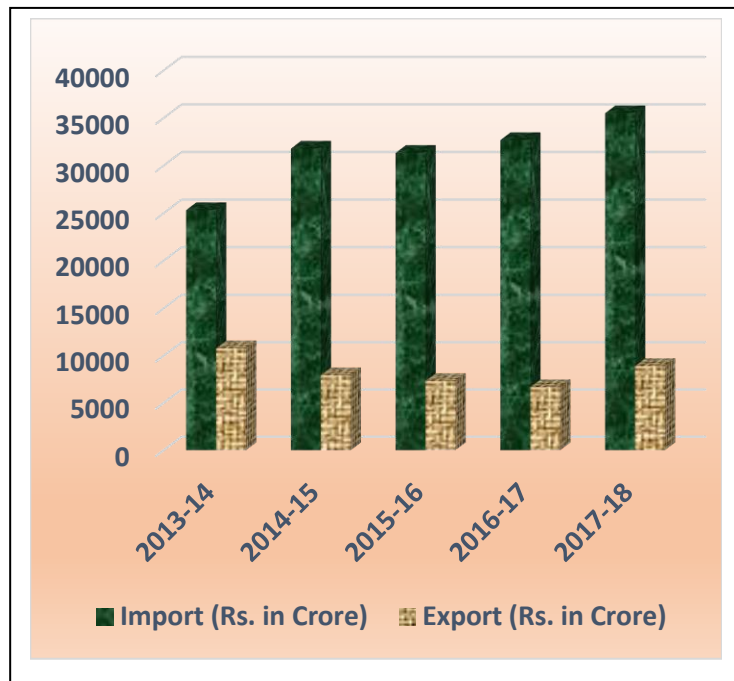


In the year 2017-18, about 37% of domestic demand of Polymers is met through import. Import of polymers has increased with a CAGR of 11% during the period.

Polymers

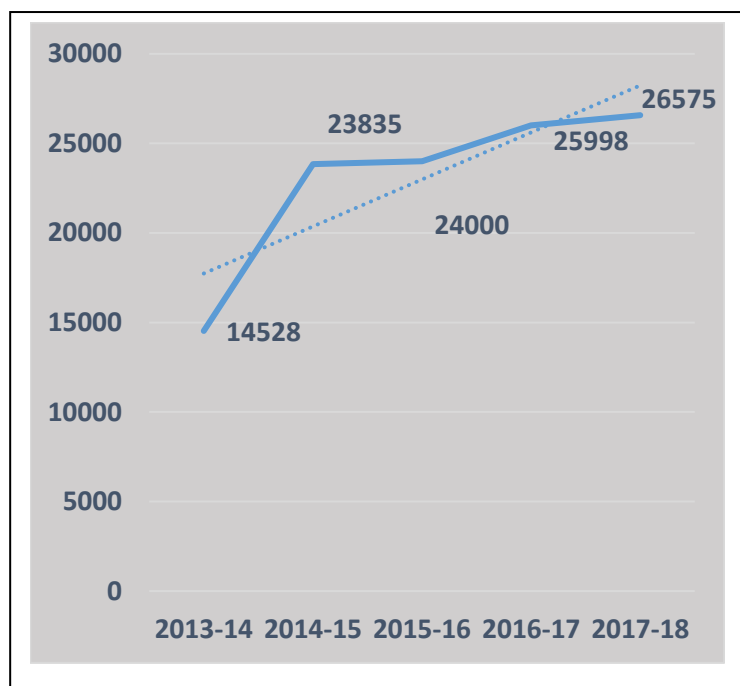
Value of Import- Value of Export

Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	25310	10783
2014-15	31771	7936
2015-16	31325	7325
2016-17	32672	6674
2017-18	35493	8918
CAGR (%)	8.8	-4.6



Net Import

Year	Net Import (Rs. in Crore)
2013-14	14528
2014-15	23835
2015-16	24000
2016-17	25998
2017-18	26575
CAGR (%)	16.3

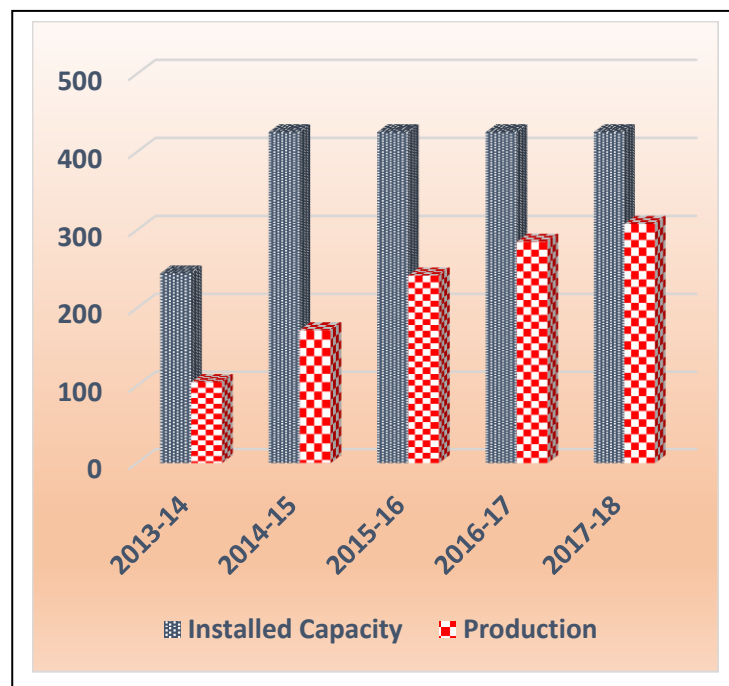


India is a Net Importer of Polymers. There is net import of Rs 26575 crore of polymers in the country during the year 2017-18. This Net Import for Polymers has shown increasing trend during the period.

Synthetic Rubber

Installed Capacity-Production

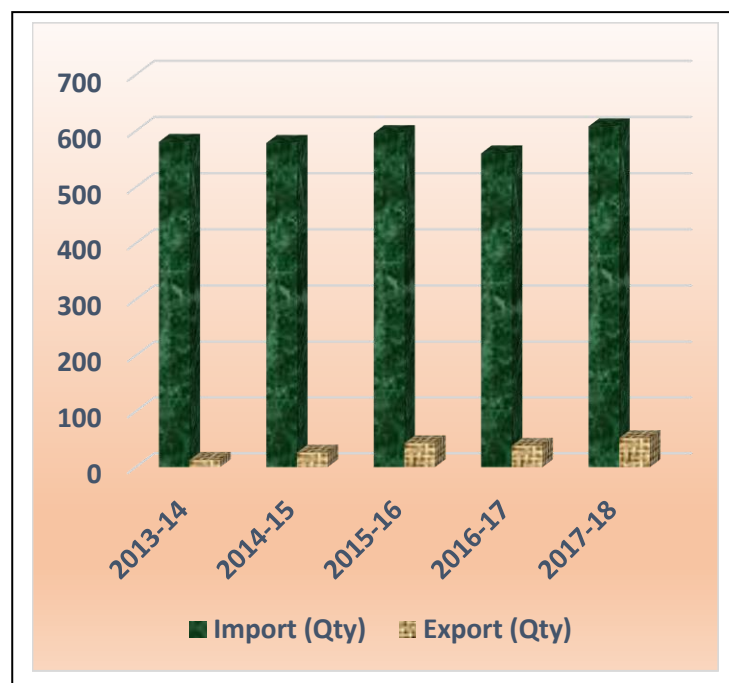
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	244	105
2014-15	425	172
2015-16	425	242
2016-17	425	285
2017-18	425	308
CAGR (%)	14.9	31.0



Production of Synthetic Rubber has maintained an increasing trend during the period, while its installed capacity remained stagnant since 2014-15.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	580	13
2014-15	578	26
2015-16	596	43
2016-17	560	38
2017-18	608	52
CAGR (%)	1.2	41.8

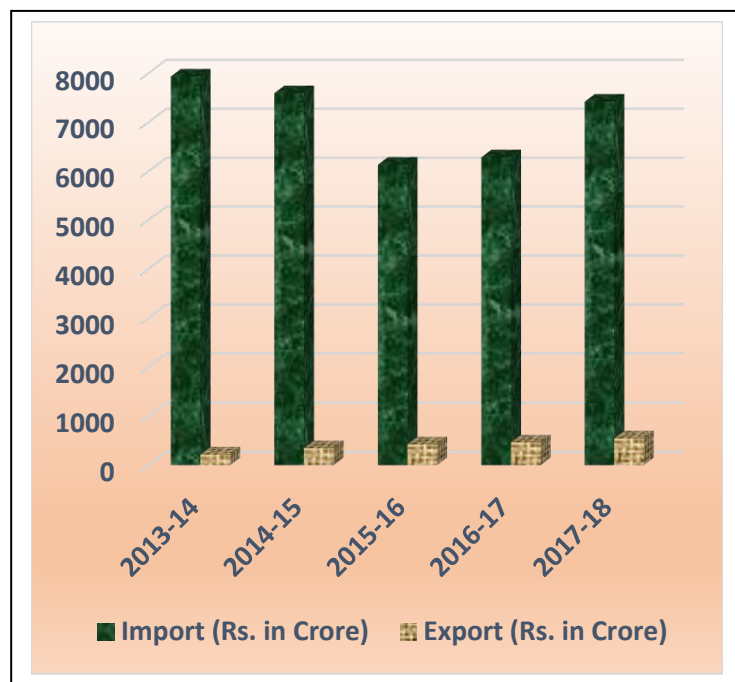


During the year 2017-18, about 70% of domestic demand for Synthetic Rubber in the country was met through import.

Synthetic Rubber

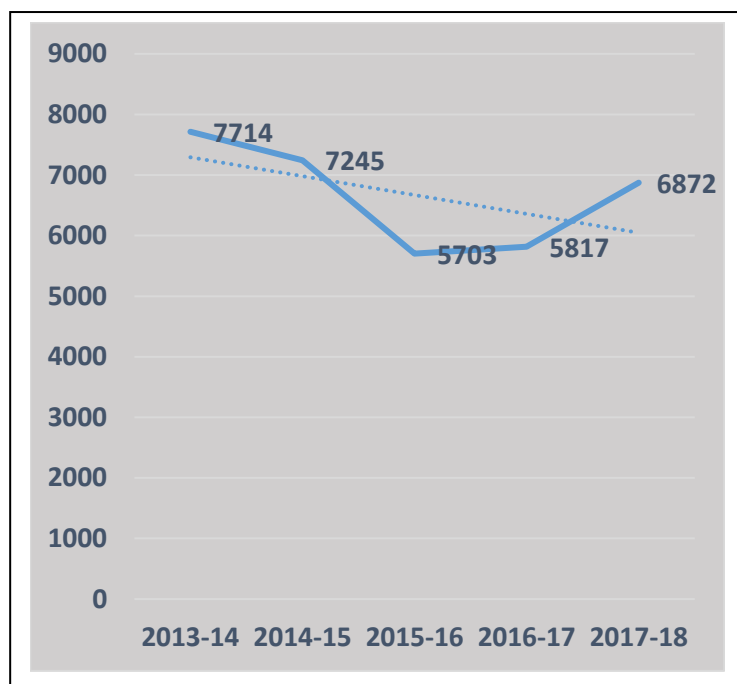
Value of Import- Value of Export

Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	7930	216
2014-15	7589	345
2015-16	6127	424
2016-17	6280	464
2017-18	7418	546
CAGR (%)	-1.7	26.1



Net Import

Year	Net Import (Rs. in Crore)
2013-14	7714
2014-15	7245
2015-16	5703
2016-17	5817
2017-18	6872
CAGR (%)	-2.9

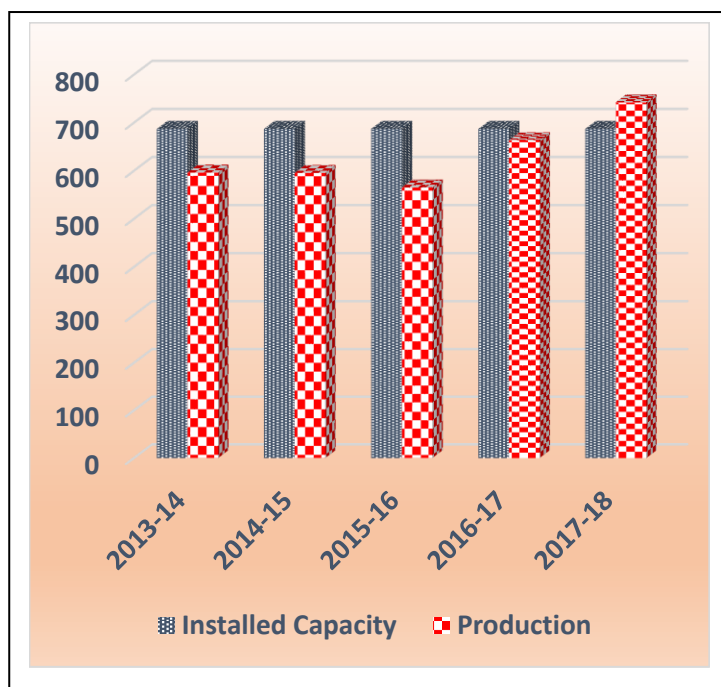


India is a net importer of Synthetic Rubber. There is a net import of Rs 6872 crore of Synthetic Rubber in the year 2017-18. Net Import of Synthetic Rubber has constantly declined till 2015-16 and has then started picking up thereafter.

Synthetic Detergent Intermediates

Installed Capacity-Production

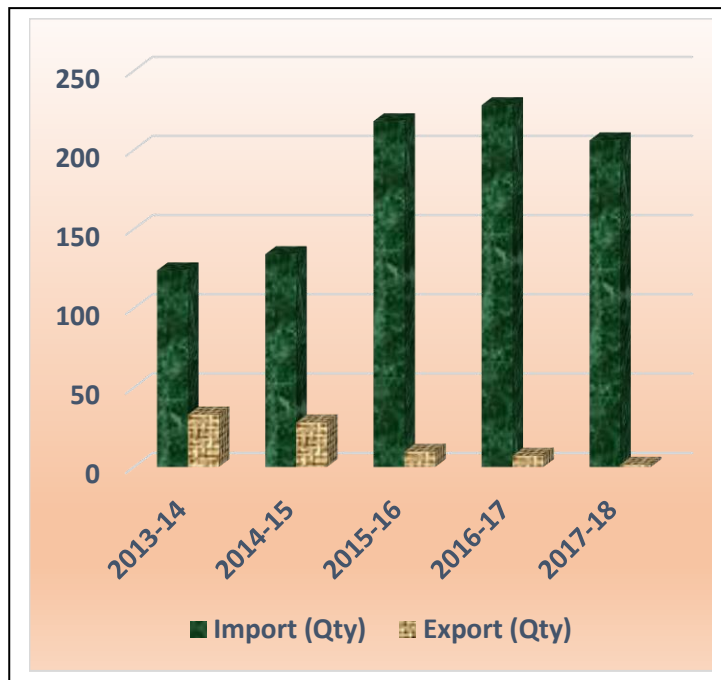
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	687	597
2014-15	687	596
2015-16	687	566
2016-17	687	664
2017-18	687	743
CAGR (%)	0.0	5.6



It is observed that installed capacity for Synthetic Detergent Intermediates has remained stable during the period while its production declined till 2015-16 and then started picking up thereafter.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	124	33
2014-15	134	28
2015-16	218	10
2016-17	228	7
2017-18	206	1
CAGR (%)	13.6	-54.5

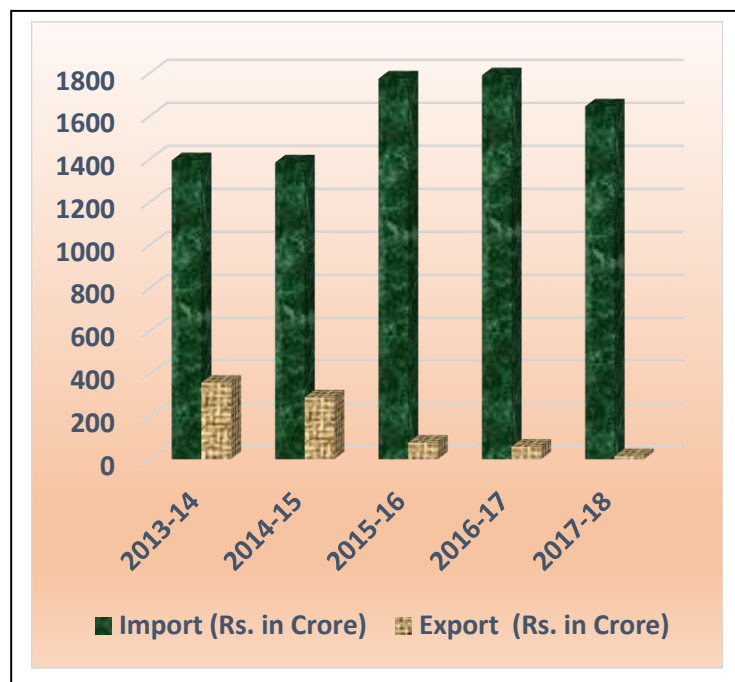


During the year 2017-18, about 22% of domestic demand for Synthetic Detergent Intermediates in the country is met through imports. Imports for this item showed increasing trend in general, with a CAGR of 13.6%.

Synthetic Detergent Intermediates

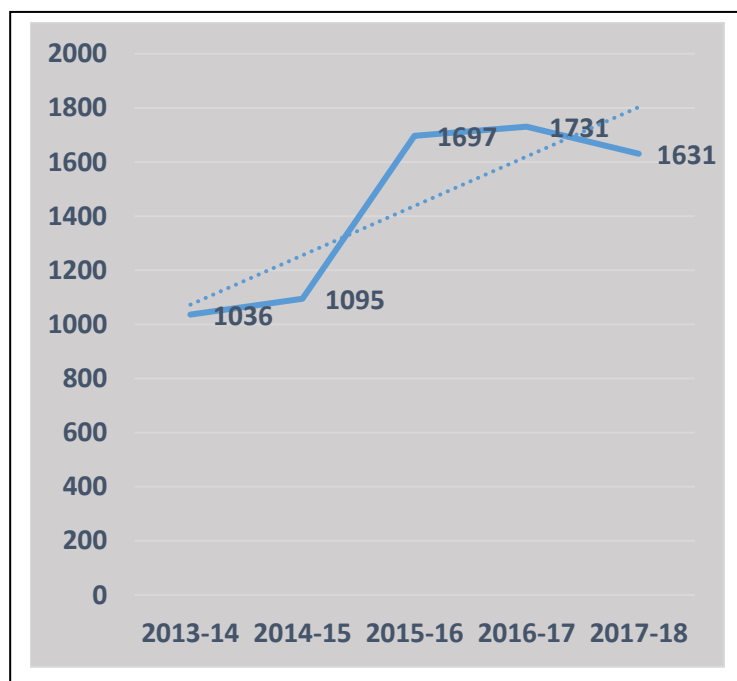
Value of Import- Value of Export

Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	1395	358
2014-15	1385	290
2015-16	1775	78
2016-17	1790	59
2017-18	1645	15
CAGR (%)	4.2	-55.0



Net Import

Year	Net Import (Rs. in Crore)
2013-14	1036
2014-15	1095
2015-16	1697
2016-17	1731
2017-18	1631
CAGR (%)	12.0

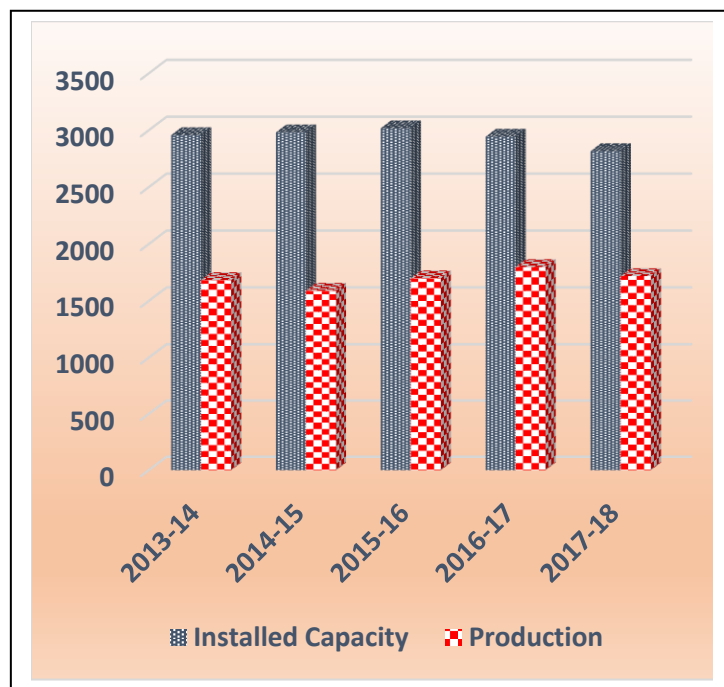


India is net importer of Synthetic Detergent Intermediates. During the year 2017-18, there is a net import of Rs. 1631 crore of Synthetic Detergent Intermediates into the country. Net Import for this item has increased till the year 2016-17.

Performance Plastic

Installed Capacity-Production

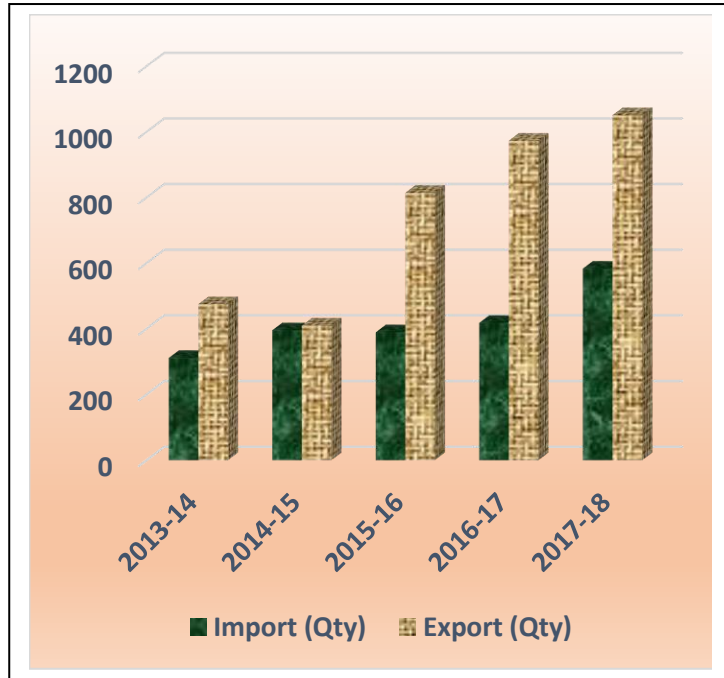
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	2958	1685
2014-15	2983	1591
2015-16	3018	1700
2016-17	2945	1799
2017-18	2817	1719
CAGR (%)	-1.2	0.5



About 39% of installed capacity for producing Performance Plastic remained unutilized during 2017-18. It is observed that installed capacity increased till 2015-16 and then slightly decreased thereafter. Its Production declined till 2014-15 and then started picking up thereafter and then again slightly decreased in 2017-18.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	311	475
2014-15	395	409
2015-16	389	814
2016-17	417	973
2017-18	583	1051
CAGR (%)	17.0	22.0

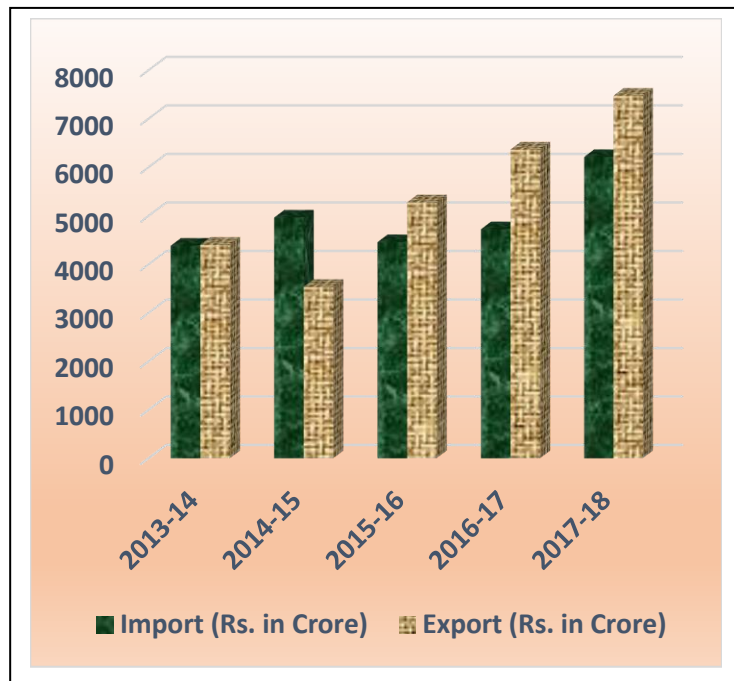


During the period Export of Performance Plastic is more as compared to its Import. It is also seen that both Exports and Imports in quantity terms have fluctuated during the period.

Performance Plastic

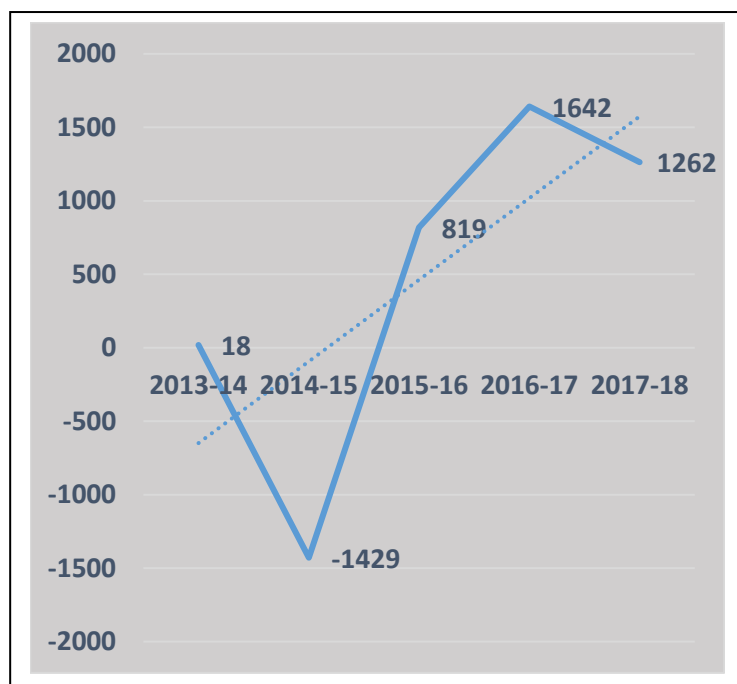
Value of Import- Value of Export

Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	4384	4402
2014-15	4964	3535
2015-16	4458	5277
2016-17	4723	6365
2017-18	6210	7473
CAGR (%)	9.1	14.1



Net Export

Year	Net Export (Rs. in Crore)
2013-14	18
2014-15	-1429
2015-16	819
2016-17	1642
2017-18	1262
CAGR (%)	188.0

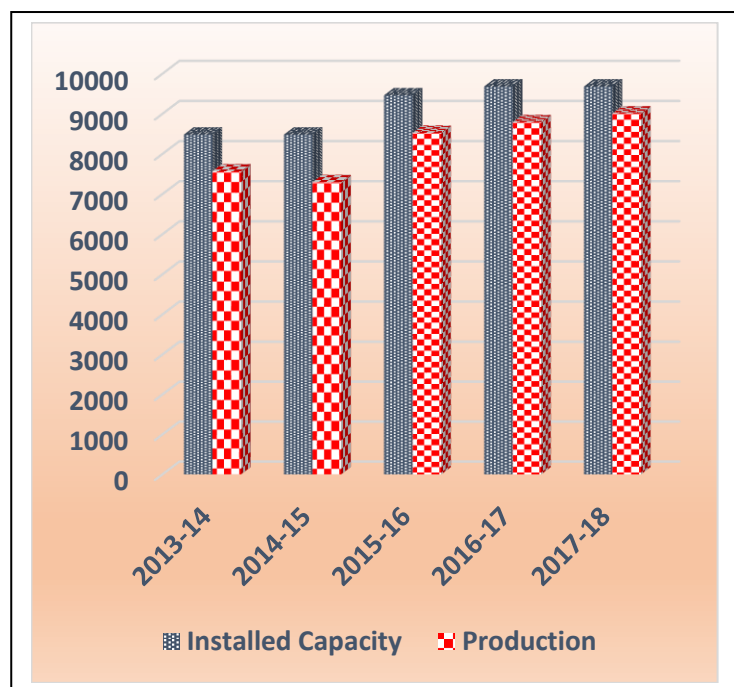


India is currently a net exporter of Performance Plastic. In the year 2017-18, there was a net export of Rs 1262 crore of Performance Plastic from India. Though the net Export has gone in to negative during 2014-15, thereafter it has remained positive.

Olefins

Installed Capacity-Production

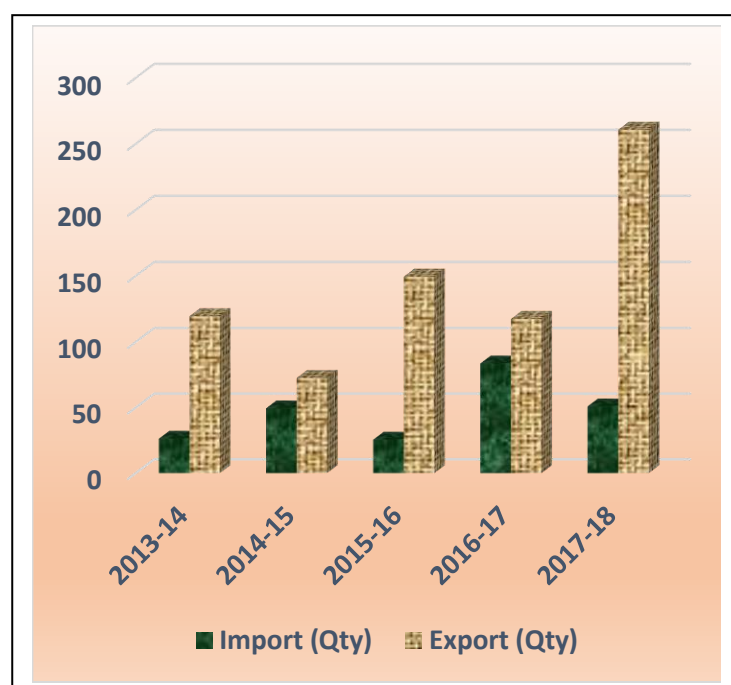
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	8484	7570
2014-15	8484	7301
2015-16	9462	8528
2016-17	9683	8794
2017-18	9683	9013
CAGR (%)	3.4	4.5



Production of Olefins during the year 2017-18 is 9013 thousand MT as against installed capacity of 9683 thousand MT. It is observed that both installed capacity and production has shown an increasing trend during the period except a slight decline during 2014-15.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	26	119
2014-15	49	72
2015-16	25	149
2016-17	83	117
2017-18	51	261
CAGR (%)	18.1	21.5

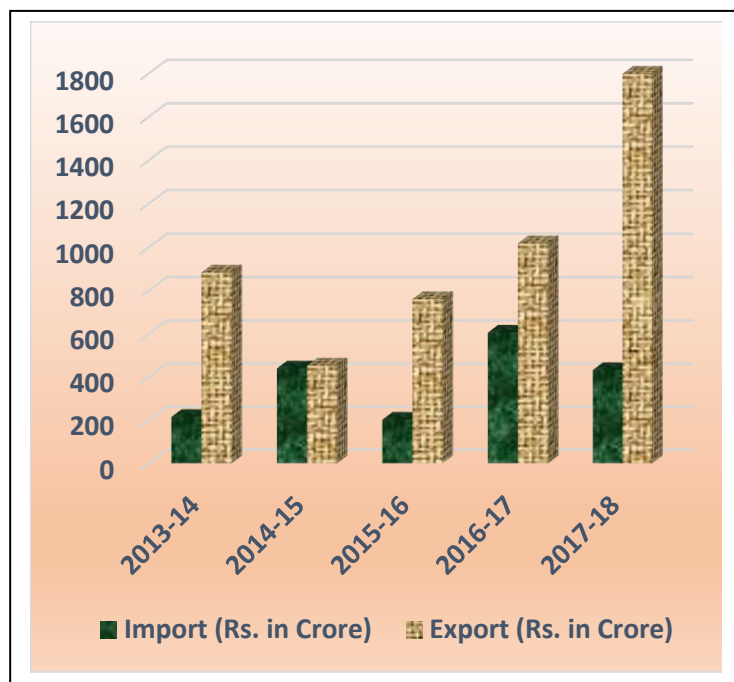


It is clear that though both import and export are insignificant in comparison to domestic production. Both have shown fluctuated trend during the period.

Olefins

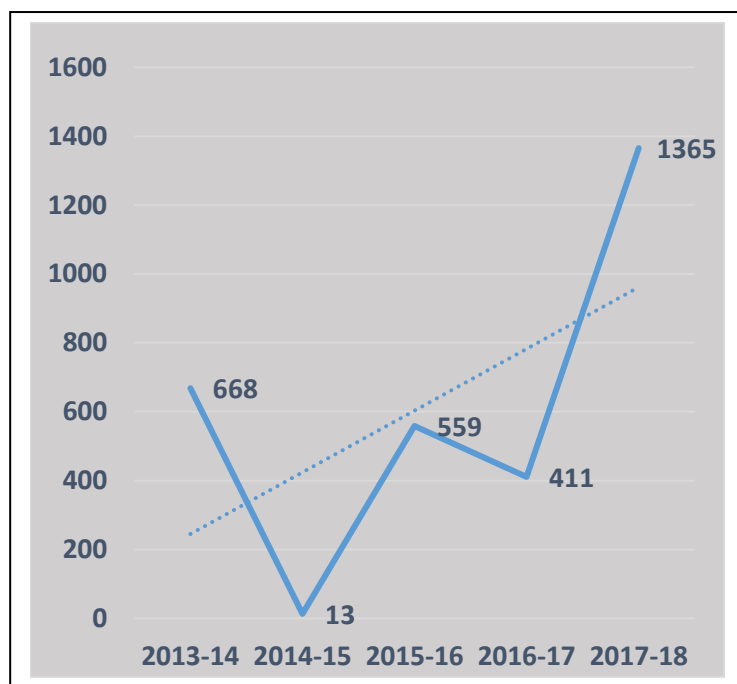
Value of Import- Value of Export

Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	215	883
2014-15	440	453
2015-16	202	761
2016-17	607	1017
2017-18	433	1798
CAGR (%)	19.1	19.5



Net Export

Year	Net Export (Rs. in Crore)
2013-14	668
2014-15	13
2015-16	559
2016-17	411
2017-18	1365
CAGR (%)	19.6

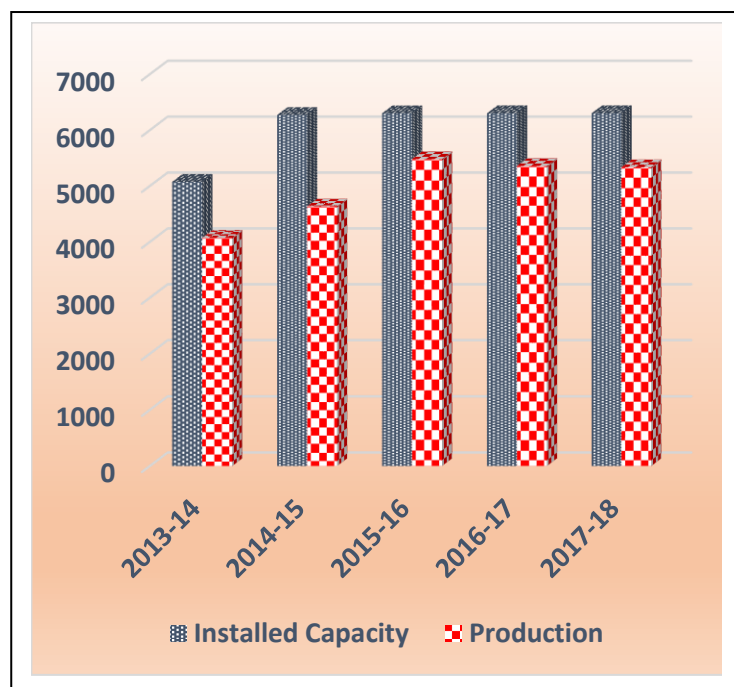


During the year 2017-18, there was a net export of Rs 1365 crore of Olefins from the country. It is seen that during the period Net Export of Olefins has shown a sharp fluctuations but, overall it has maintained an increasing trend.

Aromatics

Installed Capacity-Production

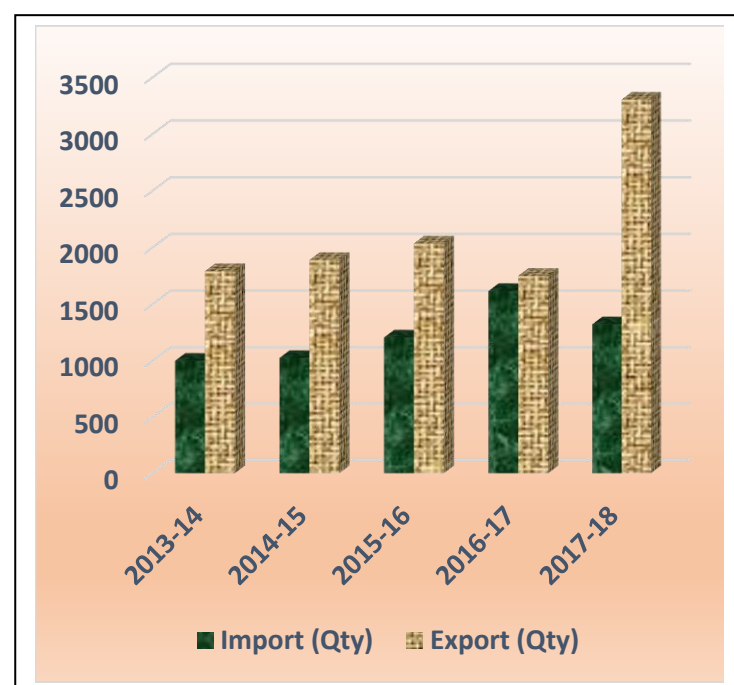
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	5077	4075
2014-15	6274	4638
2015-16	6304	5484
2016-17	6305	5361
2017-18	6305	5339
CAGR (%)	5.6	7.0



Production of Aromatics during the year 2017-18 is 5339 in thousand MT as against installed capacity of 6305 in thousand MT. It is evident that both installed capacity as well as production of Aromatics has shown, in general, an increasing trend during the period.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	998	1789
2014-15	1023	1888
2015-16	1204	2033
2016-17	1615	1749
2017-18	1321	3303
CAGR (%)	7.3	16.6

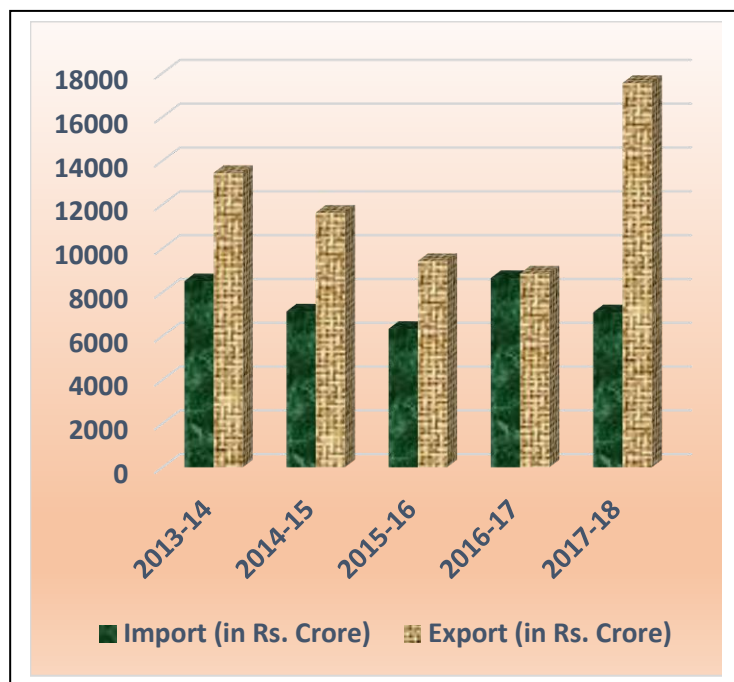


During the period, Exports of Aromatics is very high compared to its Imports. Imports of Aromatics has shown increasing trend till 2016-17, while its Exports fluctuated during the period.

Aromatics

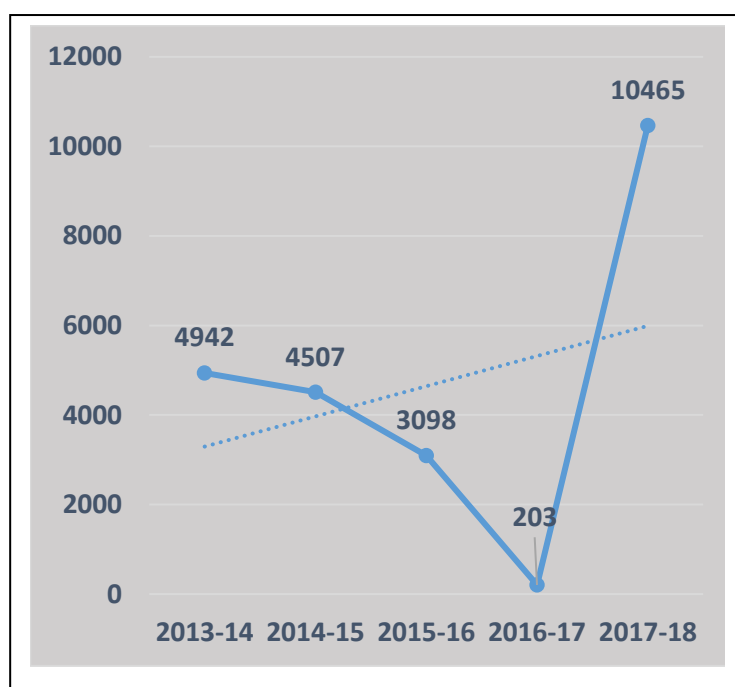
Value of Import- Value of Export

Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	8504	13445
2014-15	7126	11633
2015-16	6330	9428
2016-17	8648	8851
2017-18	7085	17550
CAGR (%)	-4.5	6.9



Net Export

Year	Net Export (Rs. in Crore)
2013-14	4942
2014-15	4507
2015-16	3098
2016-17	203
2017-18	10465
CAGR (%)	20.6

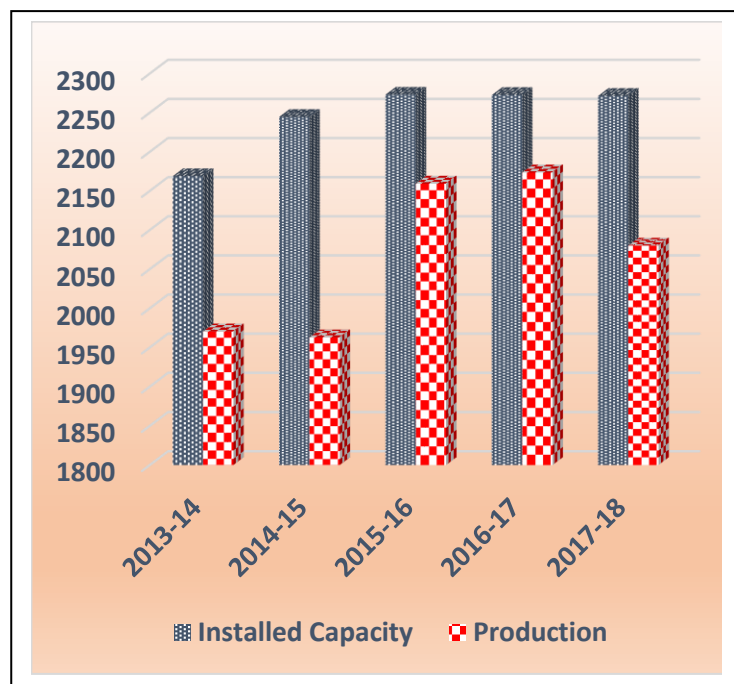


India is a net exporter of Aromatics. During the year 2017-18, there is net export of Rs 10465 crore from the country. It is observed that Net Export of Aromatics during the period shown decreasing trend till 2016-17 and thereafter, has shown an increasing trend.

Other Petro-based Chemicals

Installed Capacity-Production

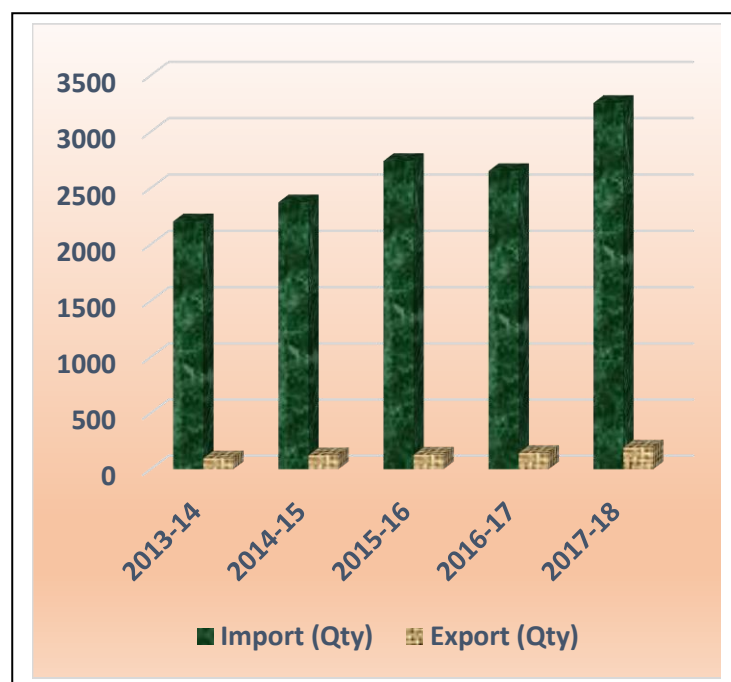
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	2169	1970
2014-15	2244	1963
2015-16	2273	2159
2016-17	2272	2174
2017-18	2271	2080
CAGR (%)	1.2	1.4



Production of Other Petro-based Chemicals during the year 2017-18 is 2080 thousand MT as against installed capacity of 2271 thousand MT. It is noted that both installed capacity and production of Other Petro-based Chemicals has shown moderately increasing trend till 2016-17 and the, thereafter shown decreasing trend.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	2204	96
2014-15	2373	124
2015-16	2740	129
2016-17	2651	144
2017-18	3255	193
CAGR (%)	10.2	19.1

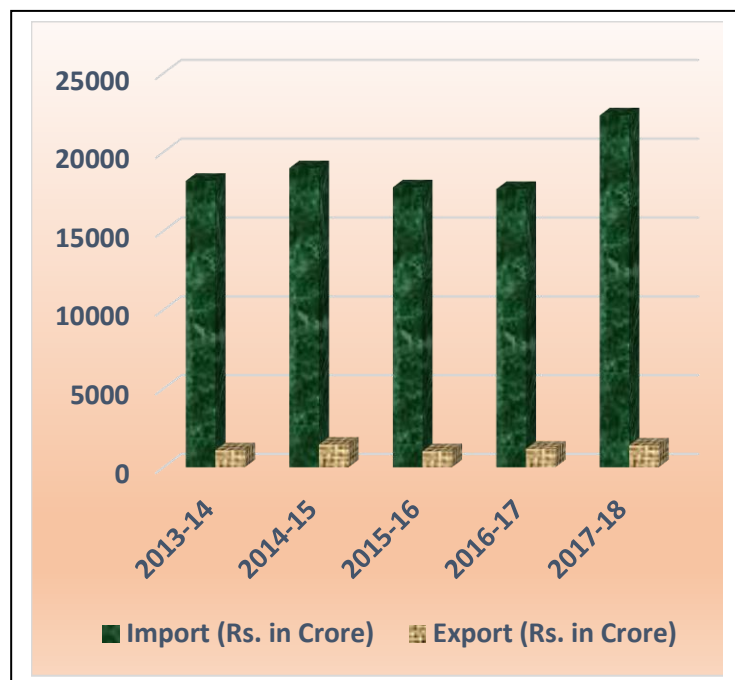


About 63% of domestic demand for Other Petro-based Chemicals is met through import into the country in the year 2017-18.

Other Petro-based Chemicals

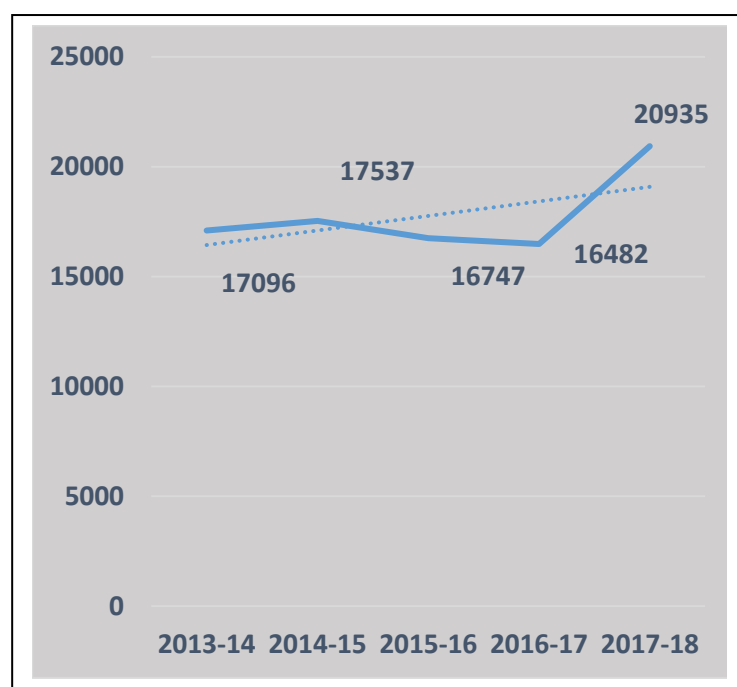
Value of Import- Value of Export

Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	18172	1076
2014-15	18973	1436
2015-16	17760	1013
2016-17	17649	1168
2017-18	22321	1386
CAGR (%)	5.3	6.5



Net Import

Year	Net Import (Rs. in Crore)
2013-14	17096
2014-15	17537
2015-16	16747
2016-17	16482
2017-18	20935
CAGR (%)	5.2

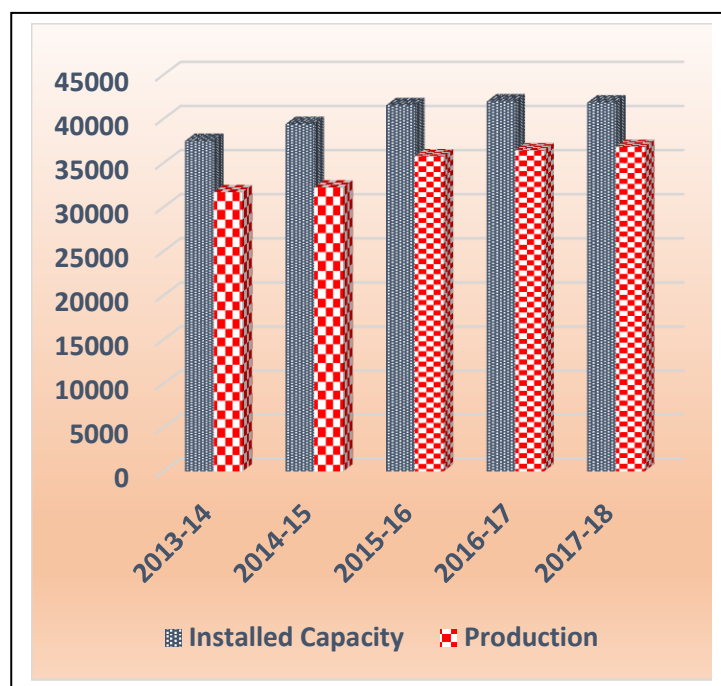


India is a net importer of Other Petro-based Chemicals and there is a net import of Rs 20935 crore of Other Petro-based Chemicals into the country in the year 2017-18. Net import is fluctuating around Rs. 17000 crore till 2016-17 and thereafter, has shown an increasing trend.

Total Major Petrochemicals

Installed Capacity-Production

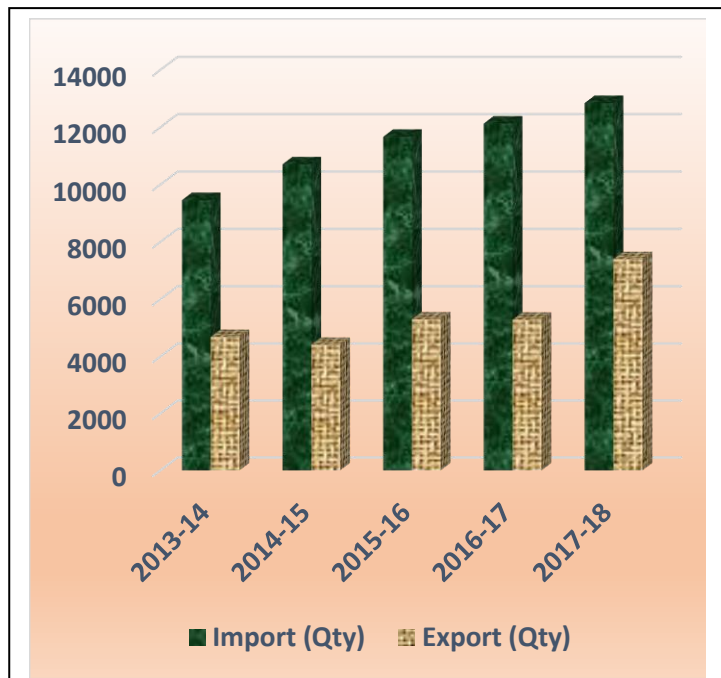
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	37503	31693
2014-15	39425	32227
2015-16	41554	35754
2016-17	41988	36427
2017-18	41860	36813
CAGR (%)	2.8	3.8



About 12% of installed capacity of Total Major Petrochemical remained unutilized during 2017-18. Both installed capacity and production have grown with a CAGR of 2.8% and 3.8% respectively during the period.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	9458	4688
2014-15	10705	4412
2015-16	11666	5302
2016-17	12129	5290
2017-18	12843	7401
CAGR (%)	7.9	12.1

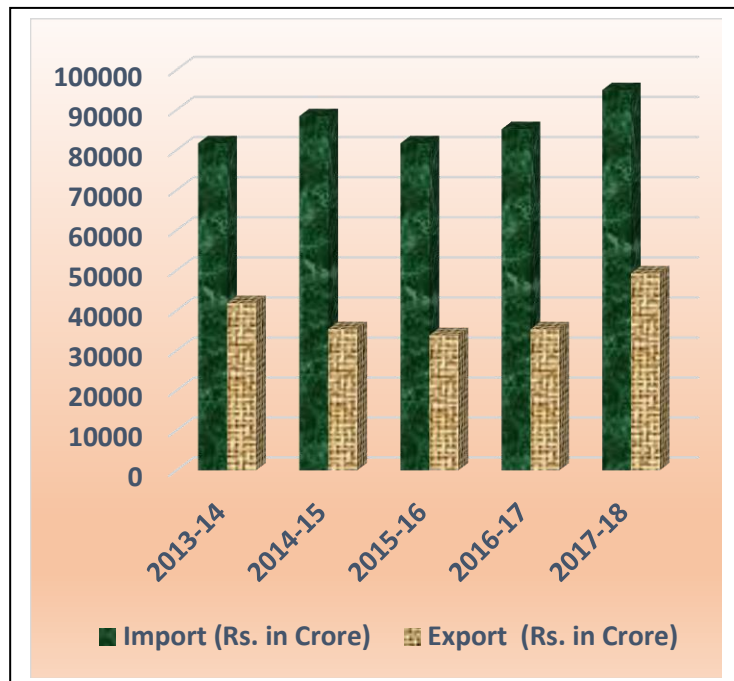


About 30% of domestic demand for Total Major Petrochemicals is met through import in the country during the year 2017-18. Both Import & Export of total Major Petrochemicals has shown an increasing trend during the period.

Total Major Petrochemicals

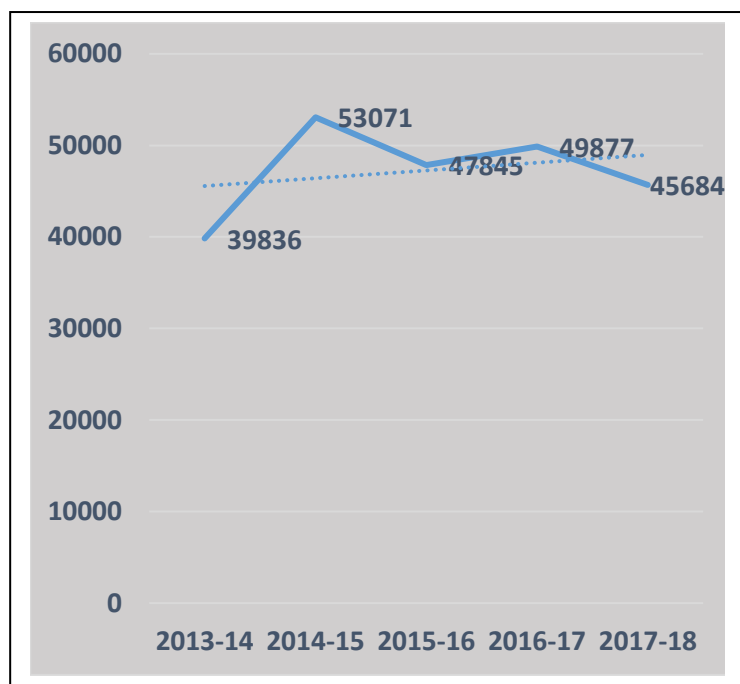
Value of Import- Value of Export

Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	81699	41863
2014-15	88446	35375
2015-16	81702	33857
2016-17	85231	35355
2017-18	94960	49276
CAGR (%)	3.8	4.2



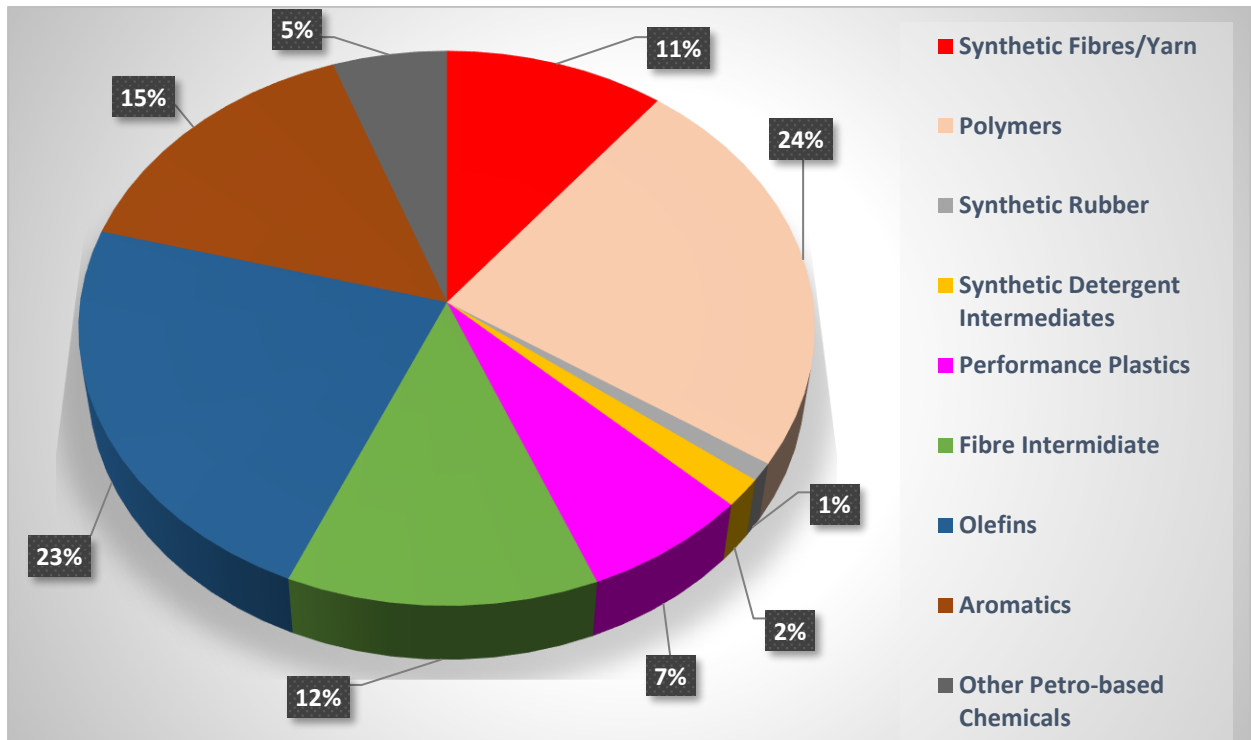
Net Import

Year	Net Import (Rs. in Crore)
2013-14	39836
2014-15	53071
2015-16	47845
2016-17	49877
2017-18	45684
CAGR (%)	3.5

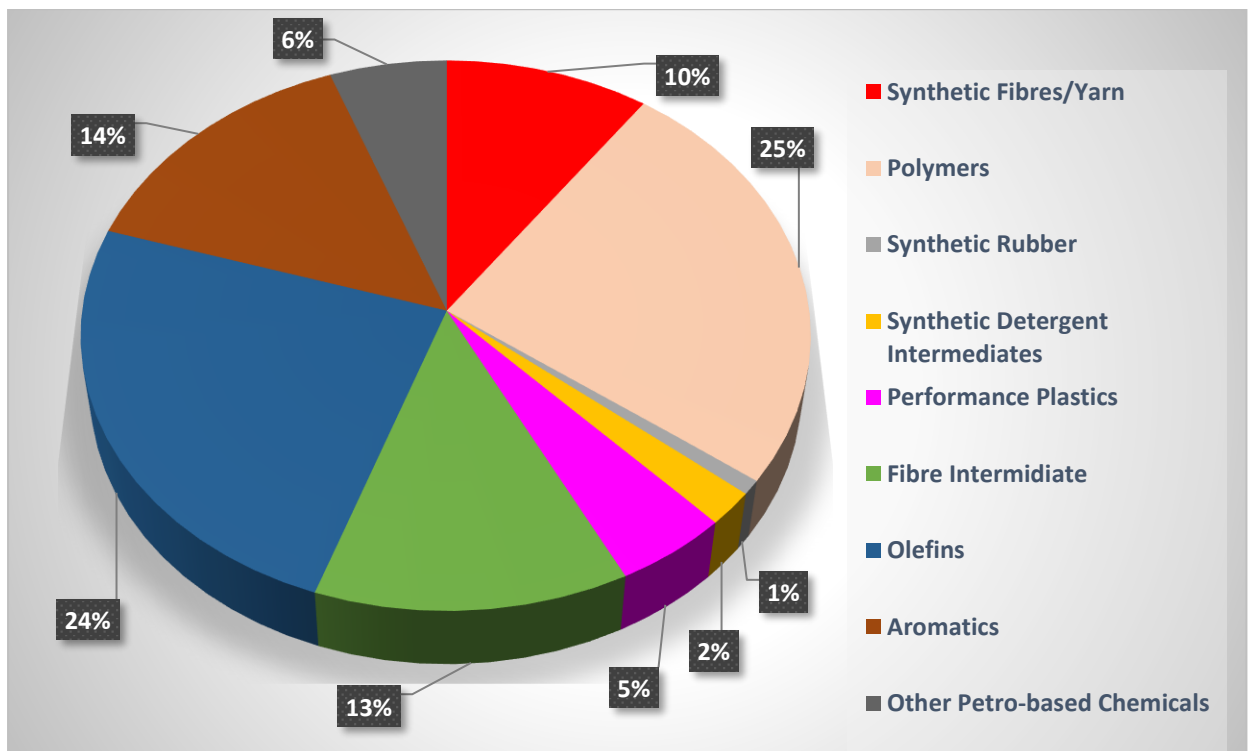


India is a net importer of Total Major Petrochemicals. There is net import Rs 45684 crore for Total major Petrochemicals during the year 2017-18. It is observed that during the period though Net Import of Total Major petrochemicals has fluctuated but overall, has shown an increasing trend with a CAGR of 3.5%.

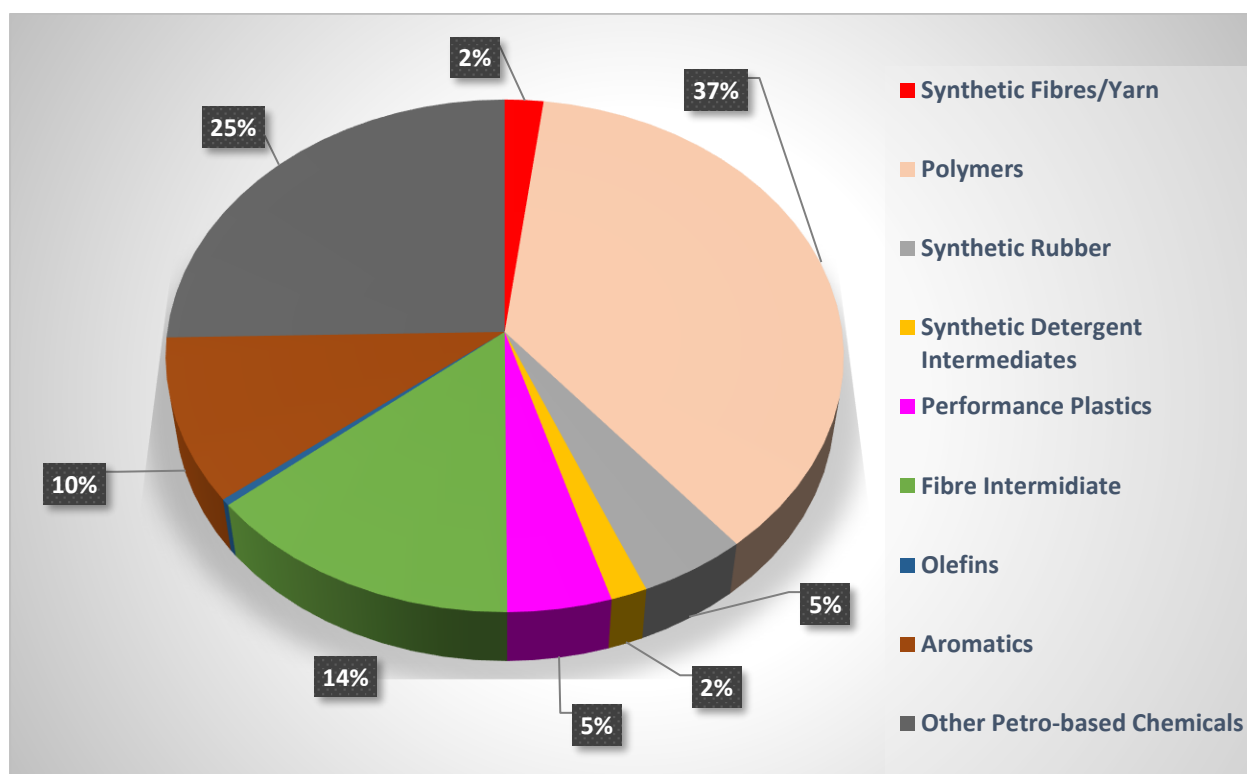
Share of Installed Capacity of Major Petrochemical Groups during year 2017-18



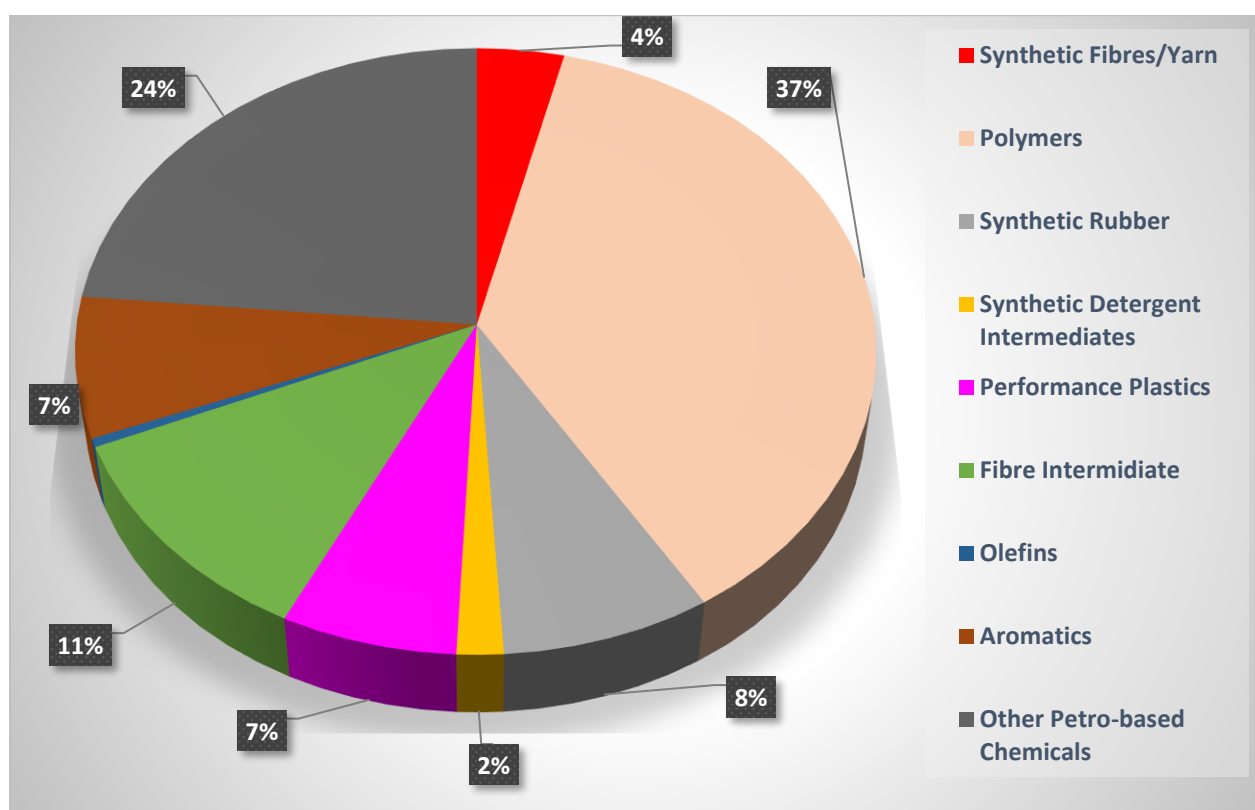
Share of Production of Major Petrochemical Groups during year 2017-18



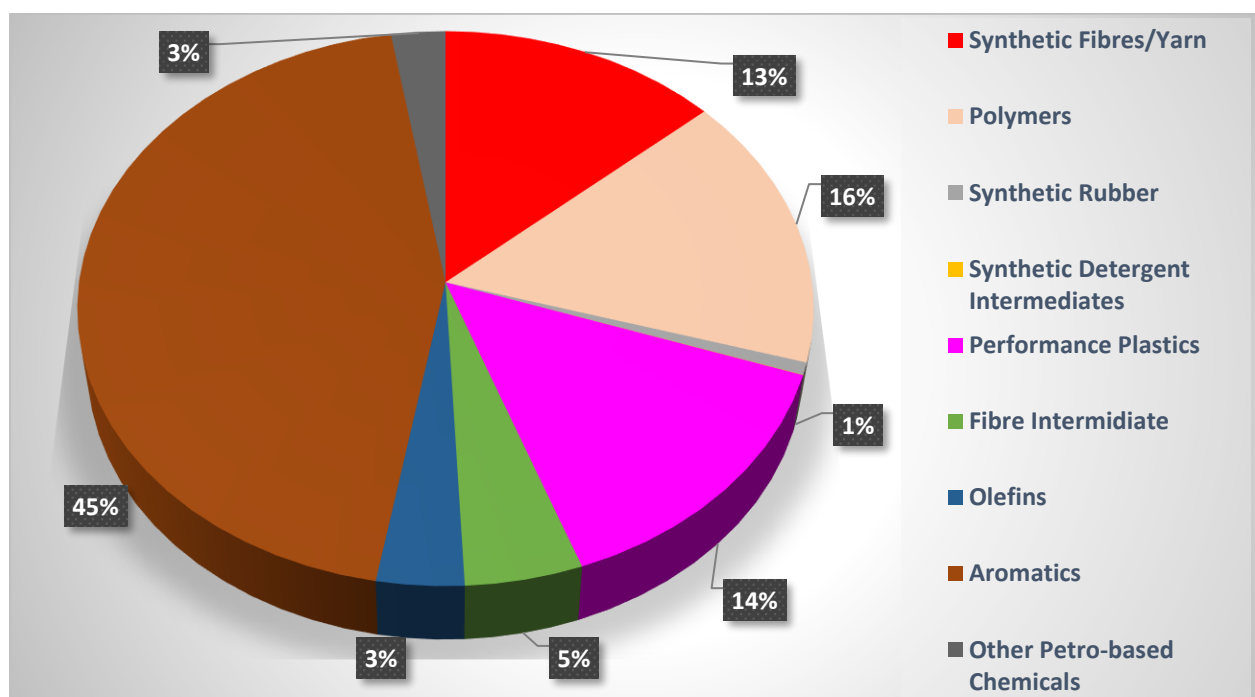
Share of groups under total Import (Qty.) of Major Petrochemicals during 2017-18



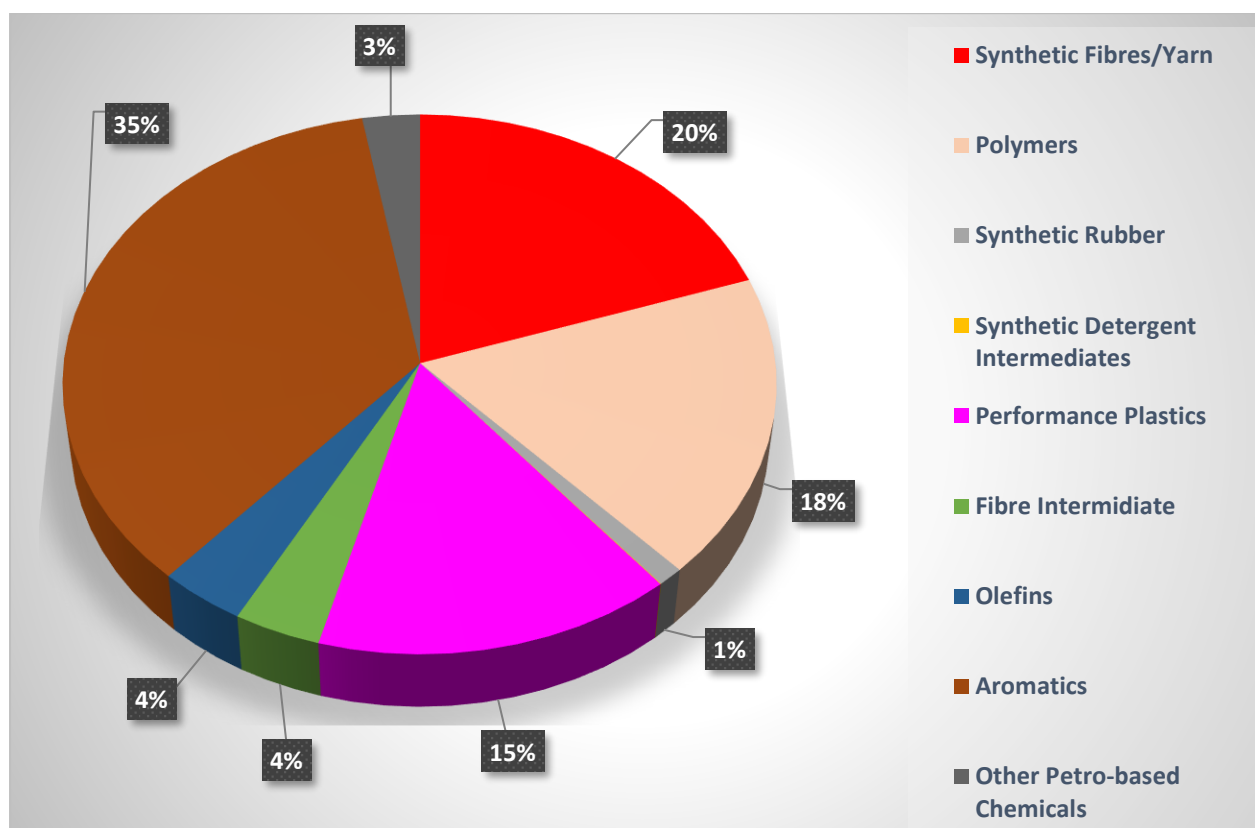
Share of groups under total Import (Value) of Major Petrochemicals during 2017-18



Share of groups under total Export (Qty.) of Major Petrochemicals during 2017-18



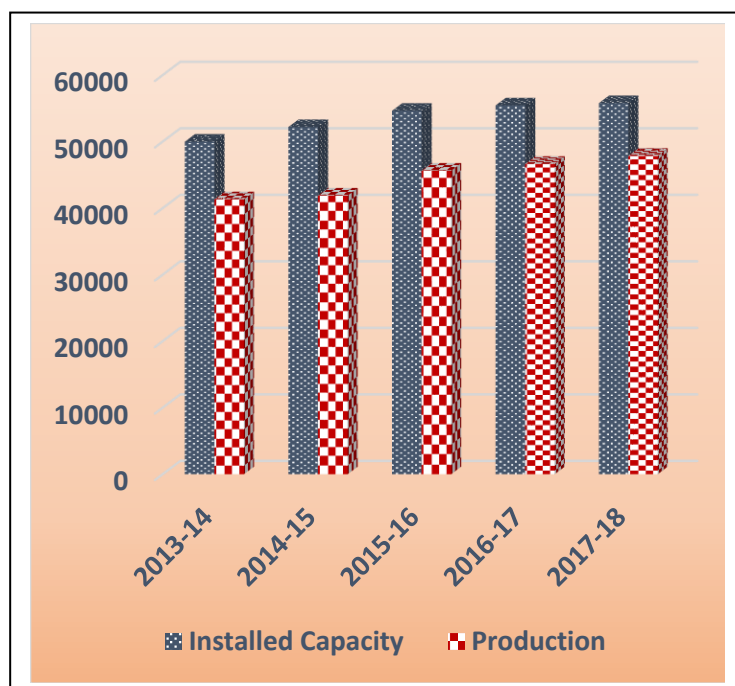
Share of groups under total Export (Value) of Major Petrochemicals during 2017-18



Total Major Chemicals & Major Petrochemicals

Installed Capacity-Production

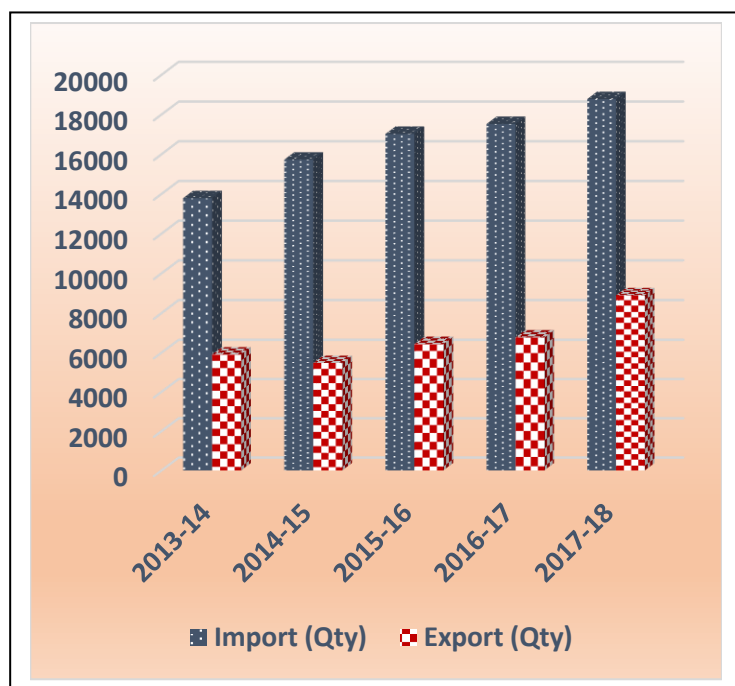
Year	Installed Capacity (In Thousand MT)	Production (In Thousand MT)
2013-14	49995	41336
2014-15	52193	41887
2015-16	54632	45638
2016-17	55440	46661
2017-18	55788	47882
CAGR (%)	2.8	3.7



Production of Total Major Chemicals and Major Petrochemicals during the year 2017-18 is 47882 thousand MT as against installed capacity of 55788 thousand MT. It is evident from the graph that both production as well as installed capacity has maintained an increasing trend with respective CAGR of 3.7% and 2.8% during the period.

Quantity Imported-Quantity Exported

Year	Import (In Thousand MT)	Export (In Thousand MT)
2013-14	13791	5909
2014-15	15730	5473
2015-16	17026	6440
2016-17	17529	6774
2017-18	18780	8897
CAGR (%)	8.0	10.8

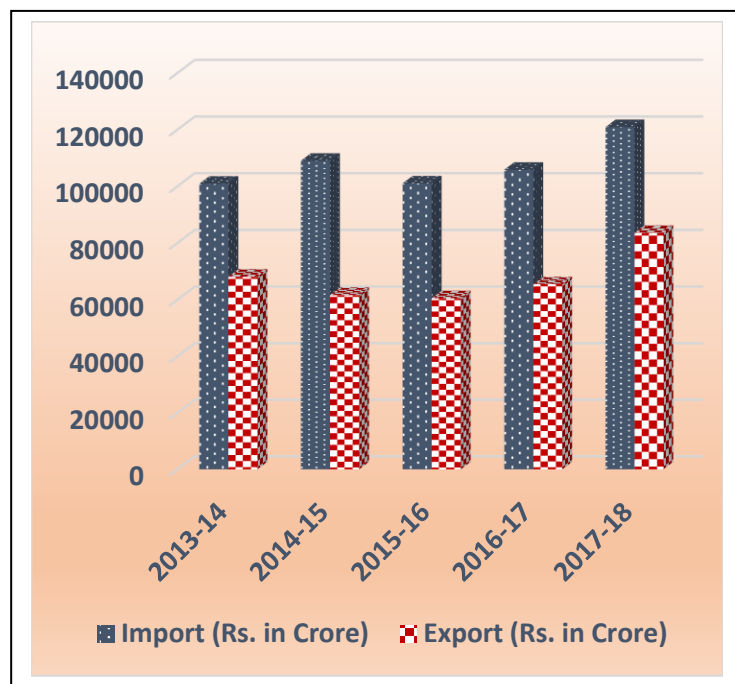


During the period, volume of Export of Total Major Chemicals and Major Petrochemicals is low compared to its Import. About 32% of domestic demand of total Major Chemicals and Petrochemicals is met through import in to the country in the year 2017-18.

Total Major Chemicals & Major Petrochemicals

Value of Import- Value of Export

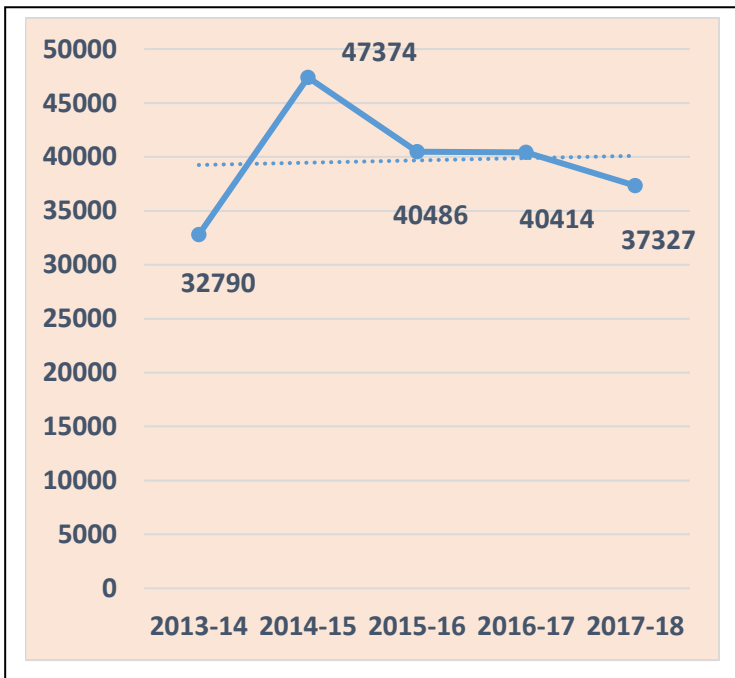
Year	Import (Rs. in Crore)	Export (Rs. in Crore)
2013-14	100909	68119
2014-15	109031	61657
2015-16	101015	60528
2016-17	105832	65419
2017-18	120902	83576
CAGR (%)	4.6	5.2



Value of Export of Total Major Chemicals and Major Petrochemicals is less as compared to Value of Import during the entire period resulting into overall trade deficit.

Net Import

Year	Net Import (Rs. in Crore)
2013-14	32790
2014-15	47374
2015-16	40486
2016-17	40414
2017-18	37327
CAGR (%)	3.3



India is a net importer of total Chemicals and Petrochemicals. In the year 2017-18, there is a net import of Rs. 37,327 crore of total Major Chemicals & Petrochemicals into the country. It is observed that the Net Imports of Major Chemicals and Petrochemicals during the period has shown an increasing trend till the year 2014-15 and thereafter depicted decreasing trend.

Section - I

Chemical Sector

Table 1:- Performance of Selected Major Chemicals (Group-Wise) during 2010-11 to 2017-18 at a Glance

(Figures in 000'MT)

GROUP	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	CAGR (%)
1	2	3	4	5	6	7	8	9	10
1. Alkali Chemicals									
Capacity	8094	8160	8075	8075	8214	8422	8822	9274	1.96
Production	6271	6478	6487	6481	6625	6802	7009	7631	2.84
Capacity Utilisation (%)	77	79	80	80	81	81	79	82	
Imports	630	658	995	874	1134	1118	1121	1194	9.55
Exports	347	345	145	164	74	107	154	273	-3.34
2. Inorganic Chemicals									
Capacity	1155	1235	1238	1228	1259	1316	1313	1315	1.87
Production	911	895	891	906	944	1002	1053	1058	2.16
Capacity Utilisation (%)	79	72	72	74	75	76	80	81	
Imports	455	479	689	874	912	1010	1010	1229	15.26
Exports	406	327	163	167	164	157	378	173	-11.47
3. Organic Chemicals									
Capacity	2485	2513	2409	2463	2537	2580	2529	2535	0.28
Production	1550	1640	1686	1792	1619	1589	1638	1799	2.15
Capacity Utilisation (%)	62	65	70	73	64	62	65	71	
Imports	1639	2182	2487	2496	2886	3143	3170	3407	11.02
Exports	187	315	407	335	241	232	190	205	1.29
4. Pesticides (Tech.)									
Capacity	250	301	283	297	302	307	322	325	3.84
Production	144	156	155	179	186	188	214	213	5.74
Capacity Utilisation (%)	58	52	55	60	62	61	66	65	
Imports\$	27	30	30	37	41	34	43	44	7.35
Exports\$	125	154	180	207	230	267	342	358	16.21
5. Dyes & Pigments									
Capacity	375	408	418	430	457	452	467	480	3.59
Production	245	241	240	284	285	304	320	367	5.96
Capacity Utilisation (%)	65	59	57	66	62	67	69	76	
Imports	41	48	52	52	52	55	56	63	6.19
Exports	272	288	326	347	353	376	419	486	8.66
Total Major Chemicals (1 to 5)									
Capacity	12359	12617	12424	12493	12768	13078	13452	13929	1.72
Production	9121	9409	9459	9643	9660	9884	10234	11068	2.80
Capacity Utilisation (%)	74	75	76	77	76	76	76	79	
Imports	2792	3397	4253	4333	5025	5360	5400	5937	11.38
Exports	1337	1429	1220	1221	1061	1138	1484	1496	1.61

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

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

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

Table 2:- Production, Installed Capacity & Growth of Selected Major Chemicals (Group-wise) during 2010-11 to 2017-18

(Figures in 000'MT)

Group	Installed Capacity			Production / Growth Rate								
	2015-16	2016-17	2017-18		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1	2	3	4	5	6	7	8	9	10	11	12	13
Alkali Chemicals	8422	8822	9274	Production	6271	6478	6487	6481	6625	6802	7009	7631
				Growth Rate (%)	13.09	3.30	0.14	-0.09	2.22	2.67	3.04	8.89
Inorganic Chemicals	1316	1313	1315	Production	911	895	891	906	944	1002	1053	1058
				Growth Rate (%)	15.00	-1.84	-0.40	1.70	4.18	6.08	5.13	0.53
Organic Chemicals	2580	2529	2535	Production	1550	1640	1686	1792	1619	1589	1638	1799
				Growth Rate (%)	9.65	5.80	2.83	6.28	-9.67	-1.87	3.12	9.79
Pesticides	307	322	325	Production	144	156	155	179	186	188	214	213
				Growth Rate (%)	10.84	8.52	-0.48	15.41	3.95	0.57	13.97	-0.48
Dyes & Pigments	452	467	480	Production	245	241	240	284	285	304	320	367
				Growth Rate (%)	45.42	-1.63	-0.56	18.40	0.58	6.60	5.28	14.69

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

Table 3:- Production Capacity Utilization & growth of Major Chemicals (Product-wise) during 2010-11 to 2017-18

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilization in 2017-18
	2015-16	2016-17	2017-18	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Alkali Chemicals													
SODA ASH	3031.00	3086.00	3464.00	2298.76	2410.82	2437.79	2392.17	2462.00	2583.01	2613.42	2989.57	3.83	86.30
CAUSTIC SODA	3102.02	3297.22	3335.94	2334.45	2408.73	2375.83	2391.66	2442.89	2503.96	2594.50	2742.31	2.33	82.21
LIQUID CHLORINE	2289.26	2438.51	2474.20	1637.62	1658.08	1673.25	1697.33	1720.10	1714.82	1800.67	1899.41	2.14	76.77
Total	8422.28	8821.73	9274.14	6270.82	6477.63	6486.88	6481.15	6624.99	6801.78	7008.58	7631.30	2.84	82.29
Inorganic Chemicals													
ALUMINIUM FLUORIDE	25.60	25.60	25.60	9.80	7.31	6.70	5.40	6.73	9.51	8.14	7.51	-3.72	29.35
CALCIUM CARBIDE	112.00	112.00	112.00	44.70	66.39	70.98	78.78	87.18	83.47	85.02	87.30	10.03	77.94
CARBON BLACK	640.00	640.00	640.00	452.44	447.67	404.02	406.41	444.35	469.56	535.27	530.36	2.30	82.87
POTASSIUM CHLORATE	3.00	3.00	4.60	0.61	0.34	0.59	0.68	0.45	0.41	0.01	0.35	-7.83	7.54
TITANIUM DIOXIDE	82.50	82.50	82.50	64.02	52.14	50.14	52.78	47.88	58.53	58.46	57.82	-1.44	70.08
RED PHOSPHORUS	1.68	1.68	1.68	0.48	0.56	0.69	0.75	0.89	0.84	0.77	0.88	9.03	52.44
HYDROGEN PEROXIDE	169.23	165.85	165.85	129.75	103.07	125.79	128.37	119.75	153.08	148.87	157.02	2.76	94.68
CALCIUM CARBONATE	282.35	282.35	282.35	209.65	217.20	232.18	233.12	236.93	226.13	216.33	217.25	0.51	76.94
Total	1316.35	1312.98	1314.58	911.44	894.68	891.10	906.27	944.15	1001.53	1052.87	1058.48	2.16	80.52
Organic Chemicals													
ACETIC ACID	177.43	177.43	159.62	156.48	160.73	160.56	157.17	159.61	157.91	158.51	157.07	0.05	98.40
ACETIC ANHYDRIDE	118.30	115.43	115.43	52.91	53.28	87.15	80.85	93.84	92.99	94.82	97.09	9.06	84.12

Table 3:- Production Capacity Utilization & growth of Major Chemicals (Product-wise) during 2010-11 to 2017-18

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilization in 2017-18
	2015-16	2016-17	2017-18	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
ACETONE	47.14	47.14	47.14	50.54	42.80	37.05	28.58	25.98	24.96	26.79	32.87	-5.96	69.72
PHENOL	76.75	76.75	76.75	79.81	65.93	59.92	46.39	42.26	40.42	43.57	53.45	-5.57	69.64
METHANOL	474.30	474.30	474.30	374.53	359.93	254.91	307.26	209.83	162.62	176.96	260.49	-5.06	54.92
FORMALDEHYDE	411.30	411.30	411.30	266.61	263.80	275.36	268.29	255.95	242.09	244.19	248.23	-1.01	60.35
NITROBENZENE	91.80	91.80	112.05	72.41	74.46	83.70	76.51	69.72	68.37	69.71	71.41	-0.20	63.73
MALEIC ANHYDRIDE	6.40	6.40	6.40	2.76	2.63	2.48	2.92	3.20	3.54	3.53	3.31	2.65	51.75
PENTAERYTHRITOL	13.72	13.72	13.72	11.73	11.40	11.49	12.18	13.46	13.97	14.01	14.10	2.67	102.75
ANILINE	60.10	54.10	54.10	41.05	40.09	48.23	40.62	34.47	39.40	41.45	41.88	0.29	77.41
CHLORO METHANES	221.10	221.10	219.92	161.35	188.55	197.74	214.03	220.71	220.18	221.51	222.43	4.69	101.14
ISOBUTYLBENZENE	13.80	13.80	13.80	2.27	1.94	6.63	6.08	4.30	7.24	6.92	8.95	21.70	64.88
ONCB	30.00	30.00	30.00	16.69	13.74	15.41	16.82	16.13	19.26	22.55	24.90	5.88	83.01
PNCB	30.00	30.00	30.00	24.87	22.14	24.40	27.06	26.96	31.27	34.19	37.78	6.16	125.93
MEK	5.00	10.00	10.00	0.00	2.19	2.49	3.72	4.02	5.75	6.54	6.40		63.97
ACETALDEHYDE	189.01	167.01	163.01	32.26	65.39	76.27	79.66	67.77	58.96	60.46	65.74	10.71	40.33
ETHANOLAMINES	17.76	17.76	17.76	3.45	8.73	7.05	11.20	13.76	13.25	13.11	13.20	21.11	74.30
ETHYL ACETATE	545.83	520.63	526.63	170.48	235.36	305.26	382.39	327.94	360.40	371.27	411.49	13.41	78.14
MENTHOL	33.65	33.65	33.65	15.74	15.80	19.70	18.34	17.45	14.73	14.54	13.68	-1.98	40.66

Table 3:- Production Capacity Utilization & growth of Major Chemicals (Product-wise) during 2010-11 to 2017-18

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilization in 2017-18
	2015-16	2016-17	2017-18	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
ORTHO NITRO TOLUENE	16.40	16.40	19.00	14.20	11.14	10.68	12.31	11.74	11.52	13.80	14.39	0.20	75.74
Total	2579.78	2528.71	2534.57	1550.12	1640.03	1686.48	1792.34	1619.11	1588.83	1638.44	1798.85	2.15	70.97
Pesticides and Insecticides													
D.D.T.	6.34	6.34	6.34	3.19	3.64	3.87	2.79	3.63	2.09	2.26	1.27	-12.39	19.94
MALATHION	3.80	3.80	3.80	3.05	2.55	1.71	2.04	2.24	2.04	2.26	3.29	1.11	86.66
DIMETHOATE	1.45	1.45	1.45	1.17	0.73	0.81	1.36	1.43	1.44	1.37	1.18	0.16	81.66
D.D.V.P.	33.92	33.92	33.62	3.48	4.64	4.41	5.52	6.66	7.22	8.13	8.13	12.90	24.17
QUINALPHOS	2.80	2.80	2.20	1.01	1.00	1.35	1.74	1.88	0.84	1.29	1.18	2.33	53.82
MONOCROTOPHOS	13.94	13.94	13.94	9.93	9.59	8.25	4.27	6.97	5.48	6.58	5.50	-8.10	39.45
PHOSPHAMIDON	2.00	2.00	2.00	0.29	0.06	0.02	0.05	0.13	0.13	0.09	0.11	-12.49	5.60
PHORATE	10.13	12.40	12.40	7.67	7.01	5.75	6.85	6.62	5.92	5.91	7.02	-1.26	56.58
ETHION	2.20	2.20	2.20	1.92	1.33	0.94	1.51	1.60	1.72	2.11	2.38	3.11	108.23
ENDOSULPHAN	0.00	0.00	0.00	11.49	1.35	0.00	0.00	0.00	0.00	0.00	0.00	-100.00	
FENVALERATE	3.60	3.60	3.60	0.81	0.55	0.48	0.75	0.51	0.56	0.53	0.74	-1.18	20.58
CYPERMETHRIN	27.79	24.33	24.43	7.21	10.41	7.78	9.26	8.59	8.53	7.88	8.25	1.94	33.76
ACEPHATE	19.67	19.67	18.97	16.49	17.11	15.76	14.51	17.97	16.58	16.27	18.27	1.48	96.32
CHLORPYRIPHOS	16.85	19.15	18.48	8.72	6.05	7.52	9.54	9.73	6.87	5.87	7.98	-1.26	43.22

Table 3:- Production Capacity Utilization & growth of Major Chemicals (Product-wise) during 2010-11 to 2017-18

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilization in 2017-18
	2015-16	2016-17	2017-18	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
TRIAZOPHOS	3.90	3.36	3.36	1.75	0.78	0.93	0.99	1.00	1.72	2.37	1.54	-1.78	45.92
TEMEPHOS	0.25	0.25	0.25	0.12	0.13	0.20	0.25	0.00	0.08	0.08	0.10	-2.10	40.00
DELTAMETHRIN	0.61	0.61	0.62	0.68	0.47	0.52	0.52	0.51	0.38	0.37	0.55	-2.92	89.16
ALPHAMETHRIN	0.50	0.50	0.50	0.55	0.57	0.54	0.56	0.75	0.23	0.10	0.32	-7.54	63.49
PROFENOFOS TECHNICAL	12.90	10.50	10.50	4.60	6.41	5.01	7.18	7.58	6.85	10.50	9.95	11.64	94.71
PRETILACHLOR TECHNICAL	2.58	2.58	2.58	1.18	1.65	1.93	2.22	1.88	1.94	2.58	3.60	17.27	139.42
LAMBDA CYHALOTHRIN	2.40	2.40	2.60	0.21	0.29	0.43	0.55	0.47	0.42	0.74	1.14	27.28	43.92
PHENTHOATE	0.90	0.90	0.90	0.59	0.59	0.96	1.24	1.40	1.11	1.14	1.32	12.28	147.00
PERMETHRIN TECH	1.97	1.97	1.67	0.65	1.41	1.04	1.39	1.70	1.30	1.10	1.53	13.01	91.10
IMIDACALOPRID TECH	1.13	1.13	1.13	0.13	0.39	0.23	0.94	0.56	0.20	0.18	0.34	15.17	30.58
CAPTAN & CAPTAFOL	3.45	3.43	3.43	0.72	0.92	0.56	1.12	2.38	2.12	1.79	1.76	13.62	51.40
ZIRAM(THIO BARBAMATE)	0.70	0.70	0.70	0.66	0.73	0.55	0.60	0.58	0.51	0.60	0.72	1.23	103.30
CARBENDZIM(BAVIST IN)	0.98	0.98	0.98	0.59	0.43	0.34	0.31	0.36	0.24	0.13	0.03	-35.62	2.76
MANCOZAB	72.46	77.14	82.39	26.05	43.46	45.30	57.82	61.40	66.38	78.48	70.25	15.23	85.26
HEXACONAZOLE	1.08	1.08	1.08	0.43	0.47	0.44	0.58	0.59	0.62	0.46	0.59	4.68	54.24
METCONAZOLE	0.75	0.75	0.75	0.36	0.50	0.63	0.70	0.61	0.39	0.35	0.40	1.56	53.33
2, 4-D	22.00	26.00	27.00	12.60	15.03	15.44	17.90	11.62	18.46	23.36	25.83	10.80	95.67

Table 3:- Production Capacity Utilization & growth of Major Chemicals (Product-wise) during 2010-11 to 2017-18

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilization in 2017-18
	2015-16	2016-17	2017-18	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
BUTACHLOR	0.50	0.50	0.50	0.29	0.20	0.18	0.04	0.00	0.00	0.00	0.00	-100.00	0.00
ETHOFUMESATE TECHNICAL	1.56	1.65	1.43	0.82	1.14	1.22	1.01	0.62	0.50	1.04	1.29	6.58	90.32
THIAMETHOXAM TECHNICAL	3.10	3.10	3.10	1.49	1.63	3.12	3.31	1.66	1.92	2.51	3.28	11.92	105.87
PENDIMETHALIN	3.00	4.50	4.50	0.00	0.00	1.03	1.71	2.26	2.82	4.04	3.78		84.00
METRIBUZIN	1.20	1.20	1.20	0.00	0.00	0.24	0.74	0.52	0.91	1.12	0.88		73.50
TRICLOPYR ACID TECH	0.30	0.30	0.30	0.30	0.10	0.21	0.20	0.19	0.30	0.28	0.15	-9.00	51.00
ISOPROTURON	6.25	6.25	6.25	3.68	2.53	4.05	2.35	2.43	1.95	0.13	0.00	-100.00	0.00
GLYPHOSATE	9.26	13.16	12.92	4.86	5.25	6.12	8.48	9.69	6.96	6.35	6.29	3.76	48.72
DIURON	3.30	3.72	3.72	0.23	0.31	0.14	0.07	0.12	1.26	3.68	3.26	46.52	87.69
ATRAZIN	0.50	0.50	0.50	0.25	0.66	0.65	1.24	1.20	1.21	1.90	2.25	37.02	449.80
ZINC PHOSPHIDE	1.32	1.92	1.92	0.86	0.89	0.60	0.65	1.29	1.50	1.31	1.40	7.24	72.66
ALUMINIUM PHOSPHIDE	3.90	4.74	4.74	2.82	3.14	4.16	4.47	5.05	5.75	6.40	4.77	7.78	100.65
DICOFOL	0.15	0.15	0.15	0.05	0.08	0.05	0.07	0.11	0.09	0.09	0.08	7.98	51.33
Total	307.39	321.57	325.09	143.92	156.17	155.42	179.38	186.47	187.52	213.72	212.70	5.74	65.43
Dyes and Pigments													
AZO DYES	22.62	22.62	21.14	13.96	12.10	12.72	13.46	10.59	9.71	9.89	10.98	-3.36	51.96
ACID DIRECT DYES(OTHER THAN	44.90	44.90	44.90	20.36	19.00	17.58	19.00	17.23	20.57	19.86	21.15	0.55	47.10

Table 3:- Production Capacity Utilization & growth of Major Chemicals (Product-wise) during 2010-11 to 2017-18

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilization in 2017-18
	2015-16	2016-17	2017-18	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
DISPERSE DYES	55.21	71.01	67.21	28.72	29.44	28.26	29.21	29.56	43.57	41.35	46.72	7.20	69.51
FAST COLOUR BASES	0.50	0.50	0.00	0.09	0.04	0.02	0.01	0.01	0.00	0.00	0.00	-100.00	
INGRAIN DYES	1.61	1.61	1.44	0.69	0.98	0.58	0.51	0.44	0.30	0.00	0.00	-100.00	0.00
OIL SOLUBLE (SOLVENT DYES)	3.60	3.60	3.60	2.02	2.64	2.31	2.26	1.80	2.20	2.23	2.07	0.34	57.42
OPTICAL WHITENING AGENTS	40.90	40.90	40.80	15.02	14.14	18.17	23.74	22.94	24.70	23.77	23.21	6.41	56.88
ORGANIC PIGMENT	80.75	80.75	87.04	56.35	51.77	44.46	68.67	76.89	61.31	63.74	73.34	3.84	84.27
PIGMENT EMULSION	5.41	5.41	5.41	5.89	5.22	6.48	7.34	9.64	9.67	10.61	10.16	8.12	187.70
REACTIVE DYES	171.82	170.59	178.49	76.88	83.38	87.60	95.42	89.47	106.12	120.87	151.86	10.21	85.08
SULPHUR DYES (SULPHUR BLACK)	3.00	3.00	8.25	8.58	7.02	6.58	7.57	9.38	9.55	10.07	7.32	-2.25	88.74
VAT DYES	2.98	2.98	2.86	1.94	1.69	1.38	1.60	1.77	1.44	1.52	1.65	-2.25	57.83
SOLUBILISED VAT DYES	0.13	0.13	0.13	0.04	0.03	0.03	0.02	0.03	0.03	0.02	0.024	-5.25	18.18
FOOD COLOURS	0.00	0.00	0.00	0.36	0.36	0.25	0.62	0.66	0.71	0.75	0.779	11.88	
NAPTHOLS	0.90	0.90	0.90	0.07	0.04	0.00	0.00	0.00	0.00	0.00	0.00	-100.00	0.00
INORGANIC PIGMENTS	18.05	18.05	18.05	13.93	13.06	13.14	14.18	14.82	14.19	15.41	17.88	3.63	99.04
Total	452.37	466.95	480.22	244.87	240.88	239.53	283.60	285.23	304.05	320.11	367.14	5.96	76.45

Note : Production and Installed Capacity data based on MPR received from large and medium scale units only.

Table 4:- Installed Capacities of Selected Chemicals (Group-Wise) from 2010-11 to 2017-18

<i>(Figures in 000'MT)</i>								
GROUP / PRODUCT	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1. Alkali Chemicals	8094	8160	8075	8075	8214	8422	8822	9274
2. Inorganic Chemicals	1155	1235	1238	1228	1259	1316	1313	1315
3. Organic Chemicals	2485	2513	2409	2463	2537	2580	2529	2535
4. Pesticides (Tech.)	250	301	283	297	302	307	322	325
5. Dyes & Pigments	375	408	418	430	457	452	467	480
TOTAL MAJOR CHEMICALS	12359	12617	12424	12493	12768	13078	13452	13929

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

Table 5:- Consumption of Selected Major Chemicals (Product-Wise) during 2010-11 to 2017-18

(Figures in 000'MT)

PRODUCTS								
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Alkali Chemicals								
SODA ASH	2588.95	2598.56	3048.51	2877.33	3159.80	3197.66	3244.35	3652.10
CAUSTIC SODA	2329.14	2539.16	2619.10	2620.25	2808.67	2905.94	2935.48	3003.98
LIQUID CHLORINE	1636.27	1653.69	1669.61	1693.52	1717.03	1709.31	1795.64	1895.73
Inorganic Chemicals								
ALUMINIUM FLUORIDE	16.72	32.39	29.19	26.28	34.02	34.98	54.39	57.07
CALCIUM CARBIDE	100.22	121.62	127.09	142.75	165.10	145.04	140.22	142.48
CARBON BLACK	161.87	294.31	436.79	428.67	469.70	478.95	331.84	594.29
POTASSIUM CHLORATE	6.40	5.80	7.26	6.99	5.96	2.81	-1.55	-1.57
SODIUM CHLORATE	24.75	25.01	25.04	28.08	21.79	17.29	7.33	7.75
TITANIUM DIOXIDE	74.82	69.77	64.50	60.60	60.30	70.52	64.18	61.96
RED PHOSPHORUS	0.55	0.57	0.52	0.61	0.56	0.35	0.32	0.43
HYDROGEN PEROXIDE	164.87	125.97	157.13	190.35	175.78	196.82	205.66	225.38
CALCIUM CARBONATE	409.97	370.68	570.31	728.41	759.32	907.92	882.97	1026.48
Organic Chemicals								
ACETIC ACID	614.21	704.88	800.68	814.63	865.50	942.30	993.41	1029.36
ACETIC ANHYDRIDE	51.77	52.17	85.46	76.21	76.43	77.30	76.65	81.83
ACETONE	125.97	142.24	130.33	144.66	149.63	152.59	159.46	174.69
PHENOL	202.01	211.54	232.24	258.34	240.37	282.35	321.74	337.27
METHANOL	1144.39	1439.15	1469.22	1535.78	1801.99	1830.49	1801.79	2034.32
FORMALDEHYDE	262.94	259.94	270.66	262.35	248.89	233.68	235.87	237.67
NITROBENZENE	72.30	74.36	83.53	76.36	70.78	74.16	83.80	86.73
CITRIC ACID	42.31	50.40	54.33	62.09	65.63	74.49	80.01	81.87
MALEIC ANHYDRIDE	40.66	37.18	39.33	39.64	41.56	50.86	54.11	55.71
PENTAERYTHRITOL	24.15	25.11	24.76	26.37	25.58	31.82	31.35	29.95

Table 5:- Consumption of Selected Major Chemicals (Product-Wise) during 2010-11 to 2017-18

(Figures in 000'MT)

PRODUCTS								
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
ANILINE	63.91	54.45	63.48	72.27	70.48	77.61	85.94	107.14
CHLORO METHANES	161.82	188.67	197.85	214.14	220.68	220.75	221.68	222.85
ISOBUTYLBENZENE	-9.19	-11.98	-6.68	-8.05	-9.64	-5.33	-6.51	-3.39
ONCB	19.86	15.75	17.12	14.94	14.29	18.66	22.42	24.90
PNCB	25.02	21.22	22.30	25.09	29.96	38.01	39.26	37.78
MEK	21.33	31.98	33.68	30.50	30.89	46.45	37.25	51.71
ACETALDEHYDE	32.23	65.21	76.07	79.72	67.80	59.03	60.55	65.81
ETHANOLAMINES	8.90	13.47	16.65	19.98	24.02	22.19	23.08	24.49
ETHYL ACETATE	75.83	113.77	137.50	192.44	213.04	255.88	279.24	305.98
MENTHOL	7.52	6.46	7.85	3.80	4.82	6.83	4.05	2.31
ORTHO NITRO TOLUENE	13.80	10.87	9.74	11.73	11.67	10.47	13.30	12.01

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

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

\$ Derived consumption as Production + Imports - Exports

Table 5A:- Consumption of Chemical Pesticides in various States/UTs During 2010-11 to 2017-18

(Figures in MT)

S. No.	States/UTs	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 * (Provisional)
1	Andhra Pradesh	8869	9289	2803	4253	4050	2713	274	1432
2	Bihar	675	655	687	765	787	831	790	961
3	Chhattisgarh	570	600	812	1016	1589	1625	1660	1450
4	Goa	9	8	9	9	12	48	NR	24
5	Gujarat	2600	2190	1210	2330	1730	1980	1713	1692
6	Haryana	4060	4050	4050	4080	4070	NR	4050	4025
7	Himachal Pradesh	328	310	325	344	379	450	341	467
8	Jammu & Kashmir	1818	1711	1789	1723	1921	2251	2188	2430
9	Jharkhand	84	151	151	430	650	493	541	NR
10	Karnataka	1858	1412	1615	1735	1793	1434	1288	1409
11	Kerala	657	807	712	1276	910	1123	895	899
12	Madhya Pradesh	633	850	846	987	696	732	694	NR
13	Maharashtra	8317	6723	6618	10969	8663	11665	13496	15568
14	Orissa	871	555	606	1219	1075	723	876	1207
15	Punjab	5730	5625	5730	5723	5689	5743	5764	5987
16	Rajasthan	3623	2802	2559	2736	2694	2475	2269	1227
17	Tamil Nadu	2361	1968	1766	2142	2096	2096	2092	2090
18	Telangana	NA	NA	NA	3812	2862	2950	NR	4866
19	Uttar Pradesh	8460	8839	9057	10164	9736	10457	10614	10595
20	Uttarakhand	199	206	247	174	172	217	198	111
21	West Bengal	3515	3670	3465	3190	3060	3712	2624	2688
	Sub Total	55236	52421	45057	59077	54633	53719	52366	59127
North-Eastern									
22	Arunachal Pradesh	10	17	NR	18	18	17	18	18
23	Assam	150	160	183	190	190	NR	NR	NR
24	Manipur	30	33	31	31	31	30	NR	26
25	Meghalaya	10	9	24	44	28	NR	NR	NR
26	Mizoram	4	4	4	508	805	NR	9	NR
27	Nagaland	NR	15	NR	16	20	20	20	NR
28	Sikkim	NR	NR	NR	NR	NR	NR	NR	NR
29	Tripura	12	266	272	310	346	293	298	329
	Sub Total	216	504	514	1117	1437	359	345	373
Union Territories									
30	Andaman & Nicobar	NR	15	7	NR	8	NR	NR	NR
31	Chandigarh	NR	NR	NR	NR	NR	NR	NR	NR
32	Dadra & Nagar Haveli	NR	NR	NR	NR	NR	NR	NR	NR
33	Daman & Diu	NR	NR	NR	NR	NR	NR	NR	NR
34	Delhi	48	NR	NR	48	NR	NR	NR	NR
35	Lakshadweep	NR	NR	NR	NR	NR	NR	NR	NR
36	Pondicherry	39	38	41	41	42	43	43	42
	Sub Total	87	54	48	89	50	43	43	42
	Grand Total	55540	52979	45619	60282	56121	54121	52755	59542

Note- 1: Information for 2017-18 are provisional. Information as on 21.06.2018**Note- 2:** NA-Not Applicable, NR-Not Reported.**Source:** Directorate of Plant Protection, Quarantine & Storage, Department of Agriculture Cooperation, Ministry of Agriculture and Farmers Welfare

Section - II

Petrochemical Sector

Table 6:- Performance of Selected Basic Major Petrochemicals (Group Wise) during 2010-11 to 2017-18 At a Glance

(Figures in 000'MT)

Group	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	CAGR (%)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Synthetic Fibres/Yarn									
Capacity	3665	3885	3949	3911	4355	4549	4493	4371	2.55
Production	3123	3105	3127	3149	3532	3558	3599	3625	2.15
Capacity Utilisation (%)	85.2	79.9	79.2	80.5	81.1	78.2	80.1	82.9	
Imports	126	150	156	164	236	264	280	260	10.94
Exports	576	734	776	908	887	878	1026	1001	8.21
2. Polymers									
Capacity	8306	8351	8761	8905	8905	9768	10110	10112	2.85
Production	6343	7250	7509	7876	7558	8839	9163	9276	5.58
Capacity Utilisation (%)	76.4	86.8	85.7	88.4	84.9	90.5	90.6	91.7	
Imports	2500	2435	3180	3125	3737	4214	4452	4751	9.61
Exports	822	1163	1113	1188	903	998	912	1188	5.40
3. Synthetic Rubber									
Capacity	128	128	124	244	425	425	425	425	18.70
Production	105	100	96	105	172	242	285	308	16.53
Capacity Utilisation (%)	82.3	78.4	77.4	42.8	40.3	56.8	67.0	72.3	
Imports	446	493	520	580	578	596	560	608	4.51
Exports	15	22	11	13	26	43	38	52	19.64
4. Synthetic Detergent Intermediates									
Capacity	637	672	687	687	687	687	687	687	1.08
Production	638	623	627	597	596	566	664	743	2.19
Capacity Utilisation (%)	100.1	92.6	91.2	86.8	86.7	82.3	96.6	108.1	
Imports	79	107	127	124	134	218	228	206	14.70
Exports	134	75	50	33	28	10	7	1	-47.80
5 : Performance Plastics									
Capacity	2070	2201	2454	2958	2983	3018	2945	2817	4.50
Production	1740	1677	1691	1685	1591	1700	1799	1719	-0.17
Capacity Utilisation (%)	84.0	76.2	68.9	56.9	53.3	56.3	61.1	61.0	
Imports	192	175	250	311	395	389	417	583	17.18
Exports	366	310	348	475	409	814	973	1051	16.24
Total Basic Major Petrochemicals (1 to 5)									
Capacity	14807	15237	15975	16705	17355	18448	18660	18413	3.16
Production	11950	12755	13050	13410	13448	14905	15510	15670	3.95
Capacity Utilisation (%)	80.7	83.7	81.7	80.3	77.5	80.8	83.1	85.1	
Imports	3343	3360	4233	4304	5080	5681	5938	6408	9.74
Exports	1913	2304	2298	2616	2254	2743	2956	3293	8.07

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

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

Note: Product coverage under each group is given at page viii- ix.

Table 7:- Production, Installed Capacity & Growth of Selected Basic Major Petrochemicals (Group-wise) during 2010-11 to 2017-18

(Figures in 000' MT)

Group	Installed Capacity			Production / Growth Rate	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
	2015-16	2016-17	2017-18									
1	2	3	4	5	6	7	8	9	10	11	12	13
Synthetic Fibers	4549	4493	4371	Production	3123	3105	3127	3149	3532	3558	3599	3625
				Growth Rate (%)	10.18	-0.58	0.70	0.70	12.17	0.75	1.15	0.72
Polymers	9768	10110	10112	Production	6343	7250	7509	7876	7558	8839	9163	9276
				Growth Rate (%)	11.39	14.30	3.57	4.88	-4.04	16.95	3.67	1.23
Elastomers (S.Rubber)	425	425	425	Production	105	100	96	105	172	242	285	308
				Growth Rate (%)	-0.66	-4.70	-4.25	8.67	64.13	40.76	17.91	8.03
Synth. Detergent Intermediates	687	687	687	Production	638	623	627	597	596	566	664	743
				Growth Rate (%)	3.26	-2.43	0.65	-4.82	-0.11	-5.09	17.36	11.92
Performance Plastics	3018	2945	2817	Production	1740	1677	1691	1685	1591	1700	1799	1719
				Growth Rate (%)	6.00	-3.60	0.82	-0.37	-5.54	6.86	5.82	-4.47
Total Basic Major Petrochemicals	18448	18660	18413	Production	11950	12755	13050	13410	13448	14905	15510	15670
				Growth Rate (%)	9.69	6.74	2.31	2.76	0.28	10.83	4.06	1.03

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

Note: Product coverage under each group is given at page viii-ix.

Table 8:- Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2010-11 to 2017-18

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilisation in 2017-18
	2015-16	2016-17	2017-18	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
A : BASIC MAJOR PETROCHEMICALS													
I : Synthetic Fibres / Yarn													
1. Polyester Filament Yarn (PFY) (\$)	2898.36	2841.29	2715.53	1803.87	1874.27	1877.53	1811.28	2178.75	2179.00	2200.91	2283.41	3.42	84.09
2. Nylon Filament Yarn (NFY) (\$\$)	61.96	63.96	63.96	33.43	30.39	21.94	24.32	32.45	37.25	40.91	40.01	2.60	62.56
3. Nylon Industrial Yarn (NIY) (\$\$)	93.58	93.58	93.58	97.05	96.64	95.07	103.83	100.52	94.87	103.56	107.59	1.48	114.97
4. Polypropylene Filament Yarn (PPFY)(\$\$)	3.60	3.60	3.60	6.16	6.97	6.43	5.91	5.14	3.47	3.39	3.15	-9.15	87.39
Sub Total Yarn (1+2+3+4)	3057.49	3002.42	2876.67	1940.51	2008.27	2000.97	1945.34	2316.86	2314.59	2348.77	2434.15	3.29	84.62
5. Acrylic Fibre (Inc. Dry Spun) (AF)	107.00	107.00	107.00	76.16	76.41	74.97	94.38	89.63	105.87	95.39	90.97	2.57	85.02
6. Polyester Staple Fibre (PSF)	1256.56	1256.08	1256.56	1036.71	953.22	974.05	1010.05	1021.25	1039.65	1056.00	1005.30	-0.44	80.00
7. Polypropylene Staple Fibre (PPSF)	32.13	32.13	32.13	3.74	4.08	8.06	23.01	25.42	27.04	24.56	22.24	29.03	69.23
8. Polyester Staple Fibrefil (PSFF)	69.00	69.00	69.00	52.72	48.52	51.09	56.46	57.30	51.05	53.65	51.33	-0.38	74.39
9. Polyester Industrial Yarn (PIY)	21.50	21.50	21.50	13.30	14.39	15.24	14.75	16.58	15.38	16.33	15.04	1.77	69.94
10. Elastomeric/Spandex Filament Yarn	5.00	5.00	8.50	0.00	0.00	2.37	4.74	4.95	4.81	4.70	6.18		72.65
Total Synth. Fibre / Yarn	4548.68	4493.13	4371.35	3123.13	3104.88	3126.75	3148.73	3531.98	3558.39	3599.40	3625.20	2.15	82.93
II : Polymers													
1. Linear Low Density Polyethylene (LLDPE)	No separate Capacity			897.07	1032.94	1011.79	1036.58	910.26	1204.57	1318.26	1290.05	5.33	
2. High Density Polyethylene (HDPE)	No separate Capacity			887.19	1118.97	1176.90	1195.04	1155.79	1317.15	1520.04	1578.38	8.58	
LLDPE/HDPE (Combined) (\$\$\$)	3135.00	3348.10	3348.10	1784.26	2151.91	2188.69	2231.62	2066.05	2521.72	2838.30	2868.42	7.02	85.67
3. Low Density Polyethylene (LDPE)	160.00	160.00	160.00	178.63	194.24	186.58	190.01	184.40	200.03	201.76	185.66	0.55	116.04

Table 8:- Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2010-11 to 2017-18

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilisation in 2017-18
	2015-16	2016-17	2017-18	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
4. Polystyrene(PS)	472.00	472.00	471.00	295.55	288.37	289.84	270.33	281.17	308.58	311.35	301.58	0.29	64.03
5. Polypropylene(PP)	4456.20	4514.00	4514.00	2735.54	3248.01	3506.60	3739.64	3614.82	4284.42	4253.39	4350.20	6.85	96.37
6. Poly Vinyl Chloride(PVC)	1423.00	1493.00	1493.00	1278.18	1295.84	1256.65	1367.00	1330.44	1437.89	1461.53	1466.08	1.98	98.20
7. Expandable Polystyrene (EX-PS)	121.80	122.80	126.30	71.20	72.02	80.80	77.35	80.68	86.20	96.77	103.91	5.55	82.28
Total Polymers	9768.00	10109.90	10112.40	6343.36	7250.38	7509.16	7875.96	7557.57	8838.84	9163.10	9275.85	5.58	91.73
III : Synthetic Rubber													
1. Styrene Butadiene Rubber (SBR)	271.00	271.00	271.00	12.24	9.03	8.17	11.95	57.25	124.80	167.33	193.97	48.40	71.58
2. Poly Butadiene Rubber (PBR)	114.00	114.00	114.00	76.37	78.92	77.25	80.87	107.54	113.93	117.09	113.63	5.84	99.68
3. Nitrile Butadiene Rubber (NBR)	25.30	25.30	25.30	6.03	0.07	0.10	0.52	0.38	0.39	0.35	0.05	-49.57	0.20
4. Ethyl Vinyl Acetate (EVA)	15.00	15.00	15.00	10.78	12.44	10.68	11.21	6.42	2.41	0.00	0.00	-100.00	0.00
Total Synthetic Rubber	425.30	425.30	425.30	105.42	100.47	96.20	104.54	171.59	241.53	284.78	307.66	16.53	72.34
IV : Synthetic Detergent Intermediates													
1. Linear Alkyl Benzene (LAB)	547.40	547.40	547.40	474.69	453.70	454.92	405.64	410.54	377.20	447.65	451.53	-0.71	82.49
2. Ethylene Oxide (EO)	140.00	140.00	140.00	163.50	169.00	171.85	190.89	185.32	188.31	216.06	291.30	8.60	208.07
Total Synth. Detergent Intermediates	687.40	687.40	687.40	638.20	622.70	626.77	596.53	595.86	565.51	663.71	742.82	2.19	108.06

Table 8:- Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2010-11 to 2017-18

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilisation in 2017-18
	2015-16	2016-17	2017-18	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
V : Performance Plastic													
1. ABS Resin	128.00	140.00	140.00	90.39	88.96	90.53	102.19	107.28	117.01	117.77	145.23	7.01	103.74
2. Nylon-6 & Nylon 66	28.20	28.20	28.20	20.66	18.44	19.34	20.45	20.75	21.44	21.54	20.56	-0.07	72.89
3. Polymethyl Methacrylate (PMMA)	3.50	3.50	3.50	2.51	2.92	2.54	2.48	1.05	1.47	0.29	0.02	-49.86	0.57
4. Styrene Acrylonitrile (SAN)	136.00	148.00	148.00	82.28	77.38	80.15	87.61	88.77	98.68	99.24	114.69	4.86	77.49
5. PET Chips/Polyester Chips	2702.91	2605.06	2477.40	1532.60	1472.71	1487.15	1459.85	1361.98	1452.93	1548.70	1424.60	-1.04	57.50
6. PTFE (TEFLON)	19.71	19.80	19.80	11.13	16.50	11.03	11.95	11.35	8.75	11.73	13.72	3.03	69.31
Total Performance Plastics	3018.32	2944.56	2816.90	1739.57	1676.90	1690.73	1684.53	1591.18	1700.27	1799.27	1718.81	-0.17	61.02
TOTAL BASIC MAJOR PETROCHEMICALS													
(I+II+III+IV+V)	18447.70	18660.29	18413.35	11949.67	12755.32	13049.61	13410.29	13448.16	14904.54	15510.25	15670.34	3.95	85.10
B : INTERMEDIATES													
I : FIBRE INTERMEDIATES													
1. Acrylonitrile (ACN)	41.00	41.00	41.00	37.61	37.93	32.99	37.04	33.70	1.94	0.00	0.00	-100.00	0.00
2. Caprolactum	120.00	120.00	120.00	122.85	118.36	98.72	84.86	87.05	86.30	86.96	85.97	-4.97	71.64
3. Mono Ethylene Glycol (MEG)	1153.40	1153.40	1153.40	746.32	996.57	1061.22	1069.28	1001.14	1158.97	1110.50	1132.65	6.14	98.20
4. Purified Terephthalic Acid (PTA)	3753.00	3753.00	3873.00	3190.59	3307.81	3493.92	3476.51	3755.28	3431.78	3390.56	3492.44	1.30	90.17
Total Fibre Intermediates	5067.40	5067.40	5187.40	4097.37	4460.66	4686.86	4667.68	4877.16	4678.98	4588.01	4711.06	2.01	90.82

Table 8:- Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2010-11 to 2017-18

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilisation in 2017-18
	2015-16	2016-17	2017-18	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
II : BUILDING BLOCKS													
Olefins													
1. Ethylene	4283.40	4446.50	4446.50	2665.02	3319.66	3314.57	3346.39	3191.90	3727.39	4021.73	4222.68	6.80	94.97
2. Propylene	4745.63	4803.42	4803.42	2981.24	3567.06	3740.73	3988.06	3869.40	4456.69	4425.21	4457.91	5.92	92.81
3. Butadiene	433.00	433.00	433.00	242.05	249.57	235.14	235.53	239.45	343.45	347.36	332.38	4.63	76.76
Total Olefins	9462.03	9682.92	9682.92	5888.31	7136.29	7290.44	7569.97	7300.74	8527.53	8794.29	9012.97	6.27	93.08
Aromatics													
1. Benzene	1566.15	1566.35	1566.35	945.13	1002.36	1048.45	1030.79	1094.38	1332.59	1332.04	1318.03	4.87	84.15
2. Toluene	287.97	288.27	288.27	128.48	132.06	108.38	120.39	108.16	115.74	126.76	106.94	-2.59	37.10
3. Mixed Xylene	898.33	898.33	898.33	125.44	206.79	199.97	247.54	215.00	269.35	296.03	271.35	11.65	30.21
4. Ortho-xylene	420.00	420.00	420.00	399.83	389.60	444.47	412.41	462.46	499.51	444.88	447.76	1.63	106.61
5. Paraxylene	3131.70	3131.70	3131.70	2137.41	2394.20	2359.75	2263.76	2757.84	3266.36	3161.30	3194.52	5.91	102.01
Total Aromatics	6304.15	6304.65	6304.65	3736.29	4125.01	4161.01	4074.89	4637.84	5483.55	5361.02	5338.60	5.23	84.68
Total Intermediates													
(I+II)	20833.58	21054.97	21174.97	13721.97	15721.97	16138.31	16312.54	16815.75	18690.06	18743.32	19062.62	4.81	90.02
C : OTHER PETRO-BASED CHEMICALS													
1. Butanol	26.00	26.00	26.00	17.51	22.18	14.41	5.48	4.20	11.08	12.47	17.39	-0.10	66.88
2. C4-Raffinate	291.60	291.60	291.60	71.30	209.39	395.15	392.64	364.61	428.64	437.17	339.20	24.96	116.32
3. Di-Ethylene Glycol	84.50	84.50	83.30	73.38	98.54	102.88	106.65	100.96	114.24	108.24	105.70	5.35	126.88

Table 8:- Production, Capacity Utilization & Growth of Selected Major Petrochemicals (Product-Wise) during 2010-11 to 2017-18

(Figures in 000'MT)

Major Groups / Products	Installed Capacity			Production								CAGR (%)	Capacity Utilisation in 2017-18
	2015-16	2016-17	2017-18	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
4. Diacetone Alcohol	9.50	9.50	9.50	3.63	5.40	3.15	0.00	0.00	0.00	0.00	0.21	-33.53	2.19
5. Ethylene Dichloride (By Product)	593.20	593.20	593.20	454.06	435.12	316.44	278.03	285.30	277.35	282.57	282.35	-6.56	47.60
6. 2-Ethyl Hexanol**	55.20	55.20	55.20	28.90	48.97	49.78	20.19	13.89	44.41	45.59	56.64	10.09	102.61
7. Epichlorohydrine	0.00	0.00	0.00	7.99	8.57	10.69	0.00	0.00	0.00	0.00	0.00	-100.00	
8. Iso-Butanol	2.80	2.80	2.80	2.91	2.44	2.38	0.79	0.67	1.86	1.96	2.23	-3.73	79.57
9. Isopropanol (IPA)	70.00	70.00	70.00	67.46	71.08	70.33	75.90	74.98	71.18	72.47	71.83	0.90	102.62
10. Methyl Methacrylate (MMA)	4.38	4.38	4.38	4.55	4.29	3.12	3.23	3.47	2.28	0.54	2.83	-6.55	64.66
11. Phthalic Anhydride (PAN)	349.05	349.05	349.05	252.63	249.58	254.47	263.75	291.52	305.78	296.07	290.01	1.99	83.09
12. Propylene Oxide (PO)	36.00	36.00	36.00	32.15	34.86	29.84	33.43	36.61	25.59	29.34	36.00	1.63	99.99
13. Propylene Glycol (PG)	20.00	20.00	20.00	16.53	19.47	15.11	14.04	16.25	13.65	16.35	17.64	0.93	88.20
14. Polyvinyl Acetate Resin	17.34	17.34	17.34	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-100.00	0.00
15. Vinyl Acetate Monomer (VAM)	30.00	30.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
16. Vinyl Chloride Monomer (VCM) (By Product)	541.30	541.30	541.30	672.19	689.24	668.92	735.47	717.88	790.71	791.26	777.98	2.11	143.72
17. Polyol	142.00	141.63	141.63	31.12	41.11	42.21	40.12	51.78	71.80	78.72	79.43	14.32	56.09
18. PBT	*	*	*	0.00	0.00	0.00	0.43	0.50	0.50	0.61	0.58		
19. Polycarbonate	*	*	*	0.00	0.00	0.00	0.16	0.16	0.17	0.15	0.09		
Total Other Petro-based Chemicals	2272.87	2272.49	2271.29	1738.55	1940.22	1978.87	1970.31	1962.81	2159.22	2173.50	2080.10	2.60	91.58

(\$) : Includes capacity of all the units producing PFY, NFY, NIY and PPFY under broadbanding as Synthetic Filament Yarn : * Includes capacity with Nylon 6, 66

(\$\$) : 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 : 1. Production and Installed Capacity data based on MPR received from large and medium scale units only.

Table 9:- Installed Capacities of Selected Major Petrochemicals (Group Wise) from 2010-11 to 2017-18

(Figures in 000'MT)

GROUP / PRODUCT	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
A : BASIC PETROCHEMICALS								
I : SYNTHETIC FIBRES	3665	3885	3949	3911	4355	4549	4493	4371
II : POLYMERS	8306	8351	8761	8905	8905	9768	10110	10112
III : SYNTHETIC RUBBER (ELASTOMERS)	128	128	124	244	425	425	425	425
IV : SYNTH. DETERGENT INTERMEDIATE	637	672	687	687	687	687	687	687
V : PERFORMANCE PLASTICS	2070	2201	2454	2958	2983	3018	2945	2817
MAJOR PETROCHEMICALS (I TO V)	14807	15237	15975	16705	17355	18448	18660	18413
B : INTERMEDIATES								
VI : FIBRE INTERMEDIATES	5034	5034	5034	5067	5067	5067	5067	5187
VII : OLEFINS	7864	7864	8304	8484	8484	9462	9683	9683
VIII : AROMATICS	5066	5069	5070	5077	6274	6304	6305	6305
C : OTHER PETRO-BASED CHEMICALS	2028	2062	2121	2169	2244	2273	2272	2271
<i>Note : 1.Production and Installed Capacity data based on MPR received from large and medium scale units only.</i>								

Table 10:- Consumption of Selected Major Petrochemicals (Product-wise) during 2010-11 to 2017-18*(Figures in 000'MT)*

PRODUCT NAME	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
I. SYNTHETIC FIBRE								
ACRYLIC FIBRE	75.25	70.22	85.07	95.81	88.55	97.20	83.83	83.94
POLYESTER STAPLE FIBREFILL	52.72	48.52	51.09	56.46	57.30	51.05	53.65	51.33
NYLON FILAMENT YARN	49.46	51.37	44.14	46.60	58.41	64.58	70.11	58.72
NYLON INDUSTRIAL YARN/TYRE CORD	105.34	101.98	103.23	107.96	102.52	98.16	109.83	112.53
POLYESTER FILAMENT YARN	1446.35	1393.58	1351.32	1210.26	1602.69	1616.81	1537.24	1648.48
POLYESTER STAPLE FIBRE	915.77	821.90	833.40	847.34	919.53	957.55	941.91	866.85
POLYPROPYLENE FILAMENT YARN	6.39	7.64	6.02	4.84	3.62	1.32	2.01	3.62
POLYPROPYLENE STAPLE FIBRE	3.21	3.84	6.09	8.52	15.14	21.40	16.82	16.02
POLYESTER INDUSTRIAL YARN	13.30	14.39	15.24	14.75	16.58	15.38	16.33	15.04
ELASTOMERIC/SPANDEX FILAMENT YARN	4.64	7.16	11.55	12.69	16.04	20.36	21.93	27.24
Total	2672.43	2520.59	2507.15	2405.22	2880.38	2943.80	2853.65	2883.77
II. POLYMERS								
LOW DENSITY POLYETHYLENE	363.13	379.07	434.18	427.79	488.78	550.79	566.35	541.99
HIGH DENSITY POLYTHYLENE	1268.15	1302.14	1656.62	1656.81	1947.02	2122.78	2372.35	2365.65
POLYESTYRENE	262.34	256.60	251.65	224.15	247.12	264.80	273.18	284.56
POLYPROPYLENE (INC. CO-POLYMER)	2578.54	2830.10	3176.05	3275.54	3499.59	4249.93	4460.35	4737.19
EXPANDABLE POLYESTYRENE	78.48	77.36	81.53	77.68	78.99	85.42	96.85	103.44
POLY VINYL CHLORIDE	1938.64	2143.54	2388.51	2574.19	2621.79	2936.15	3157.90	3305.72
LINEAR LOW DENSITY POLYTHYLENE	1467.15	1474.14	1528.82	1522.95	1449.51	1778.76	1734.12	1486.21
PVC COMPOUND	64.86	59.40	58.74	54.20	58.29	65.91	42.13	14.35
Total	8021.28	8522.36	9576.09	9813.31	10391.11	12054.52	12703.23	12839.10
III. SYNTHETIC RUBBER								
STYRENE BUTADIENE RUBBER	195.15	214.07	207.19	244.01	262.79	266.55	289.76	286.26
POLY BUTADIENE RUBBER	123.49	144.67	147.13	166.80	176.09	182.59	196.89	201.40
ETHYL PROPYLENE DIMERS	25.82	26.17	27.19	28.27	30.43	36.65	40.13	42.58
ETHYL VINYL ACETATE	100.48	95.25	118.20	124.76	144.70	166.40	143.11	182.45
NITRILE BUTADIENE RUBBER	21.51	8.91	26.40	29.66	26.66	51.93	36.36	39.93
BUTYL RUBBER	70.42	81.90	78.27	78.53	83.29	90.84	100.26	111.02

Table 10:- Consumption of Selected Major Petrochemicals (Product-wise) during 2010-11 to 2017-18*(Figures in 000'MT)*

PRODUCT NAME	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Total	536.87	570.97	604.38	672.04	723.95	794.94	806.50	863.64
IV. SYNTHETIC DETERGENT INTERMEDIATES								
LINEAR ALKYL BENZENE	420.08	485.96	532.29	496.97	517.33	585.94	669.30	656.51
ETHYLENE OXIDE	163.26	168.73	171.49	190.44	184.57	188.03	215.58	290.89
Total	583.35	654.69	703.78	687.41	701.90	773.97	884.88	947.39
V. PERFORMANCE PLASTICS								
ABS RESIN	131.35	133.63	146.76	164.91	176.97	206.62	220.16	242.99
NYLON-6	76.74	86.40	96.84	118.59	136.67	150.19	161.53	174.07
POLYMETHYL METHACRYLATE	14.76	9.82	11.18	11.63	7.11	12.62	18.90	26.43
STYRENE ACRYLONITRILE	87.17	81.82	86.35	93.30	95.07	107.67	107.11	122.94
NYLON 6,6	0.56	0.79	0.85	0.91	1.25	1.23	1.17	1.08
POLYESTER CHIPS/PET CHIPS	1246.81	1217.79	1242.59	1123.03	1153.57	792.03	729.45	676.37
POLYTETRAFLUOROETHYLENE (PTFE)	7.83	12.24	7.96	8.52	5.95	4.75	5.64	7.07
Total	1565.22	1542.48	1592.52	1520.90	1576.58	1275.10	1243.96	1250.94
TOTAL BASIC MAJOR PETROCHEMICALS								
(I+II+III+IV+V)	13379.14	13811.10	14983.93	15098.87	16273.92	17842.34	18492.22	18784.84
FIBRE INTERMEDIATE								
ACRYLONITRILE	110.23	109.69	112.85	137.90	131.08	159.82	139.70	158.27
CAPROLACTUM	115.41	110.29	111.30	107.84	119.33	130.87	138.86	144.33
DIMETHYL TEREPHTHALATE	4.42	2.81	2.10	1.79	2.09	2.22	1.76	2.26
MONO ETHYLENE GLYCOL	1481.55	1564.68	1644.26	1822.97	1931.46	2198.31	2283.68	2061.67
PURIFIED TEREPHTHALIC ACID	3934.08	3887.52	4138.30	4454.58	4799.80	3955.64	3543.14	3801.61
Total	5645.68	5674.98	6008.81	6525.06	6983.76	6446.86	6107.15	6168.13
OLEFINS								
BUTADIENE	111.04	133.21	126.70	117.19	170.19	214.64	242.62	231.81
ETHYLENE	2779.52	3334.32	3338.36	3371.18	3235.80	3743.33	4102.62	4125.38
PROPYLENE	2957.03	3558.14	3735.74	3988.31	3871.53	4445.58	4415.14	4445.97
Total	5847.60	7025.68	7200.80	7476.67	7277.52	8403.54	8760.38	8803.16
AROMATICS								
BENZENE	425.82	543.93	446.14	400.29	517.68	417.72	542.62	31.77

Table 10:- Consumption of Selected Major Petrochemicals (Product-wise) during 2010-11 to 2017-18*(Figures in 000'MT)*

PRODUCT NAME	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
MIXED XYLENE	53.12	58.31	58.58	65.87	206.19	269.45	296.08	273.36
ORTHO-XYLENE	97.78	238.02	278.78	228.28	271.15	299.63	316.81	277.81
TOLUENE	311.80	371.99	410.11	369.35	386.04	454.13	513.67	516.98
PARAXYLENE	2175.01	2227.63	2344.68	2220.25	2391.98	3213.80	3557.33	2256.66
Total	3063.53	3439.87	3538.29	3284.04	3773.04	4654.73	5226.49	3356.58
OTHER PETRO-BASED CHEMICALS								
DIETHYLENE GLYCOL	73.38	98.54	102.88	106.65	100.96	114.24	108.24	105.70
DIACETONE ALCOHOL	3.63	5.40	3.15	0.00	0.00	0.00	0.00	0.21
ETHYLENE DICHLORIDE	739.06	698.52	672.25	717.56	750.57	861.55	786.54	950.82
BUTANOL	37.44	50.16	45.94	47.98	60.40	73.40	68.13	70.21
OXO ALCOHOL	0.19	0.46	0.52	0.51	0.10	0.69	1.92	1.38
2-ETHYL HEXANOL	63.03	78.07	108.15	120.37	142.40	152.76	110.41	112.13
VINYL CHLORIDE MONOMER	1057.27	991.56	965.09	1038.51	1035.81	1140.08	1135.68	1262.37
EPICHLHYDRINE	27.77	27.62	29.79	22.98	33.57	43.36	48.06	55.98
ISO BUTYLENE	42.94	23.35	9.26	21.44	13.01	15.83	20.05	48.70
METAXYLENE	-107.86	-82.78	-36.69	3.03	0.92	3.02	2.60	2.07
METHYL ISOBUTYL KETONE	16.29	18.67	17.66	18.30	23.04	27.29	21.57	33.75
PBT	0.00	0.00	0.00	0.43	0.50	0.50	0.61	0.58
PIB	-0.08	0.91	6.47	3.56	6.30	8.24	13.80	12.42
POLYCARBONATE	101.90	113.67	120.23	120.57	122.26	133.91	134.53	154.11
PROPYLENE OXIDE	44.71	44.25	42.98	45.11	59.52	51.14	52.40	59.44
PROPYLENE GLYCOL	50.48	54.29	52.56	56.77	64.23	67.16	66.82	73.86
POLYVINYL ACETATE RESIN	-1.01	-5.82	-9.68	-11.26	-11.45	-8.05	-5.72	-3.51
UNSATURATED POLYSTER RESIN	27.50	24.78	25.31	20.41	16.19	18.19	23.71	35.45
METHYL METHACRYLATE	4.55	4.29	3.12	3.23	3.47	2.28	0.54	2.83
ISO-BUTANOL	2.91	2.44	2.38	0.79	0.67	1.86	1.96	2.23
C4-RAFFINATE	71.30	209.39	395.15	392.64	364.61	428.64	437.17	339.20
CELLULOSE ACETATE SHEET	0.17	0.44	0.53	0.92	1.23	1.26	0.98	1.29
MELAMINE MOULDING POWDER	4.94	6.95	7.51	8.04	3.74	3.88	2.87	-0.06
POLYACETAL RESIN	17.94	20.37	25.66	25.73	32.07	34.90	37.50	43.53
PHTHALIC ANHYDRIDE	295.39	263.48	285.98	295.51	305.24	345.13	346.10	382.58

Table 10:- Consumption of Selected Major Petrochemicals (Product-wise) during 2010-11 to 2017-18*(Figures in 000'MT)*

PRODUCT NAME	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
STYRENE	456.79	513.24	574.32	570.41	610.86	716.90	724.54	784.75
VINYL ACTATE MONOMER	84.31	122.50	126.19	143.27	137.99	139.95	150.25	163.70
ISOPROPANOL	100.69	94.92	122.21	123.84	132.04	155.07	162.35	171.29
POLYOL	146.27	160.34	179.44	180.22	200.76	236.94	226.03	274.55
Total	3361.87	3540.02	3878.33	4077.48	4211.00	4770.11	4679.61	5141.55

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

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

\$ Derived consumption as Production + Imports - Exports

Section - III

Foreign Trade

Table 11:- Exports and Imports of Chemicals (excluding Pharmaceutical Products and Fertilizers) during 2010-11 to 2017-18

Values in Rs. Crore

HS Code	Commodity	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	CAGR (%)
	Total National Exports of which	1136964	1465959	1634318	1905011	1896445	1716384	1849433.6	1955541.1	8.1
28	INORGANIC CHEMICALS	7991	8667	7176	8258	8749	7913	9138	11175	4.9
29	ORGANIC CHEMICALS	40235	56179	65865	72860	73069	75295	78386	95305	13.1
32	TANNING OR DYEING	7720	9336	11372	15455	17206	16165	17189	18951	13.7
38	MISCELLANEOUS CHEMICAL PRODUCTS.	9409	12485	15545	18694	19432	20083	21792	25082	15.0
39	PLASTIC AND ARTICLES THEREOF.	17966	25312	28012	34154	31022	34381	35502	40926	12.5
4002	SYNTHETIC RUBBER AND FACTICE	175	286	181	245	379	452	480	571	18.4
54	MAN-MADE FILAMENTS.	10469	12467	12112	15575	14621	13460	13334	13984	4.2
55	MAN-MADE STAPLE FIBRES.	8244	10599	10565	12621	13334	13625	14373	13212	7.0
A: Total Chemicals and Petrochemical Products		102207	135330	150829	177862	177813	181374	190193	219206	11.5
	% share in total export	9.0	9.2	9.2	9.3	9.4	10.6	10.3	11.2	
	Total National Imports of which	1683467	2345463	2669162	2715434	2737087	2490306	2577675	3001016	8.6
28	INORGANIC CHEMICALS	17236	27792	28770	29063	31413	33170	31654	38927	12.3
29	ORGANIC CHEMICALS	57550	69144	85439	103157	108320	101986	103798	123761	11.6
32	TANNING OR DYEING	5434	7097	8004	9254	9821	10467	11186	12995	13.3
38	MISCELLANEOUS CHEMICAL PRODUCTS.	13935	17855	20650	23107	25494	27207	30642	35521	14.3
39	PLASTIC AND ARTICLES THEREOF.	34477	40578	52283	61072	71398	74566	77573	89772	14.6
4002	SYNTHETIC RUBBER AND FACTICE	5141	7731	7562	7339	6697	5205	5654	6687	3.8
54	MAN-MADE FILAMENTS.	3024	3725	4149	4597	5042	4879	4856	5538	9.0
55	MAN-MADE STAPLE FIBRES.	1935	2498	3052	3722	4539	4401	3826	4658	13.4
B: Total Chemicals and Petrochemical Products		138731	176419	209909	241311	262722	261880	269189	317859	12.6
	% share in total import	8.2	7.5	7.9	8.9	9.6	10.5	10.4	10.6	

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

Note: Data Source in respect of imports and exports is DGCIS, Kolkata, M/O Commerce and Industry, as on 31.07.2018.

Table 12:- Exports and Imports of Chemicals and Petrochemical Products (including Pharmaceutical Products and Fertilizers) during 2010-11 to 2017-18

Values in Rs. Crore

HS Code	Commodity	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	CARG (%)
	Total National Exports of which	1136964	1465959	1634318	1905011	1896445	1716384	1849434	1955541	8.1
28,29,32,38, 4002, 54 & 55	Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers)	102207	135330	150829	177862	177813	181374	190193	219206	11.5
	% share in total exports	9.0	9.2	9.2	9.3	9.4	10.6	10.3	11.2	
30	Pharmaceutical Products	30383	40817	54774	67404	70815	84481	86705	85445	15.9
	% share in total exports	2.7	2.8	3.4	3.5	3.7	4.9	4.7	4.4	
31	Fertilisers	236	397	480	492	555	673	466	685	16.4
	% share in total exports	0.02	0.03	0.03	0.03	0.03	0.04	0.03	0.04	
A: Total Chemicals and Chemical Products (including Pharmaceutical Products and Fertilizers)		132827	176544	206082	245758	249183	266528	277364	305336	12.6
	% share in total exports	11.68	12.04	12.61	12.90	13.14	15.53	15.00	15.61	
	Total National Imports of which	1683467	2345463	2669162	2715434	2737087	2490306	2577675	3001016	8.6
28,29,32,38, 4002, 54 & 55	Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers)	138731	176419	209909	241311	262722	261880	269189	317859	12.6
	% share in total imports	8.2	7.5	7.9	8.9	9.6	10.5	10.4	10.6	
30	Pharmaceutical Products	5504	8131	9522	9371	9961	10742	11515	12241	12.1
	% share in total imports	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	
31	Fertilisers	28322	44996	40412	32639	39106	45973	28754	30108	0.9
	% share in total imports	1.68	1.92	1.51	1.20	1.43	1.85	1.12	1.00	
B: Total Chemicals and Petrochemical Products (including Pharmaceutical Products and Fertilizers)		172557	229546	259844	283322	311790	318595	309458	360208	11.1
	% share in total imports	10.25	9.79	9.74	10.43	11.39	12.79	12.01	12.00	

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,Kolkata, M/O Commerce and Industry, as on 31.07.2018.

Table 12A:- Net Imports of Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers) during 2010-11 to 2017-18

Values in Rs. Crore

HS Code	Commodity	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
	Total National Net Imports of which	546503	879504	1034844	810423	840641	773921	728242	1045475
28	INORGANIC CHEMICALS	9246	19125	21594	20805	22664	25256	22516	27753
29	ORGANIC CHEMICALS	17315	12965	19574	30296	35251	26692	25412	28455
32	TANNING OR DYEING	-2286	-2240	-3368	-6201	-7385	-5698	-6004	-5955
38	MISCELLANEOUS CHEMICAL PRODUCTS.	4526	5370	5105	4413	6061	7124	8850	10439
39	PLASTIC AND ARTICLES THEREOF.	16511	15266	24271	26918	40376	40185	42071	48845
4002	SYNTHETIC RUBBER AND FACTICE	4966	7445	7381	7094	6318	4753	5174	6116
54	MAN-MADE FILAMENTS.	-7445	-8742	-7964	-10978	-9579	-8582	-8479	-8446
55	MAN-MADE STAPLE FIBRES.	-6309	-8101	-7513	-8899	-8795	-9224	-10546	-8554
Net Imports of Total Chemicals and Chemical Products (excluding Pharmaceutical Products and Fertilizers)		36524	41089	59080	63449	84909	80506	78995	98653
% share in total national net imports		6.7	4.7	5.7	7.8	10.1	10.4	10.8	9.4
30	Pharmaceutical Products	-24879	-32686	-45252	-58032	-60854	-73739	-75190	-73204
31	Fertilisers	28085	44599	39933	32147	38551	45300	28289	29423
Net Imports of Total Chemicals and Chemical Products (including Pharmaceutical Products and Fertilizers)		39730	53002	53761	37564	62607	52067	32094	54872
% share in total national net imports		7.3	6.0	5.2	4.6	7.4	6.7	4.4	5.2

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: Data Source in respect of imports and exports is DGCIS, Kolkata, M/O Commerce and Industry, as on 31.07.2018.

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

Table 13:- Exports of Major Chemicals (Group Wise) during 2010-11 to 2017-18

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

GROUP	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE
ALKALI CHEMICALS	346968	44553	344596	51653	144954	33599	164213	35747	73639	17660	106744	29210	154244	39591	273456	86880
INORGANIC CHEMICALS	405998	132531	327280	162105	162645	99228	167449	116036	163592	100558	156683	74466	377587	111322	173071	102270
ORGANIC CHEMICALS	187390	164132	315492	264248	406944	373539	335353	343064	240545	249461	231728	216771	190306	232940	204923	320492
PESTICIDES & INSECTICIDES \$	125229	390996	153501	568869	179518	794635	206960	985161	230227	974682	266915	1126874	342331	1315026	358481	1481031
DYES & PIGMENTS	271612	567989	288392	661852	326035	816039	346539	1145588	353220	1285827	376046	1219795	419272	1307546	485741	1439290
EXPORTS OF MAJOR CHEMICALS	1337197	1300201	1429261	1708727	1220096	2117040	1220514	2625596	1061223	2628188	1138116	2667116	1483740	3006425	1495672	3429963

Source: Imports & Exports data have been received from Directorate General of Commercial Intelligence & Statistics, Ministry of Commerce & Industry, and Kolkata. www.dgciskol@nic.in
 Note : \$ Import and Export includes both technical and formulations.

Table 14:- Imports of Major Chemicals (Group Wise) during 2010-11 to 2017-18

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

GROUP	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE
ALKALI CHEMICALS	630499	70565	658385	95789	995300	172682	874159	152967	1134146	206474	1117878	218199	1121137	215051	1193978	265347
INORGANIC CHEMICALS	454720	134307	478707	196837	689374	237352	873906	265840	911969	267873	1009821	237368	1010071	235237	1228854	308363
ORGANIC CHEMICALS	1638994	418374	2182271	627474	2486575	757437	2495989	957223	2885815	995356	3143476	865684	3170287	904366	3407051	1207748
PESTICIDES & INSECTICIDES \$	26868	196567	30255	231832	29789	263642	37099	335996	40674	374050	33868	390707	42591	490581	44145	581385
DYES & PIGMENTS	41349	122582	47548	148857	52236	183735	52315	208985	51935	214741	54691	219304	55868	214913	62971	231383
IMPORTS OF MAJOR CHEMICALS	2792430	942395	3397166	1300789	4253274	1614848	4333468	1921011	5024539	2058494	5359734	1931262	5399954	2060148	5936999	2594226

Source: Imports & Exports data have been received from Directorate General of Commercial Intelligence & Statistics, Ministry of Commerce & Industry, and Kolkata. www.dgciskol@nic.in

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

Table 15:- Net Imports of Major Chemicals (Group Wise) during 2010-11 to 2017-18

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

GROUP	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE	QTY.	VALUE
ALKALI CHEMICALS	283531	26012	313789	44136	850346	139083	709946	117220	1060507	188814	1011134	188989	966893	175460	920522	178467
INORGANIC CHEMICALS	48722	1776	151427	34732	526729	138124	706457	149804	748377	167315	853138	162902	632484	123915	1055783	206093
ORGANIC CHEMICALS	1451604	254242	1866779	363226	2079631	383898	2160636	614159	2645270	745895	2911748	648913	2979981	671426	3202128	887256
PESTICIDES & INSECTICIDES \$	-98361	-194429	-123246	-337037	-149729	-530993	-169861	-649165	-189553	-600632	-233047	-736167	-299740	-824445	-314336	-899646
DYES & PIGMENTS	-230263	-445407	-240844	-512995	-273799	-632304	-294224	-936603	-301285	-1071086	-321355	-1000491	-363404	-1092633	-422770	-1207907
NET IMPORTS OF MAJOR CHEMICALS	1455233	-357806	1967905	-407938	3033178	-502192	3112954	-704585	3963316	-569694	4221618	-735854	3916214	-946277	4441327	-835737

Source: Imports & Exports data have been received from Directorate General of Commercial Intelligence & Statistics, Ministry of Commerce & Industry, and Kolkata. www.dgciskol@nic.in Dated 09.08.2018

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

Table 16:- Exports of Major Chemicals during 2010-11 to 2017-18

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

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ALKALI CHEMICALS																
SODA ASH	199765	18281	257622	31586	82144	12766	84254	12506	27720	5166	18613	3927	64377	10793	110087	19377
CAUSTIC SODA	143791	25699	82208	18977	59118	20166	76059	22568	42200	11973	82144	23807	84809	27773	159630	66829
LIQUID CHLORINE	3412	573	4766	1090	3692	667	3900	673	3719	521	5987	1476	5058	1025	3739	674
TOTAL	346968	44553	344596	51653	144954	33599	164213	35747	73639	17660	106744	29210	154244	39591	273456	86880
INORGANIC CHEMICALS																
ALUMINIUM FLUORIDE	7068	3363	3362	2181	3755	2410	3658	2571	2831	1980	1796	1240	321	265	206	204
CALCIUM CARBIDE	961	348	1267	592	1758	853	268	148	412	230	371	206	493	284	464	258
CARBON BLACK	365478	114404	277698	142242	110697	79285	123679	88731	114119	77832	114668	55019	332172	87414	122287	72959
POTASSIUM CHLORATE	1307	393	844	487	791	567	724	451	634	492	758	576	1658	1145	1941	1245
SODIUM CHLORATE	7	22	127	51	40	5	7	10	31	21	13	13	118	56	1075	256
TITANIUM DIOXIDE	7491	8797	5009	7811	3470	5278	9051	12853	5158	7108	4436	5582	8183	10216	9560	15377
RED PHOSPHORUS	317	799	383	1133	471	1598	411	1557	360	1299	482	1777	454	1757	455	1716
HYDROGEN PEROXIDE	1952	454	2415	598	1789	483	544	217	244	143	351	222	270	284	116	214
CALCIUM CARBONATE	21417	3951	36175	7010	39874	8749	29107	9498	39803	11453	33808	9831	33918	9901	36967	10041
TOTAL	405998	132531	327280	162105	162645	99228	167449	116036	163592	100558	156683	74466	377587	111322	173071	102270

Table 16:- Exports of Major Chemicals during 2010-11 to 2017-18

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

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ORGANIC CHEMICALS																
ACETIC ACID	8368	2662	25887	8687	6617	2995	7338	3134	6489	3449	8378	5181	12914	6277	12220	5401
ACETIC ANHYDRIDE	1902	880	2652	1373	3734	1855	6430	3470	20098	11565	18605	9941	20443	10277	19644	13743
ACETONE	2805	1250	1200	958	2660	1828	674	628	3182	2975	10778	6392	3225	2201	5054	3173
PHENOL	1293	2321	1146	2147	436	1028	2142	3230	2009	3338	6841	7379	4013	8192	4750	9709
METHANOL	43560	8787	120419	20481	184669	34456	81917	22584	49463	11525	44013	8196	12624	3123	9466	2846
FORMALDEHYDE	4275	533	4474	722	5041	961	6369	2020	7467	1213	8480	1383	8406	1548	10616	2098
NITROBENZENE	110	83	128	126	165	141	146	131	150	137	49	38	344	231	60	49
CITRIC ACID	1795	1272	2745	1935	2411	1817	2013	1671	1737	1364	1487	1144	1670	1244	2393	1931
MALEIC ANHYDRIDE	66	57	38	32	23	27	27	36	37	47	80	67	232	164	233	227
PENTAERYTHRITOL	1539	2026	1353	1966	1385	2144	1460	2277	1557	2516	1632	2958	2044	3470	2110	3399
ANILINE	1161	899	953	744	193	344	94	143	86	141	129	134	168	207	162	614
CHLORO METHANES	36	53	126	121	42	49	35	353	144	236	38	41	89	121	101	283
ISOBUTYLBENZENE	11459	9769	13920	14712	13314	17938	14156	21087	13944	19250	12572	14186	13430	14854	12341	14384
ONCB	428	243	323	168	378	319	2555	2428	2231	2283	843	883	973	950	0	0
PNCB	1413	677	1272	693	2096	1442	2370	1763	843	564	1670	1114	1023	738	0	0

Table 16:- Exports of Major Chemicals during 2010-11 to 2017-18

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

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
MEK	56	184	428	501	408	390	460	2382	673	922	184	795	189	98	19	36
ACETALDEHYDE	84	352	241	908	239	1005	37	118	25	140	2	4	40	44	3	6
ETHANOLAMINES	1149	1578	1752	3063	832	3173	1235	4665	1027	3696	1129	7119	1692	4996	4801	14201
ETHYL ACETATE	96996	46806	126601	64994	169166	88388	190187	103855	115096	67934	104814	54269	93699	48020	105551	62174
MENTHOL	8274	83459	9507	139774	12181	212575	14988	166411	13135	115160	8836	94548	12006	125246	12749	183951
ORTHO NITRO TOLUENE	621	241	327	143	954	664	720	678	1152	1006	1168	999	1082	939	2650	2267
TOTAL	187390	164132	315492	264248	406944	373539	335353	343064	240545	249461	231728	216771	190306	232940	204923	320492
PESTICIDES & INSECTICIDES																
D.D.T.	32	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MALATHION	555	676	425	483	328	611	415	819	1260	2346	1010	1943	1264	2274	1977	3682
DIMETHOATE	359	614	4	9	69	182	184	679	369	1327	20	52	24	58	24	62
D.D.V.P.	929	1288	1129	2024	543	1179	298	707	564	1449	550	1461	322	1145	493	1835
QUINALPHOS	673	2108	483	1490	463	1657	950	3360	996	3900	235	1036	384	1772	382	1645
ENDOSULPHAN	4701	9353	1612	3483	80	260	45	59	0	0	0	0	0	0	0	1
CYPERMETHRIN	10871	40665	10570	52655	10268	55107	11982	58546	10487	50407	8837	45949	9416	45742	9706	62713
FENTHION	0	0	0	0	0	0	0	0	0	0	0	0	10	18	0	0

Table 16:- Exports of Major Chemicals during 2010-11 to 2017-18

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

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
OTHER PESTICIDES	22283	84569	27283	83613	33468	136414	48228	206246	37862	178366	41058	214054	45560	208648	43320	216510
OTHER INSECTICIDES	37925	150093	42940	259829	41853	335623	48918	372937	45483	344754	31146	276427	41471	311285	50008	393497
COPPER-OXYCHLORIDE	625	1403	434	1179	478	1231	417	1155	867	2311	810	1818	871	1921	723	1732
2, 4-D	8835	11013	13262	20823	15365	27427	14851	27924	10938	18095	19449	29770	20677	27496	24125	36076
ISOPROTURON	3351	6864	2239	6588	4181	13189	2114	7804	2150	7972	1087	3830	356	1295	0	0
ALUMINIUM PHOSPHIDE	2158	6816	1969	7271	2341	9758	853	3703	223	562	64	226	127	515	505	1703
METHYL BROMIDE	14	28	155	404	104	373	383	1333	551	1940	1274	4641	1756	6229	2000	7292
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	10535	40697	14971	68852	14452	85943	15005	130898	19150	151055	32381	266182	50720	362041	67039	425113
OTHER FUNGICIDES	21383	34714	36025	60166	55525	125681	62317	168991	99327	210198	128994	279485	169373	344587	158179	329170
TOTAL	125229	390996	153501	568869	179518	794635	206960	985161	230227	974682	266915	1126874	342331	1315026	358481	1481031
DYES & PIGMENTS																
AZO DYES	49700	88623	48638	89802	54228	111415	57392	172261	51902	194665	55327	161970	60390	162456	69996	181785
ACID DIRECT DYES(OTHER THAN	4220	8870	3264	7815	3629	9770	5637	21363	4004	20146	3559	17300	4434	19689	5098	21655
BASIC DYES	6141	9512	5655	9732	6957	14815	7148	19082	7646	21701	8173	23896	9229	26186	10757	32222
DISPERSE DYES	5700	15642	6452	18596	7017	19417	9248	33190	12065	48545	13117	52818	16078	59912	14460	56914
FAST COLOUR BASES	2683	6939	2815	7442	3106	9349	2619	10191	2806	11890	2262	11868	2174	15766	2042	9726

Table 16:- Exports of Major Chemicals during 2010-11 to 2017-18*(Qty. in MT & Value in Rs. Lakh)*

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
OIL SOLUBLE (SOLVENT DYES)	4045	13960	5158	17215	4665	17828	4965	23306	6826	32614	6123	31703	8702	39439	8995	42906
OPTICAL WHITENING AGENTS	23625	25112	20346	22941	23049	29156	23381	36889	27211	44223	25203	46519	26957	46240	30124	48069
ORGANIC PIGMENT	296	648	330	1383	60	386	15	100	191	500	75	531	71	293	62	185
PIGMENT EMULSION	67539	212430	65704	253341	69919	295002	71335	353119	76407	365943	81536	374190	88980	392700	102051	441253
REACTIVE DYES	69031	113510	77313	137604	98440	200414	110018	340284	107369	392147	113224	344963	128417	379350	147417	413080
SULPHUR DYES (SULPHUR BLACK)	1514	1277	747	838	889	1153	1141	1575	1993	2627	1472	1945	2023	2682	5467	5794
VAT DYES	2073	16295	2229	18768	1954	16816	1955	24387	2132	31855	1364	20523	1404	22737	1707	26607
SOLUBILISED VAT DYES	481	1309	51	399	47	370	31	491	29	283	36	354	31	265	46	529
FOOD COLOURS	13211	29415	19012	42563	21786	51772	22893	65439	26034	77218	27101	79537	28359	79492	31110	87129
NAPTHOLS	608	1369	869	1634	1242	2754	887	2597	1139	3113	1489	3463	2076	4753	2329	5725
OTHER DYES	6991	13192	6852	13361	8050	16587	9558	23840	9612	27865	10159	22693	12711	24977	13735	26227
INORGANIC PIGMENTS	13754	9886	22957	18418	20997	19035	18316	17474	15854	10492	25826	25522	27236	30609	40345	39484
TOTAL	271612	567989	288392	661852	326035	816039	346539	1145588	353220	1285827	376046	1219795	419272	1307546	485741	1439290

Note : Data Source in respect of imports and exports is DGCIS,Kolkata, M/O Commerce and Industry.

Table17:- Imports of Major Chemicals (Product-wise) during 2010-11 to 2017-18

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

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ALKALI CHEMICALS																
SODA ASH	489956	49573	445363	52829	692866	96965	569420	79817	725517	112616	633263	101707	695307	102490	772622	111757
CAUSTIC SODA	138481	20764	212642	42811	302385	75577	304653	73038	407981	93584	484133	116303	425795	112391	421298	153382
LIQUID CHLORINE	2062	228	380	149	49	140	86	112	648	274	482	189	35	170	58	208
TOTAL	630499	70565	658385	95789	995300	172682	874159	152967	1134146	206474	1117878	218199	1121137	215051	1193978	265347
INORGANIC CHEMICALS																
ALUMINIUM FLUORIDE	13989	6597	28448	20188	26244	19086	24542	17383	30120	20259	27258	18102	46564	26437	49758	29075
CALCIUM CARBIDE	56479	19046	56500	21507	57865	24734	64239	26743	78332	31525	61935	25429	55692	23652	55651	23941
CARBON BLACK	74905	45674	124338	85053	143461	105503	145939	112823	139468	108915	124059	83401	128740	82424	186224	143618
POTASSIUM CHLORATE	7095	3171	6300	2991	7468	4217	7040	4357	6147	3856	3160	2026	100	61	29	22
SODIUM CHLORATE	24762	6655	25135	8251	25076	9375	28083	11570	21818	9085	17298	6400	7447	2907	8822	3041
TITANIUM DIOXIDE	18295	20938	22636	34902	17825	31788	16875	29196	17574	28243	16421	25709	13901	22943	13701	24771
RED PHOSPHORUS	384	775	388	808	298	735	266	750	36	98	0	0	0	1	0	3
HYDROGEN PEROXIDE	37074	9385	25313	6378	33129	8191	62527	16443	56276	14311	44084	11211	57068	15910	68474	19305

Table17:- Imports of Major Chemicals (Product-wise) during 2010-11 to 2017-18

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

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
CALCIUM CARBONATE	221737	22066	189649	16759	378008	33723	524395	46575	562198	51581	715606	65090	700559	60902	846195	64587
TOTAL	454720	134307	478707	196837	689374	237352	873906	265840	911969	267873	1009821	237368	1010071	235237	1228854	308363
ORGANIC CHEMICALS																
ACETIC ACID	466097	96233	570040	152012	646738	171462	664797	197806	712384	234821	792775	206305	847808	193958	884515	290624
ACETIC ANHYDRIDE	771	401	1533	856	2042	1049	1792	985	2689	1538	2918	1780	2272	1118	4381	2346
ACETONE	78236	32100	100637	54505	95939	54615	116758	81421	126832	82658	138402	55796	135887	63055	146878	74975
PHENOL	123490	93671	146762	111194	172758	139980	214096	172402	200115	183502	248769	147715	282187	176601	288572	202842
METHANOL	813422	103539	1199635	198749	1398982	260025	1310438	341804	1641624	319399	1711879	285259	1637457	295762	1783293	400004
FORMALDEHYDE	605	221	614	395	342	217	433	216	412	225	66	42	84	248	46	44
NITROBENZENE	0	0	22	36	0	0	0	4	1208	802	5838	2733	14429	6944	15384	8207
CITRIC ACID	44102	18562	53142	25921	56743	27338	64099	31694	67369	33345	75978	36119	81681	39558	84262	45489
MALEIC ANHYDRIDE	37973	24772	34584	25470	36864	35099	36751	39695	38388	35773	47399	31392	50813	34618	52627	42928
PENTAERYTHRITOL	13961	8764	15059	12162	14650	13819	15650	16423	13681	14646	19486	21468	19380	20690	17963	19614
ANILINE	24012	14563	15310	10544	15441	14410	31742	34853	36095	36876	38341	26965	44650	29368	65416	58924

Table17:- Imports of Major Chemicals (Product-wise) during 2010-11 to 2017-18

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

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
CHLORO METHANES	502	435	249	268	153	356	143	296	113	289	608	364	258	223	519	429
ISOBUTYLBENZENE	0	0	0	0	0	0	26	19	0	0	0	0	0	0	0	0
ONCB	3598	1697	2336	1092	2089	1313	672	589	395	410	237	192	839	628	0	0
PNCB	1564	776	347	187	0	0	398	295	3838	2301	8408	3886	6095	2899	0	0
MEK	21384	15286	30220	24334	31597	25151	27239	23186	27539	25599	40883	26950	30901	16629	45331	36027
ACETALDEHYDE	61	576	67	240	49	230	97	436	53	176	74	299	130	357	81	243
ETHANOLAMINES	6595	5132	6488	5706	10435	8562	10023	10652	11286	17183	10072	10321	11662	10202	16101	16140
ETHYL ACETATE	2344	1202	5008	2732	1405	1102	240	466	201	453	290	909	1664	861	43	127
MENTHOL	52	369	159	1051	329	2702	457	3889	507	4307	936	7112	1511	10211	1372	8573
ORTHO NITRO TOLUENE	225	75	59	20	19	7	138	92	1086	1053	117	77	579	436	267	212
TOTAL	1638994	418374	2182271	627474	2486575	757437	2495989	957223	2885815	995356	3143476	865684	3170287	904366	3407051	1207748
PESTICIDES & INSECTICIDES																
MALATHION	52	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DIMETHOATE	58	109	152	299	182	422	46	106	0	0	0	0	0	0	0	0

Table17:- Imports of Major Chemicals (Product-wise) during 2010-11 to 2017-18

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

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
D.D.V.P.	45	66	24	46	0	0	70	99	20	36	64	116	16	28	35	66
ENDOSULPHAN	192	592	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CYPERMETHRIN	17	282	0	4	8	20	4	11	0	0	0	0	0	0	8	47
FENTHION	0	0	0	0	0	0	35	173	50	236	0	0	0	0	0	0
OTHER PESTICIDES	651	1495	2340	7815	1263	6928	2255	13747	2007	12072	1318	12700	1176	91641	1907	139991
OTHER INSECTICIDES	17257	142478	18388	156952	17157	173226	19563	194422	19369	205845	15634	213829	18067	208838	17307	239549
COPPER-OXYCHLORIDE	1	7	0	2	0	1	48	122	0	0	0	0	0	1	0	1
2, 4-D	204	486	0	0	0	78	0	0	34	77	72	123	16	27	1824	2735
ISOPROTURON	23	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ALUMINIUM PHOSPHIDE	187	2183	31	561	23	741	8	61	3	54	6	98	0	0	0	0
METHYL BROMIDE	448	955	655	1667	779	2591	460	1652	269	1150	53	250	24	70	18	107
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	3775	27693	4689	36838	7107	57625	10056	85938	12294	86257	10171	85167	16149	104626	15248	100387
OTHER FUNGICIDES	3958	20107	3976	27648	3270	22010	4554	39665	6628	68323	6550	78424	7143	85350	7798	98502
TOTAL	26868	196567	30255	231832	29789	263642	37099	335996	40674	374050	33868	390707	42591	490581	44145	581385

Table17:- Imports of Major Chemicals (Product-wise) during 2010-11 to 2017-18

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

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
DYES & PIGMENTS																
AZO DYES	536	2055	769	2556	527	2844	669	3559	1114	5148	716	4016	630	3509	514	3734
ACID DIRECT DYES(OTHER THAN AZO)	643	1205	746	1454	678	1643	729	2136	436	2036	312	1685	188	1348	248	1942
BASIC DYES	1275	3970	1401	4807	1189	6195	1075	6569	724	5266	475	4135	560	4183	647	5445
DISPERSE DYES	8378	17490	10534	22582	11118	28720	8788	33194	4671	26330	6199	28647	4970	23618	4051	23972
FAST COLOUR BASES	367	867	292	801	374	1308	499	2653	327	2864	510	3058	426	2314	379	2113
OIL SOLUBLE (SOLVENT DYES)	801	4615	1240	6292	1239	7434	1131	7329	782	6414	689	5967	762	5446	846	6414
OPTICAL WHITENING AGENTS	499	3073	392	2755	489	4302	675	4708	565	4442	664	5376	612	5455	593	5540
ORGANIC PIGMENT	111	537	186	817	124	561	178	694	142	575	190	889	100	678	65	271
PIGMENT EMULSION	6659	33094	8376	40159	6955	43711	7069	46089	6663	48423	6578	47122	7085	47759	8261	52679
REACTIVE DYES	2118	12646	2151	11667	2935	19312	3352	24425	3146	26556	3148	27009	3460	28744	3340	24642
SULPHUR DYES (SULPHUR BLACK)	1900	1680	2167	1888	2189	3318	1781	2498	1151	2537	1332	2636	1283	2638	1252	2916
VAT DYES	4430	13255	6379	16986	10201	27519	13801	36889	17449	43388	20580	48846	23527	53539	26368	59134
SOLUBILISED VAT DYES	54	266	193	698	107	483	91	418	82	252	473	1007	337	756	319	764

Table17:- Imports of Major Chemicals (Product-wise) during 2010-11 to 2017-18*(Qty. in MT & Value in Rs. Lakh)*

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
FOOD COLOURS	623	1825	290	1768	367	2778	391	2978	653	3872	1083	5225	1041	4859	1162	5057
NAPTHOLS	1200	3492	916	2147	1040	3178	1142	4190	1024	3896	1051	3824	1107	3750	1286	4446
OTHER DYES	344	1737	462	1661	905	2709	291	1927	271	1868	177	1531	183	1533	512	2239
INORGANIC PIGMENTS	11411	20775	11054	29819	11799	27720	10653	28729	12735	30874	10514	28331	9597	24784	13128	30075
TOTAL	41349	122582	47548	148857	52236	183735	52315	208985	51935	214741	54691	219304	55868	214913	62971	231383

Note : Data Source in respect of imports and exports is DGCIS,Kolkata, M/O Commerce and Industry.

Table 18:- Net Imports of Major Chemicals (Product-wise) during 2010-11 to 2017-18

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

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ALKALI CHEMICALS																
SODA ASH	290191	31292	187741	21243	610722	84199	485166	67311	697797	107450	614650	97780	630930	91697	662535	92380
CAUSTIC SODA	-5310	-4935	130434	23834	243267	55411	228594	50470	365781	81611	401989	92496	340986	84618	261668	86553
LIQUID CHLORINE	-1350	-345	-4386	-941	-3643	-527	-3814	-561	-3071	-247	-5505	-1287	-5023	-855	-3681	-466
TOTAL	283531	26012	313789	44136	850346	139083	709946	117220	1060507	188814	1011134	188989	966893	175460	920522	178467
INORGANIC CHEMICALS																
ALUMINIUM FLUORIDE	6921	3234	25086	18007	22489	16676	20884	14812	27289	18279	25462	16862	46243	26172	49552	28871
CALCIUM CARBIDE	55518	18698	55233	20915	56107	23881	63971	26595	77920	31295	61564	25223	55199	23368	55187	23683
CARBON BLACK	-290573	-68730	-153360	-57189	32764	26218	22260	24092	25349	31083	9391	28382	-203432	-4990	63937	70659
POTASSIUM CHLORATE	5788	2778	5456	2504	6677	3650	6316	3906	5513	3364	2402	1450	-1558	-1084	-1912	-1223
SODIUM CHLORATE	24755	6633	25008	8200	25036	9370	28076	11560	21787	9064	17285	6387	7329	2851	7747	2785
TITANIUM DIOXIDE	10804	12141	17627	27091	14355	26510	7824	16343	12416	21135	11985	20127	5718	12727	4141	9394
RED PHOSPHORUS	67	-24	5	-325	-173	-863	-145	-807	-324	-1201	-482	-1777	-454	-1756	-455	-1713
HYDROGEN PEROXIDE	35122	8931	22898	5780	31340	7708	61983	16226	56032	14168	43733	10989	56798	15626	68358	19091
CALCIUM CARBONATE	200320	18115	153474	9749	338134	24974	495288	37077	522395	40128	681798	55259	666641	51001	809228	54546
TOTAL	48722	1776	151427	34732	526729	138124	706457	149804	748377	167315	853138	162902	632484	123915	1055783	206093

Table 18:- Net Imports of Major Chemicals (Product-wise) during 2010-11 to 2017-18

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

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ORGANIC CHEMICALS																
ACETIC ACID	457729	93571	544153	143325	640121	168467	657459	194672	705895	231372	784397	201124	834894	187681	872295	285223
ACETIC ANHYDRIDE	-1131	-479	-1119	-517	-1692	-806	-4638	-2485	-17409	-10027	-15687	-8161	-18171	-9159	-15263	-11397
ACETONE	75431	30850	99437	53547	93279	52787	116084	80793	123650	79683	127624	49404	132662	60854	141824	71802
PHENOL	122197	91350	145616	109047	172322	138952	211954	169172	198106	180164	241928	140336	278174	168409	283822	193133
METHANOL	769862	94752	1079216	178268	1214313	225569	1228521	319220	1592161	307874	1667866	277063	1624833	292639	1773827	397158
FORMALDEHYDE	-3670	-312	-3860	-327	-4699	-744	-5936	-1804	-7055	-988	-8414	-1341	-8322	-1300	-10570	-2054
NITROBENZENE	-110	-83	-106	-90	-165	-141	-146	-127	1058	665	5789	2695	14085	6713	15324	8158
CITRIC ACID	42307	17290	50397	23986	54332	25521	62086	30023	65632	31981	74491	34975	80011	38314	81869	43558
MALEIC ANHYDRIDE	37907	24715	34546	25438	36841	35072	36724	39659	38351	35726	47319	31325	50581	34454	52394	42701
PENTAERYTHRITOL	12422	6738	13706	10196	13265	11675	14190	14146	12124	12130	17854	18510	17336	17220	15853	16215
ANILINE	22851	13664	14357	9800	15248	14066	31648	34710	36009	36735	38212	26831	44482	29161	65254	58310
CHLORO METHANES	466	382	123	147	111	307	108	-57	-31	53	570	323	169	102	418	146
ISOBUTYLBENZENE	-11459	-9769	-13920	-14712	-13314	-17938	-14130	-21068	-13944	-19250	-12572	-14186	-13430	-14854	-12341	-14384
ONCB	3170	1454	2013	924	1711	994	-1883	-1839	-1836	-1873	-606	-691	-134	-322	0	0
PNCB	151	99	-925	-506	-2096	-1442	-1972	-1468	2995	1737	6738	2772	5072	2161	0	0

Table 18:- Net Imports of Major Chemicals (Product-wise) during 2010-11 to 2017-18

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

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
MEK	21328	15102	29792	23833	31189	24761	26779	20804	26866	24677	40699	26155	30712	16531	45312	35991
ACETALDEHYDE	-23	224	-174	-668	-190	-775	60	318	28	36	72	295	90	313	78	237
ETHANOLAMINES	5446	3554	4736	2643	9603	5389	8788	5987	10259	13487	8943	3202	9970	5206	11300	1939
ETHYL ACETATE	-94652	-45604	-121593	-62262	-167761	-87286	-189947	-103389	-114895	-67481	-104524	-53360	-92035	-47159	-105508	-62047
MENTHOL	-8222	-83090	-9348	-138723	-11852	-209873	-14531	-162522	-12628	-110853	-7900	-87436	-10495	-115035	-11377	-175378
ORTHO NITRO TOLUENE	-396	-166	-268	-123	-935	-657	-582	-586	-66	47	-1051	-922	-503	-503	-2383	-2055
TOTAL	1451604	254242	1866779	363226	2079631	383898	2160636	614159	2645270	745895	2911748	648913	2979981	671426	3202128	887256
PESTICIDES & INSECTICIDES																
D.D.T	-32	-95	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MALATHION	-503	-626	-425	-483	-328	-611	-415	-819	-1260	-2346	-1010	-1943	-1264	-2274	-1977	-3682
DIMETHOATE	-301	-505	148	290	113	240	-138	-573	-369	-1327	-20	-52	-24	-58	-24	-62
D.D.V.P.	-884	-1222	-1105	-1978	-543	-1179	-228	-608	-544	-1413	-486	-1345	-306	-1117	-458	-1769
QUINALPHOS	-673	-2108	-483	-1490	-463	-1657	-950	-3360	-996	-3900	-235	-1036	-384	-1772	-382	-1645
ENDOSULPHAN	-4509	-8761	-1612	-3483	-80	-260	-45	-59	0	0	0	0	0	0	0	-1
CYPERMETHRIN	-10854	-40383	-10570	-52651	-10260	-55087	-11978	-58535	-10487	-50407	-8837	-45949	-9416	-45742	-9698	-62666
FENTHION	0	0	0	0	0	0	35	173	50	236	0	0	-10	-18	0	0

Table 18:- Net Imports of Major Chemicals (Product-wise) during 2010-11 to 2017-18

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

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
OTHER PESTICIDES	-21632	-83074	-24943	-75798	-32205	-129486	-45973	-192499	-35855	-166294	-39740	-201354	-44384	-117007	-41413	-76519
OTHER INSECTICIDES	-20668	-7615	-24552	-102877	-24696	-162397	-29355	-178515	-26114	-138909	-15512	-62598	-23404	-102447	-32701	-153948
COPPER-OXYCHLORIDE	-624	-1396	-434	-1177	-478	-1230	-369	-1033	-867	-2311	-810	-1818	-871	-1920	-723	-1731
2, 4-D	-8631	-10527	-13262	-20823	-15365	-27349	-14851	-27924	-10904	-18018	-19377	-29647	-20661	-27469	-22301	-33341
ISOPROTURON	-3328	-6800	-2239	-6588	-4181	-13189	-2114	-7804	-2150	-7972	-1087	-3830	-356	-1295	0	0
ALUMINIUM PHOSPHIDE	-1971	-4633	-1938	-6710	-2318	-9017	-845	-3642	-220	-508	-58	-128	-127	-515	-505	-1703
METHYL BROMIDE	434	927	500	1263	675	2218	77	319	-282	-790	-1221	-4391	-1732	-6159	-1982	-7185
OTHER HERBICIDES- ANTI SPROUTING PRODUCTS	-6760	-13004	-10282	-32014	-7345	-28318	-4949	-44960	-6856	-64798	-22210	-181015	-34571	-257415	-51791	-324726
OTHER FUNGICIDE NES	-17425	-14607	-32049	-32518	-52255	-103671	-57763	-129326	-92699	-141875	-122444	-201061	-162230	-259237	-150381	-230668
TOTAL	-98361	-194429	-123246	-337037	-149729	-530993	-169861	-649165	-189553	-600632	-233047	-736167	-299740	-824445	-314336	-899646
DYES & PIGMENTS																
AZO DYES	-49164	-86568	-47869	-87246	-53701	-108571	-56723	-168702	-50788	-189517	-54611	-157954	-59760	-158947	-69482	-178051
DYES(OTHER THAN AZO)	-3577	-7665	-2518	-6361	-2951	-8127	-4908	-19227	-3568	-18110	-3247	-15615	-4246	-18341	-4850	-19713
BASIC DYES	-4866	-5542	-4254	-4925	-5768	-8620	-6073	-12513	-6922	-16435	-7698	-19761	-8669	-22003	-10110	-26777
DISPERSE DYES	2678	1848	4082	3986	4101	9303	-460	4	-7394	-22215	-6918	-24171	-11108	-36294	-10409	-32942
FAST COLOUR BASES	-2316	-6072	-2523	-6641	-2732	-8041	-2120	-7538	-2479	-9026	-1752	-8810	-1748	-13452	-1663	-7613

Table 18:- Net Imports of Major Chemicals (Product-wise) during 2010-11 to 2017-18*(Qty. in MT & Value in Rs. Lakh)*

PRODUCT	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015		2015-2016		2016-2017		2017-2018	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
OIL SOLUBLE (SOLVENT DYES)	-3244	-9345	-3918	-10923	-3426	-10394	-3834	-15977	-6044	-26200	-5434	-25736	-7940	-33993	-8149	-36492
OPTICAL WHITENING AGENTS	-23126	-22039	-19954	-20186	-22560	-24854	-22706	-32181	-26646	-39781	-24539	-41143	-26345	-40785	-29531	-42529
ORGANIC PIGMENT	-185	-111	-144	-566	64	175	163	594	-49	75	115	358	29	385	3	86
PIGMENT EMULSION	-60880	-179336	-57328	-213182	-62964	-251291	-64266	-307030	-69744	-317520	-74958	-327068	-81895	-344941	-93790	-388574
REACTIVE DYES	-66913	-100864	-75162	-125937	-95505	-181102	-106666	-315859	-104223	-365591	-110076	-317954	-124957	-350606	-144077	-388438
SULPHUR DYES (SULPHUR BLACK)	386	403	1420	1050	1300	2165	640	923	-842	-90	-140	691	-740	-44	-4215	-2878
VAT DYES	2357	-3040	4150	-1782	8247	10703	11846	12502	15317	11533	19216	28323	22123	30802	24661	32527
SOLUBILISED VAT DYES	-427	-1043	142	299	60	113	60	-73	53	-31	437	653	306	491	273	235
FOOD COLOURS	-12588	-27590	-18722	-40795	-21419	-48994	-22502	-62461	-25381	-73346	-26018	-74312	-27318	-74633	-29948	-82072
NAPTHOLS	592	2123	47	513	-202	424	255	1593	-115	783	-438	361	-969	-1003	-1043	-1279
OTHER DYES	-6647	-11455	-6390	-11700	-7145	-13878	-9267	-21913	-9341	-25997	-9982	-21162	-12528	-23444	-13223	-23988
INORGANIC PIGMENTS	-2343	10889	-11903	11401	-9198	8685	-7663	11255	-3119	20382	-15312	2809	-17639	-5825	-27217	-9409
TOTAL	-230263	-445407	-240844	-512995	-273799	-632304	-294224	-936603	-301285	-1071086	-321355	-1000491	-363404	-1092633	-422770	-1207907

Note : Data Source in respect of imports and exports is DGCIS,Kolkata, M/O Commerce and Industry.

Table 19:- Top Five Export Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
SODA ASH	INDONESIA	35677.000	5799.781
	BANGLADESH PR	33862.672	5809.725
	NEPAL	8740.828	1548.463
	SRI LANKA DSR	8498.886	1488.355
	PHILIPPINES	8260.246	1402.573
	Product Total	95039.632	16048.897
CAUSTIC SODA	TANZANIA REP	23502.334	9671.577
	KENYA	14429.492	6188.753
	VIETNAM SOC REP	14241.712	5528.780
	UGANDA	11308.926	5059.981
	SUDAN	10915.951	4557.982
	Product Total	74398.415	31007.073
LIQUID CHLORINE	SRI LANKA DSR	916.600	66.801
	KENYA	829.136	184.591
	QATAR	638.400	63.462
	U ARAB EMTS	314.900	22.809
	MALAYSIA	244.490	93.528
	Product Total	2943.526	431.191
ALUMINIUM FLUORIDE	JAPAN	200.050	192.425
	NIGERIA	5.000	10.128
	NEPAL	0.490	0.367
	BELGIUM	0.040	0.601
	Product Total	205.580	203.521
CALCIUM CARBIDE	BANGLADESH PR	371.000	207.745
	OMAN	45.000	22.040
	ANGOLA	24.000	12.415
	CONGO D. REP.	24.000	14.017
	ETHIOPIA	0.100	1.916
	Product Total	464.100	258.133
CARBON BLACK	SRI LANKA DSR	27955.931	17567.417
	VIETNAM SOC REP	17205.468	10452.416
	KOREA RP	14783.959	7411.085
	JAPAN	12082.063	7464.342
	INDONESIA	8407.945	5194.628
	Product Total	80435.366	48089.888
POTASSIUM CHLORATE	MEXICO	363.000	247.743
	PHILIPPINES	294.000	225.199
	TANZANIA REP	233.000	143.192
	KENYA	225.000	119.359
	ETHIOPIA	135.000	77.701
	Product Total	1250.000	813.194

Table 19:- Top Five Export Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
SODIUM CHLORATE	BANGLADESH PR	686.000	26.261
	PERU	275.000	111.211
	SOUTH AFRICA	50.000	51.278
	BRAZIL	25.000	31.750
	CHILE	25.000	21.021
	Product Total	1061.000	241.521
TITANIUM DIOXIDE	U S A	3693.496	5660.246
	ITALY	1428.000	2675.792
	SPAIN	911.011	1636.228
	JAPAN	721.179	992.757
	U ARAB EMTS	330.107	511.886
	Product Total	7083.793	11476.909
RED PHOSPHORUS	U S A	118.052	396.726
	BRAZIL	58.000	222.040
	CHILE	49.000	184.023
	INDONESIA	38.000	148.645
	PHILIPPINES	28.200	101.860
	Product Total	291.252	1053.294
HYDROGEN PEROXIDE	NEPAL	22.822	30.240
	MOZAMBIQUE	20.008	6.902
	KUWAIT	20.007	6.972
	BURUNDI	11.000	5.968
	U ARAB EMTS	10.080	43.659
	Product Total	83.917	93.741
CALCIUM CARBONATE	NEPAL	14787.047	3369.190
	BANGLADESH PR	6871.140	1564.549
	PAKISTAN IR	2514.475	420.935
	NIGERIA	1753.350	602.245
	BHUTAN	1320.791	93.531
	Product Total	27246.803	6050.450
ACETIC ACID	U S A	2493.000	927.792
	BANGLADESH PR	2265.225	1071.927
	U ARAB EMTS	1582.138	634.756
	SOUTH AFRICA	903.013	414.644
	SAUDI ARAB	602.135	297.279
	Product Total	7845.511	3346.398
ACETIC ANHYDRIDE	BELGIUM	11613.000	7215.220
	U S A	4877.008	4111.205
	BANGLADESH PR	1086.400	795.396
	NETHERLAND	819.140	752.712
	BRAZIL	361.000	341.466
	Product Total	18756.548	13215.999

Table 19:- Top Five Export Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ACETONE	IRAN	1511.850	991.946
	LITHUANIA	1497.000	769.933
	KENYA	462.008	286.325
	SRI LANKA DSR	317.656	196.150
	QATAR	223.357	164.605
	Product Total	4011.871	2408.959
PHENOL	EGYPT A RP	1920.205	1366.343
	IRAN	879.000	651.676
	BRAZIL	467.001	543.215
	SAUDI ARAB	299.480	188.964
	SPAIN	242.100	2249.392
	Product Total	3807.786	4999.590
METHANOL	SRI LANKA DSR	3136.140	794.683
	NEPAL	2664.965	796.005
	KENYA	1296.763	395.481
	NIGERIA	1119.001	300.169
	BANGLADESH PR	339.600	91.825
	Product Total	8556.469	2378.163
FORMALDEHYDE	NEPAL	9200.936	1624.778
	KENYA	299.200	76.915
	SRI LANKA DSR	210.305	93.180
	MYANMAR	170.090	40.523
	QATAR	126.050	30.522
	Product Total	10006.581	1865.918
NITROBENZENE	PAKISTAN IR	20.000	12.233
	THAILAND	20.000	18.216
	PERU	10.000	10.288
	NEPAL	6.805	5.280
	ITALY	2.500	2.976
	Product Total	59.305	48.993
CITRIC ACID	U S A	1988.754	1504.004
	PUERTO RICO	57.000	46.484
	CUBA	43.300	47.891
	QATAR	36.822	30.398
	BANGLADESH PR	34.537	50.924
	Product Total	2160.413	1679.701
MALEIC ANHYDRIDE	SAUDI ARAB	200.000	186.944
	BANGLADESH PR	20.501	23.854
	KENYA	8.000	11.684
	SRI LANKA DSR	2.000	2.455
	NEPAL	1.825	1.750
	Product Total	232.326	226.687

Table 19:- Top Five Export Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
PENTAERYTHRITOL	U S A	1533.024	2413.481
	NETHERLAND	162.000	185.880
	COLOMBIA	144.000	165.400
	NEPAL	75.500	97.199
	BELGIUM	75.000	216.264
	Product Total	1989.524	3078.224
ANILINE	THAILAND	131.600	164.732
	PAKISTAN IR	30.000	39.624
	GERMANY	0.198	3.023
	BELGIUM	0.170	1.735
	EGYPT A RP	0.145	0.429
	Product Total	162.113	209.543
CHLORO METHANES	SAUDI ARAB	54.225	55.035
	NEPAL	22.000	9.425
	NETHERLAND	18.000	36.339
	U S A	6.080	18.018
	SUDAN	0.280	0.163
	Product Total	100.585	118.980
ISOBUTYLBENZENE	CHINA P RP	8318.000	9731.479
	U S A	4020.020	4643.198
	NETHERLAND	3.000	8.908
	Product Total	12341.020	14383.585
MEK	SRI LANKA DSR	13.000	14.689
	PAKISTAN IR	3.000	12.347
	NEPAL	1.990	5.153
	CONGO D. REP.	0.220	0.791
	QATAR	0.165	0.242
	Product Total	18.375	33.222
ACETALDEHYDE	SAUDI ARAB	2.000	3.205
	EGYPT A RP	0.315	0.646
	IRAN	0.180	0.340
	MAURITIUS	0.130	0.442
	BANGLADESH PR	0.100	0.203
	Product Total	2.725	4.836
ETHANOLAMINES	U S A	1337.407	3034.145
	AUSTRALIA	786.120	1217.083
	CHINA P RP	525.445	1280.980
	U ARAB EMTS	406.057	569.252
	SAUDI ARAB	308.734	602.350
	Product Total	3363.763	6703.810

Table 19:- Top Five Export Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ETHYL ACETATE	BELGIUM	14912.880	8262.867
	ITALY	14854.333	8150.219
	RUSSIA	8567.180	5181.039
	U ARAB EMTS	8463.290	4925.633
	BANGLADESH PR	8435.420	5279.437
	Product Total	55233.103	31799.195
MENTHOL	CHINA P RP	8537.885	113819.920
	U S A	1182.225	18050.154
	NETHERLAND	771.015	16631.416
	SINGAPORE	519.164	7304.487
	FRANCE	417.665	5352.687
	Product Total	11427.954	161158.664
ORTHO NITRO TOLUENE	GERMANY	2325.000	1993.720
	JAPAN	324.002	272.333
	ANGOLA	0.800	1.389
	Product Total	2649.802	2267.442
MALATHION	SAUDI ARAB	368.299	672.906
	TURKEY	329.000	567.187
	MEXICO	260.000	479.474
	EGYPT A RP	234.000	417.213
	MALAYSIA	220.000	409.175
	Product Total	1411.299	2545.955
DIMETHOATE	TUNISIA	12.868	40.981
	NEPAL	6.769	13.311
	BANGLADESH PR	3.000	5.333
	MADAGASCAR	1.000	2.832
	SOUTH AFRICA	0.001	0.003
	Product Total	23.638	62.460
D.D.V.P.	UGANDA	297.406	1122.562
	MEXICO	100.000	231.918
	JAPAN	25.960	86.919
	TANZANIA REP	20.800	72.187
	BRAZIL	15.000	38.732
	Product Total	459.166	1552.318
QUINALPHOS	VIETNAM SOC REP	326.250	1483.743
	BANGLADESH PR	47.600	126.749
	TANZANIA REP	7.500	33.086
	NEPAL	0.270	1.641
	SAUDI ARAB	0.002	0.064
	Product Total	381.622	1645.283
ENDOSULPHAN	ZAMBIA	0.100	0.565
	NEPAL	0.025	0.188
	Product Total	0.125	0.753

Table 19:- Top Five Export Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
CYPERMETHRIN	BRAZIL	1279.730	8391.000
	THAILAND	872.225	6135.712
	CHINA P RP	746.000	5120.149
	VIETNAM SOC REP	679.475	4919.765
	MEXICO	582.474	3813.554
	Product Total	4159.904	28380.180
OTHER PESTICIDES	BRAZIL	11928.870	57034.598
	U S A	4799.146	33569.539
	NIGERIA	2789.665	5901.906
	NEPAL	1597.847	3299.250
	VIETNAM SOC REP	1575.242	12118.663
	Product Total	22690.770	111923.956
OTHER INSECTICIDES	BRAZIL	10861.964	104755.565
	BANGLADESH PR	4453.825	23890.953
	U S A	3298.357	53172.777
	IRAN	2470.623	11824.696
	VIETNAM SOC REP	1854.806	8077.589
	Product Total	22939.575	201721.580
COPPER-OXYCHLORIDE	IRAN	268.000	599.959
	EGYPT A RP	162.000	402.313
	VIETNAM SOC REP	76.000	194.448
	PAKISTAN IR	42.000	78.765
	LEBANON	33.000	96.264
	Product Total	581.000	1371.749
2, 4-D	U S A	5594.400	8451.142
	BRAZIL	5312.014	8025.057
	ARGENTINA	3564.000	5239.112
	AUSTRALIA	1441.663	2435.393
	COLOMBIA	1126.048	1462.479
	Product Total	17038.125	25613.183
ALUMINIUM PHOSPHIDE	BANGLADESH PR	142.906	422.490
	TURKEY	69.632	312.770
	TAIWAN	43.000	64.070
	EGYPT A RP	42.007	145.530
	ETHIOPIA	41.562	171.808
	Product Total	339.107	1116.668
METHYL BROMIDE	VIETNAM SOC REP	506.510	1739.603
	AUSTRALIA	270.000	941.254
	EGYPT A RP	260.000	925.259
	NEW ZEALAND	216.000	733.514
	EL SALVADOR	162.850	532.888
	Product Total	1415.360	4872.518

Table 19:- Top Five Export Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	U S A	25135.259	171398.332
	BRAZIL	3716.559	24980.671
	FRANCE	3586.726	21499.116
	ISRAEL	2352.801	11171.489
	ARGENTINA	2294.108	14538.494
	Product Total	37085.453	243588.102
OTHER FUNGICIDE NES	BRAZIL	21871.666	44218.945
	BANGLADESH PR	14280.848	15269.834
	U S A	12150.621	28831.781
	INDONESIA	8649.716	15557.141
	FRANCE	7060.460	14510.941
	Product Total	64013.311	118388.642
AZO DYES	ITALY	10994.340	34619.460
	SPAIN	5777.543	16298.243
	CHINA P RP	5173.577	15357.163
	GERMANY	5029.626	11740.714
	BRAZIL	3168.398	8008.452
	Product Total	30143.484	86024.032
ACID DIRECT DYES(OTHER THAN AZO)	U S A	693.870	2784.028
	ITALY	499.588	2191.823
	CHINA P RP	378.233	1837.831
	MALAYSIA	318.001	690.492
	THAILAND	238.589	1388.677
	Product Total	2128.281	8892.851
BASIC DYES	CHINA P RP	986.665	2811.053
	U S A	967.591	3181.959
	PAKISTAN IR	823.092	1703.892
	INDONESIA	726.901	1419.651
	ITALY	683.371	1492.066
	Product Total	4187.620	10608.621
DISPERSE DYES	PAKISTAN IR	2180.310	5969.204
	TURKEY	1606.560	4584.585
	HONDURAS	1127.640	4798.377
	INDONESIA	909.231	3771.448
	TAIWAN	847.570	3438.721
	Product Total	6671.311	22562.335
FAST COLOUR BASES	NETHERLAND	355.500	1237.776
	CHINA P RP	302.150	1539.644
	INDONESIA	285.735	962.115
	GERMANY	248.650	784.683
	BRAZIL	158.478	503.787
	Product Total	1350.513	5028.005

Table 19:- Top Five Export Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
OIL SOLUBLE (SOLVENT DYES)	U K	2034.673	8557.841
	U S A	736.006	5497.014
	BRAZIL	719.185	2182.549
	ITALY	661.147	2933.586
	NETHERLAND	614.560	2246.565
	Product Total	4765.571	21417.555
OPTICAL WHITENING AGENTS	SINGAPORE	2896.470	2043.500
	U S A	2398.620	5418.304
	AUSTRALIA	2390.771	1620.027
	SOUTH AFRICA	2340.850	2977.572
	KOREA RP	1975.100	1083.089
	Product Total	12001.811	13142.492
ORGANIC PIGMENT	BANGLADESH PR	46.827	151.007
	AUSTRALIA	10.000	13.741
	GERMANY	2.940	3.806
	RUSSIA	0.760	7.950
	TAIWAN	0.660	4.861
	Product Total	61.187	181.365
PIGMENT EMULSION	U S A	15411.836	62489.387
	NETHERLAND	8897.002	40574.259
	KOREA RP	5182.886	19327.789
	BELGIUM	5111.610	22205.060
	JAPAN	4791.482	21732.774
	Product Total	39394.816	166329.269
REACTIVE DYES	TURKEY	31916.585	76265.648
	BANGLADESH PR	26845.250	55536.002
	SINGAPORE	10197.010	36686.305
	PAKISTAN IR	9831.201	22934.096
	HONDURAS	8005.830	26546.743
	Product Total	86795.876	217968.794
SULPHUR DYES (SULPHUR BLACK)	BANGLADESH PR	1572.705	1399.508
	TURKEY	572.995	621.202
	ITALY	434.000	411.929
	MYANMAR	411.212	510.392
	NETHERLAND	382.800	360.297
	Product Total	3373.712	3303.328
VAT DYES	BANGLADESH PR	303.606	3926.244
	GERMANY	143.214	3240.479
	PAKISTAN IR	117.043	1264.061
	CHINA P RP	109.073	2133.905
	SWITZERLAND	94.303	1582.207
	Product Total	767.239	12146.896

Table 19:- Top Five Export Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
SOLUBILISED VAT DYES	INDONESIA	35.190	451.339
	NIGERIA	6.000	7.644
	ARGENTINA	2.160	3.747
	BULGARIA	0.750	5.105
	ITALY	0.515	17.554
	Product Total	44.615	485.389
FOOD COLOURS	U S A	2219.246	10666.222
	INDONESIA	1534.937	5132.068
	MEXICO	1366.483	4545.115
	TURKEY	1337.063	2631.703
	CHINA P RP	1337.029	4356.927
	Product Total	7794.758	27332.035
NAPTHOLS	SOUTH AFRICA	410.450	671.463
	U ARAB EMTS	294.940	365.648
	KENYA	273.675	442.246
	U S A	205.579	809.183
	TURKEY	198.145	205.803
	Product Total	1382.789	2494.343
OTHER DYES	GERMANY	1712.820	2376.337
	POLAND	1329.000	1609.342
	ITALY	978.115	1724.570
	TAIWAN	921.466	994.110
	U K	867.970	1057.624
	Product Total	5809.371	7761.983
INORGANIC PIGMENTS	SOUTH AFRICA	3950.104	1531.728
	KENYA	2251.235	1665.544
	SRI LANKA DSR	1969.377	1720.862
	RUSSIA	1703.752	1886.063
	TANZANIA REP	1624.360	743.233
	Product Total	11498.828	7547.430

Note : Data Source in respect of imports and exports is DGCIS,Kolkata, M/O Commerce and Industry.

Table 20:- Top Five Import Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
SODA ASH	ROMANIA	179046.000	25958.260
	U S A	149072.906	19011.307
	KENYA	101034.750	13850.871
	TURKEY	92251.396	12390.007
	BULGARIA	82848.629	13074.402
	Product Total	604253.681	84284.847
CAUSTIC SODA	JAPAN	230536.001	86998.705
	IRAN	61945.716	21144.302
	CHINA P RP	42357.601	13557.037
	QATAR	25403.000	8826.122
	KOREA RP	18673.000	6518.323
	Product Total	378915.318	137044.489
LIQUID CHLORINE	KOREA RP	17.635	162.681
	FRANCE	14.806	29.599
	HONG KONG	0.200	5.233
	Product Total	32.641	197.513
ALUMINIUM FLUORIDE	U ARAB EMTS	29540.500	20588.322
	INDONESIA	6300.000	3483.285
	CANADA	4344.000	922.193
	ITALY	2970.000	2303.964
	QATAR	1725.000	187.554
	Product Total	44879.500	27485.318
CALCIUM CARBIDE	CHINA P RP	20838.000	8820.521
	BHUTAN	18908.580	8404.243
	INDONESIA	8022.000	3439.101
	SOUTH AFRICA	7840.800	3258.314
	ARGENTINA	41.000	18.692
	Product Total	55650.380	23940.871
CARBON BLACK	CHINA P RP	62465.001	43988.470
	KOREA RP	38073.344	26110.970
	RUSSIA	24371.220	15330.989
	EGYPT A RP	12701.200	7847.997
	IRAN	6867.000	4496.405
	Product Total	144477.765	97774.831
POTASSIUM CHLORATE	CHINA P RP	27.000	14.986
	U K	2.001	5.555
	U S A	0.020	0.210
	GERMANY	0.007	0.653
	BELGIUM	0.002	0.096
	Product Total	29.030	21.500

Table 20:- Top Five Import Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
SODIUM CHLORATE	FRANCE	2394.200	810.022
	BRAZIL	2075.000	694.411
	URUGUAY	1875.000	636.085
	SWEDEN	1150.000	379.157
	FINLAND	713.000	285.402
	Product Total	8207.200	2805.077
TITANIUM DIOXIDE	CHINA P RP	5632.169	8659.914
	KOREA RP	2500.000	4091.581
	GERMANY	2447.418	5467.670
	JAPAN	1248.092	2745.083
	U S A	509.439	870.198
	Product Total	12337.118	21834.446
RED PHOSPHORUS	U S A	0.026	2.082
	GERMANY	0.002	0.153
	BELGIUM	0.001	0.034
	CHINA P RP	0.001	0.601
	U K	0.000	0.593
	Product Total	0.030	3.463
HYDROGEN PEROXIDE	THAILAND	31119.278	7952.731
	BANGLADESH PR	17976.600	4646.070
	INDONESIA	8667.490	2206.100
	KOREA RP	5393.704	1589.124
	TURKEY	3335.208	1033.428
	Product Total	66492.280	17427.453
CALCIUM CARBONATE	MALAYSIA	424699.572	33137.568
	VIETNAM SOC REP	306037.087	20002.782
	EGYPT A RP	84059.225	5346.902
	GREECE	7503.750	615.159
	THAILAND	6710.345	686.044
	Product Total	829009.979	59788.455
ACETIC ACID	CHINA P RP	360214.602	113782.346
	SINGAPORE	239100.431	79239.674
	MALAYSIA	202478.771	72423.135
	SAUDI ARAB	41593.000	13482.599
	U S A	28189.755	7639.599
	Product Total	871576.559	286567.353
ACETIC ANHYDRIDE	U S A	4121.640	2119.871
	SAUDI ARAB	258.940	226.478
	BELGIUM	0.002	0.075
	Product Total	4380.582	2346.424

Table 20:- Top Five Import Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ACETONE	THAILAND	61709.022	31610.694
	KOREA RP	28812.758	14649.985
	CHINA P RP	21775.631	11669.234
	TAIWAN	12406.000	5736.374
	SINGAPORE	7184.000	3354.503
	Product Total	131887.411	67020.790
PHENOL	THAILAND	87568.000	60909.125
	KOREA RP	53758.601	38371.007
	SAUDI ARAB	34957.000	26608.344
	CHINA P RP	33742.510	23996.823
	U S A	21237.525	13882.435
	Product Total	231263.636	163767.734
METHANOL	IRAN	1175664.000	260702.854
	SAUDI ARAB	440657.000	95133.755
	RUSSIA	48913.000	12867.565
	QATAR	46759.000	12010.975
	OMAN	45578.000	12033.490
	Product Total	1757571.000	392748.639
FORMALDEHYDE	SINGAPORE	35.200	14.767
	THAILAND	8.600	2.881
	CHINA P RP	0.740	18.319
	U S A	0.665	3.670
	GERMANY	0.449	3.498
	Product Total	45.654	43.135
NITROBENZENE	KOREA RP	15384.370	8205.530
	BELGIUM	0.010	0.132
	CHINA P RP	0.010	0.680
	GERMANY	0.001	0.277
	Product Total	15384.391	8206.619
CITRIC ACID	CHINA P RP	83936.165	44648.324
	GERMANY	69.074	533.650
	TAIWAN	68.000	38.940
	U ARAB EMTS	40.000	25.826
	AUSTRIA	33.037	38.099
	Product Total	84146.276	45284.839
MALEIC ANHYDRIDE	MALAYSIA	23639.601	19497.533
	TAIWAN	12155.000	9049.033
	KOREA RP	6347.000	5617.966
	CHINA P RP	4950.246	4165.310
	INDONESIA	4554.000	3830.952
	Product Total	51645.847	42160.794

Table 20:- Top Five Import Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
PENTAERYTHRITOL	SAUDI ARAB	9600.000	10523.611
	SPAIN	1970.000	2105.405
	SWEDEN	1555.200	1672.719
	CHINA P RP	1534.950	1688.647
	TAIWAN	1401.050	1341.758
	Product Total	16061.200	17332.140
ANILINE	CHINA P RP	48917.528	43318.742
	BELGIUM	5716.000	5391.294
	NETHERLAND	2095.000	1933.455
	U K	2082.000	1962.868
	PORTUGAL	1625.300	1562.896
	Product Total	60435.828	54169.255
CHLORO METHANES	CHINA P RP	492.200	301.172
	U S A	26.420	127.742
	Product Total	518.620	428.914
MEK	TAIWAN	22037.652	16828.188
	JAPAN	10227.548	8025.395
	SOUTH AFRICA	6095.000	5131.119
	NETHERLAND	4929.000	4241.553
	CHINA P RP	1803.820	1643.267
	Product Total	45093.020	35869.522
ACETALDEHYDE	SWITZERLAND	64.000	104.400
	U S A	8.921	25.542
	GERMANY	7.369	88.726
	CHINA P RP	0.624	15.200
	FRANCE	0.136	8.666
	Product Total	81.050	242.534
ETHANOLAMINES	GERMANY	3890.355	3047.340
	SAUDI ARAB	3252.836	2394.112
	THAILAND	2402.200	1852.677
	BELGIUM	1963.457	1749.335
	U S A	1198.390	1461.701
	Product Total	12707.238	10505.165
ETHYL ACETATE	CHINA P RP	16.477	42.624
	SINGAPORE	15.662	13.569
	GERMANY	7.972	31.633
	U S A	1.948	29.533
	SPAIN	0.516	2.848
	Product Total	42.575	120.207

Table 20:- Top Five Import Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
MENTHOL	GERMANY	1187.928	7685.568
	CHINA P RP	148.069	534.439
	JAPAN	14.622	130.717
	U S A	14.319	155.591
	HONG KONG	5.000	18.232
	Product Total	1369.938	8524.547
ORTHO NITRO TOLUENE	GERMANY	267.420	211.809
	Product Total	267.420	211.809
D.D.V.P.	CHINA P RP	35.200	66.259
	Product Total	35.200	66.259
OTHER PESTICIDES	CHINA P RP	1401.071	136494.321
	U S A	115.824	489.342
	RUSSIA	90.000	319.887
	NETHERLAND	67.500	1287.596
	THAILAND	5.220	10.127
	Product Total	1679.615	138601.273
OTHER INSECTICIDES	CHINA P RP	10620.362	118665.550
	U S A	1699.889	35581.631
	TAIWAN	1580.800	3055.995
	GERMANY	1001.433	37697.249
	ISRAEL	795.501	8992.047
	Product Total	15697.985	203992.472
COPPER-OXYCHLORIDE	GERMANY	0.035	0.500
	Product Total	0.035	0.500
2, 4-D	CHINA P RP	1068.000	1710.456
	HONG KONG	756.000	1024.173
	U K	0.001	0.004
	Product Total	1824.001	2734.633
ALUMINIUM PHOSPHIDE	CHINA P RP	0.010	0.158
	Product Total	0.010	0.158
METHYL BROMIDE	U S A	16.344	102.322
	Product Total	16.344	102.322
OTHER HERBICIDES-ANTI SPROUTING PRODUCTS	CHINA P RP	5817.159	29752.823
	ISRAEL	3879.841	21475.600
	JAPAN	1755.597	17576.818
	U S A	1496.624	14054.877
	U K	1150.876	5233.302
	Product Total	14100.097	88093.420
OTHER FUNGICIDE NES	CHINA P RP	2031.079	13128.191
	GERMANY	1831.557	32964.262
	SPAIN	877.707	11640.593
	ISRAEL	788.655	4812.955
	U S A	462.290	8370.999
	Product Total	5991.288	70917.000

Table 20:- Top Five Import Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
AZO DYES	CHINA P RP	234.391	1060.177
	ITALY	97.205	304.428
	SPAIN	40.310	1078.794
	THAILAND	30.802	249.920
	GERMANY	12.925	197.535
	Product Total	415.633	2890.854
ACID DIRECT DYES(OTHER THAN AZO)	CHINA P RP	115.883	755.781
	ITALY	70.738	424.078
	JAPAN	11.875	344.943
	MALAYSIA	8.000	18.242
	GERMANY	7.757	76.562
	Product Total	214.253	1619.606
BASIC DYES	CHINA P RP	614.199	5103.932
	SPAIN	15.735	38.232
	ITALY	7.810	41.735
	GERMANY	2.519	27.790
	CHILE	1.000	7.750
	Product Total	641.263	5219.439
DISPERSE DYES	CHINA P RP	3561.187	19628.177
	INDONESIA	197.925	2033.737
	U S A	82.457	278.478
	ITALY	33.248	120.732
	MEXICO	29.888	388.060
	Product Total	3904.705	22449.184
FAST COLOUR BASES	CHINA P RP	364.580	1713.824
	HUNGARY	9.425	359.406
	SPAIN	3.105	15.151
	ITALY	1.507	15.699
	GERMANY	0.148	3.232
	Product Total	378.765	2107.312
OIL SOLUBLE (SOLVENT DYES)	CHINA P RP	561.286	5146.483
	KOREA RP	136.527	515.532
	TAIWAN	37.583	142.055
	U S A	37.399	65.856
	GERMANY	21.939	182.091
	Product Total	794.734	6052.017
OPTICAL WHITENING AGENTS	SWITZERLAND	328.470	3054.858
	CHINA P RP	190.955	2141.659
	INDONESIA	32.570	107.117
	SINGAPORE	2.920	96.430
	NETHERLAND	2.460	20.345
	Product Total	557.375	5420.409

Table 20:- Top Five Import Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ORGANIC PIGMENT	U S A	29.926	122.282
	CHINA P RP	18.361	74.762
	SPAIN	14.640	34.693
	JAPAN	0.976	14.806
	GERMANY	0.394	16.053
	Product Total	64.297	262.596
PIGMENT EMULSION	CHINA P RP	4545.848	20828.491
	GERMANY	725.532	10318.314
	ITALY	466.750	1366.624
	U S A	462.139	3666.590
	KOREA RP	399.358	2359.546
	Product Total	6599.627	38539.565
REACTIVE DYES	THAILAND	1327.803	10612.446
	CHINA P RP	849.241	8727.717
	KOREA RP	637.981	2515.100
	ITALY	154.386	827.065
	TAIWAN	104.660	555.842
	Product Total	3074.071	23238.170
SULPHUR DYES (SULPHUR BLACK)	CHINA P RP	945.495	2292.611
	SPAIN	246.533	461.191
	GERMANY	26.105	46.403
	SINGAPORE	13.730	26.978
	ITALY	9.265	14.334
	Product Total	1241.128	2841.517
VAT DYES	SINGAPORE	14955.298	25181.313
	CHINA P RP	10083.061	31560.146
	PAKISTAN IR	1286.640	2056.364
	GERMANY	37.511	158.414
	U S A	1.728	24.095
	Product Total	26364.238	58980.332
SOLUBILISED VAT DYES	SINGAPORE	302.080	536.506
	CHINA P RP	13.210	164.835
	JAPAN	1.085	21.058
	INDONESIA	0.765	15.082
	U S A	0.659	10.174
	Product Total	317.799	747.655
FOOD COLOURS	TAIWAN	649.641	1805.690
	KOREA RP	231.650	741.012
	GREECE	79.841	135.746
	SPAIN	41.078	173.246
	GERMANY	35.449	215.027
	Product Total	1037.659	3070.721

Table 20:- Top Five Import Destinations of selected Chemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
NAPTHOLS	CHINA P RP	1259.699	4190.611
	GERMANY	4.187	47.630
	JAPAN	3.466	60.157
	ITALY	2.440	28.984
	U S A	1.917	58.479
	Product Total	1271.709	4385.861
OTHER DYES	U K	244.548	636.634
	U S A	112.097	1052.816
	CHINA P RP	76.793	119.676
	THAILAND	25.800	61.735
	TURKEY	22.467	95.154
	Product Total	481.705	1966.015
INORGANIC PIGMENTS	U ARAB EMTS	3261.506	3673.674
	VIETNAM SOC REP	2806.624	937.958
	CHINA P RP	1226.770	3485.961
	THAILAND	902.424	2298.398
	GERMANY	850.041	4175.712
	Product Total	9047.365	14571.703

Note : Data Source in respect of imports and exports is DGCIS,Kolkata, M/O Commerce and Industry.

Table 21:- Exports of Major Petrochemicals (Group-wise) during 2010-11 to 2017-18

[Qty. in MT & Value in Rs. Lakh]

GROUP	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES	576259	493055	733966	717155	775886	777875	907646	1015940	887182	917327	878358	833783	1025740	922018	1001053	977982
FIBRE INTERMEDIATES	50626	37046	100735	78701	80823	61926	67873	53980	73270	57347	247540	121394	323096	153574	351358	181069
POLYMERS	822208	500436	1163483	815325	1112662	853586	1187634	1078251	903266	793550	998339	732497	912124	667432	1188233	891771
SYNTHETIC RUBBER (ELASTOMERS)	14786	14883	22128	25460	11489	15082	12834	21597	26040	34492	42688	42428	38204	46387	51889	54589
SYNTHETIC DETERGENT INTERMEDIATES	133709	93904	74864	87518	50478	50928	32971	35845	27992	29004	9634	7768	7058	5941	1413	1468
PERFORMANCE PLASTICS	366377	255601	309593	287212	347916	307451	474528	440224	409365	353492	813967	527737	972750	636450	1050548	747271
OLEFINS	158503	131755	130472	181191	123827	138968	119411	88308	72479	45302	149389	76055	117365	101742	260597	179804
AROMATICS	1351789	612929	1445312	985016	1590660	1188161	1789251	1344539	1888275	1163302	2033143	942807	1749173	885136	3303041	1754998
OTHER PETRO-BASED CHEMICALS	184395	133682	184342	145504	137082	129315	96237	107611	124125	143644	128670	101261	144135	116773	193342	138613
TOTAL EXPORT OF MAJOR PETRO-CHEMICALS	3658652	2273291	4164895	3323082	4230823	3523292	4688385	4186295	4411994	3537460	5301728	3385730	5289645	3535453	7401474	4927565

Note 1: The data from 2010-11 to 2012-13 is based on ITCHS 2007 and the data for 2013-14 is based on ITCHS 2012

Note : Data Source in respect of imports and exports is DGCIS,Kolkata, M/O Commerce and Industry.

Table 22:- Imports of Major Petrochemicals (Group-wise) during 2010-11 to 2017-18

GROUP	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES	125553	161433	149682	204214	156291	247329	164136	274315	235590	346205	263774	346368	279993	342993	259632	363079
FIBRE INTERMEDIATES	1598939	777720	1315056	800960	1402774	878497	1925258	1304669	2179870	1273665	2015419	1026126	1842229	943136	1808425	1072331
POLYMERS	2500130	1495239	2435473	1598868	3179593	2254904	3124986	2531008	3736798	3177068	4214022	3132488	4452258	3267230	4751478	3549286
SYNTHETIC RUBBER (ELASTOMERS)	446242	540793	492633	794847	519670	797499	580333	793037	578400	758949	596101	612690	559919	628042	607867	741750
SYNTHETIC DETERGENT INTERMEDIATES	78859	60774	106852	96832	127493	131685	123846	139467	134035	138461	218097	177489	228229	179003	205984	164533
PERFORMANCE PLASTICS	192024	208769	175173	254490	249709	336062	310899	438390	394766	496367	388796	445847	417442	472270	582692	621047
OLEFINS	117791	53667	19855	13371	34187	29316	26109	21482	49255	43981	25398	20177	83453	60651	50791	43283
AROMATICS	679025	325942	760164	504683	967941	764603	998399	850360	1023472	712564	1204325	633048	1614652	864845	1321018	708548
OTHER PETRO-BASED CHEMICALS	1807833	1046288	1784500	1219192	2037034	1495971	2203984	1817179	2372654	1897349	2739780	1775978	2650608	1764933	3255244	2232102
TOTAL IMPORT OF MAJOR PETRO-CHEMICALS	7546396	4670625	7239388	5487457	8674692	6935866	9457950	8169907	10704840	8844609	11665712	8170211	12128783	8523103	12843131	9495959

Note 1: The data from 2010-11 to 2012-13 is based on ITCHS 2007 and the data for 2013-14 is based on ITCHS 2012

Note : Data Source in respect of imports and exports is DGCIS, Kolkata, M/O Commerce and Industry.

Table 23:- Net Imports of Major Petrochemicals (Group-wise) during 2010-11 to 2017-18

GROUP	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES	-450706	-331622	-584284	-512941	-619595	-530546	-743510	-741625	-651592	-571122	-614584	-487415	-745747	-579025	-741421	-614903
FIBRE INTERMEDIATES	1548313	740674	1214321	722259	1321951	816571	1857385	1250689	2106600	1216318	1767879	904732	1519133	789562	1457067	891262
POLYMERS	1677922	994803	1271990	783543	2066931	1401318	1937352	1452757	2833532	2383518	3215683	2399991	3540134	2599798	3563245	2657515
SYNTHETIC RUBBER (ELASTOMERS)	431456	525910	470505	769387	508181	782417	567499	771440	552360	724457	553413	570262	521715	581655	555978	687161
SYNTHETIC DETERGENT INTERMEDIATES	-54850	-33130	31988	9314	77015	80757	90875	103622	106043	109457	208463	169721	221171	173062	204571	163065
PERFORMANCE PLASTICS	-174353	-46832	-134420	-32722	-98207	28611	-163629	-1834	-14599	142875	-425171	-81890	-555308	-164180	-467856	-126224
OLEFINS	-40712	-78088	-110617	-167820	-89640	-109652	-93302	-66826	-23224	-1321	-123991	-55878	-33912	-41091	-209806	-136521
AROMATICS	-672764	-286987	-685148	-480333	-622719	-423558	-790852	-494179	-864803	-450738	-828818	-309759	-134521	-20291	-1982023	-1046450
OTHER PETRO-BASED CHEMICALS	1623438	912606	1600158	1073688	1899952	1366656	2107747	1709568	2248529	1753705	2611110	1674717	2506473	1648160	3061902	2093489
TOTAL NET IMPORT OF MAJOR PETRO-CHEMICALS	3887744	2397334	3074493	2164375	4443869	3412574	4769565	3983612	6292846	5307149	6363984	4784481	6839138	4987650	5441657	4568394

Note 1: The data from 2010-11 to 2012-13 is based on ITCHS 2007 and the data for 2013-14 is based on ITCHS 2012

Note : Data Source in respect of imports and exports is DGCIS,Kolkata, M/O Commerce and Industry.

Table 24:- Exports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES																
ACRYLIC FIBRE	24522	44634	26383	37398	19258	26183	31562	47385	37420	59176	47911	58966	48332	60060	39213	52227
NYLON FILAMENT YARN	2110	4925	1923	5412	1865	5728	2023	7402	1848	6939	1639	6236	1857	6462	4014	12111
NYLON INDUSTRIAL YARN/TYRE CORD	3976	5739	3733	6979	3756	6810	2896	5696	1752	2937	1122	1471	1474	1872	1620	2239
POLYESTER FILAMENT YARN	391220	330277	524093	510458	576224	588908	647732	743768	648773	677742	634799	624444	748037	690836	717714	730282
POLYESTER STAPLE FIBRE	152487	105285	176000	154451	170318	144355	205341	187652	183575	151547	181813	129129	213903	150316	227441	169364
POLYPROPYLENE FILAMENT YARN	1259	1476	1235	1582	2008	2694	1863	2813	2232	3234	2844	3878	2077	2690	869	1117
POLYPROPYLENE STAPLE FIBRE	645	655	571	798	2300	2657	14892	16220	10611	11862	7531	6885	9755	8767	9497	8663
ELASTOMERIC/SPAN DEX FILAMENT YARN	40	64	28	77	157	540	1337	5004	971	3890	699	2774	305	1015	685	1979
TOTAL	576259	493055	733966	717155	775886	777875	907646	1015940	887182	917327	878358	833783	1025740	922018	1001053	977982
FIBRE INTERMEDIATES																
ACRYLONITRILE	1	2	5598	6048	2103	2747	2	5	4	85	2323	2132	6	39	1514	1900
CAPROLACTUM	13777	21658	13448	20052	3343	4853	514	902	0	1	0	8	1010	867	53	93
DIMETHYL TEREPHTHALATE	5	15	3	11	0	0	1	2	0	0	1	1	1	1	0	0
MONO EHYLENE GLYCOL	35959	15116	66483	45720	71796	52515	67032	53008	73216	57216	72239	52081	62199	45932	137462	90499
PURIFIED TEREPHTHALIC ACID	884	255	15203	6870	3581	1811	324	63	50	45	172977	67172	259880	106735	212329	88577
TOTAL	50626	37046	100735	78701	80823	61926	67873	53980	73270	57347	247540	121394	323096	153574	351358	181069

Table 24:- Exports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
POLYMERS																
LOW DENSITY POLYETHYLENE	11919	9167	12670	10470	16892	15296	18369	20153	21519	23853	24007	26531	26909	27321	108257	88430
HIGH DENSITY POLYTHYLENE	133485	81358	239546	159380	159341	123866	113344	103538	51663	51095	116114	97840	148142	117815	205797	155550
POLYESTYRENE	62670	43175	60982	48710	74137	68035	83962	91765	73695	69174	86290	72301	82542	75483	69814	67452
POLYPROPYLENE (INC. CO-POLYMER)	582285	347506	816005	571653	828236	616817	943284	832814	726906	620745	735410	503124	574234	382678	552002	397646
EXPANDABLE POLYESTYRENE	178	127	377	280	3830	3689	3646	4413	4810	5489	3762	3735	3697	3548	3119	3272
POLY VINYL CHLORIDE	10850	5185	3632	2990	1267	1462	1332	2754	1988	2085	3054	3272	6484	6127	6662	6015
LINEAR LOW DENSITY POLYTHYLENE	14809	10428	23007	16734	21821	18582	13451	13366	10854	10267	15825	14160	53215	41558	228952	163632
PVC COMPOUND	6012	3490	7264	5108	7138	5839	10246	9448	11831	10842	13877	11534	16901	12902	13630	9774
TOTAL	822208	500436	1163483	815325	1112662	853586	1187634	1078251	903266	793550	998339	732497	912124	667432	1188233	891771
SYNTHETIC RUBBER (ELASTOMERS)																
STYRENE BUTADIENE RUBBER	7388	5985	7516	9142	7646	8461	7483	8024	18007	17961	31053	23969	27139	27423	40704	36382
POLY BUTADIENE RUBBER	1874	1772	185	408	1173	1947	267	388	1919	1978	5988	4008	5114	4942	7012	7376
ETHYL PROPYLENE DIMERS	2577	3258	3063	4830	1182	1916	2075	7096	2915	8114	2725	8882	3282	9531	2517	7696
ETHYL VINYL ACETATE	1072	986	374	453	804	848	1215	1494	1141	1734	1274	1510	1494	1751	901	1314
NITRILE BUTADIENE RUBBER	1404	2286	10778	10059	431	1297	446	1557	444	1124	400	970	451	1092	427	1128
BUTYL RUBBER	471	596	212	568	253	613	1348	3038	1614	3581	1248	3089	724	1648	328	693
TOTAL	14786	14883	22128	25460	11489	15082	12834	21597	26040	34492	42688	42428	38204	46387	51889	54589

Table 24:- Exports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC DETERGENT INTERMEDIATES																
LINEAR ALKYL BENZENE	133368	93397	74555	86732	50068	50134	32493	34657	27199	27204	9256	7034	6440	4816	930	809
ETHYLENE OXIDE	341	507	309	786	410	794	478	1188	793	1800	378	734	618	1125	483	659
TOTAL	133709	93904	74864	87518	50478	50928	32971	35845	27992	29004	9634	7768	7058	5941	1413	1468
PERFORMANCE PLASTICS																
ABS RESIN	5272	4925	807	915	666	780	303	424	225	281	465	682	294	473	273	445
NYLON-6	4108	5937	5912	9804	9915	16353	15308	25961	16715	28775	14577	25321	17656	29593	21353	34774
POLYMETHYL METHACRYLATE	5497	5631	5545	5747	7849	8626	9775	12115	9306	11215	9158	10541	8557	10230	3563	3584
STYRENE ACRYLONITRILE	11	21	33	66	43	69	275	249	120	158	579	459	671	450	1179	682
POLYESTER CHIPS/PET CHIPS	346071	220251	290894	229867	324307	256947	443104	372102	375421	274943	783106	460787	937251	557185	1014588	655326
POLYTETRAFLUORO ETHYLENE(PTFE)	5418	18836	6402	40813	5136	24676	5763	29373	7578	38120	6082	29947	8321	38519	9592	52460
TOTAL	366377	255601	309593	287212	347916	307451	474528	440224	409365	353492	813967	527737	972750	636450	1050548	747271
OLEFINS																
BUTADIENE	134087	121198	121393	176675	117626	135098	119410	88301	72479	45301	129808	66961	106838	97268	103426	73371
ETHYLENE	44	31	7	6	1	4	1	7	0	1	5119	3789	27	23	136426	97327
PROPYLENE	24372	10526	9072	4510	6200	3866	0	0	0	0	14462	5305	10500	4451	20745	9106
TOTAL	158503	131755	130472	181191	123827	138968	119411	88308	72479	45302	149389	76055	117365	101742	260597	179804
AROMATICS																
BENZENE	567717	225586	501894	279998	652963	445735	635749	437813	576741	348900	914875	371288	789425	366822	1286323	662408
MIXED XYLENE	72334	29652	148512	87950	141564	104472	187239	139394	10464	6923	8	49	66	110	418	278

Table 24:- Exports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ORTHO-XYLENE	341918	160600	187083	121039	210822	163337	229010	172190	227007	138341	234386	107621	154347	74761	185675	86881
TOLUENE	4119	2209	5465	3535	5412	4167	14798	11449	9994	6409	5268	3314	5843	3764	4103	2772
PARAXYLENE	365701	194882	602358	492494	579899	470450	722455	583693	1064069	662729	878606	460535	799492	439679	1826522	1002659
TOTAL	1351789	612929	1445312	985016	1590660	1188161	1789251	1344539	1888275	1163302	2033143	942807	1749173	885136	3303041	1754998
OTHER PETRO-BASED CHEMICALS																
ETHYLENE DICHLORIDE	0	0	0	3	3200	554	9	5	21	14	15839	3103	16	8	44861	6510
BUTANOL	5454	4463	3591	4458	4762	5986	2186	3583	759	993	195	162	2292	1189	863	703
OXO ALCOHOL	339	1415	383	740	812	983	1188	1133	1191	907	582	565	1271	731	890	682
2-ETHYL HEXANOL	20	530	78	808	47	1001	321	654	6391	6405	746	654	2055	1437	2636	1701
VINYL CHLORIDE MONOMER	26	39	0	0	0	0	1	8	0	0	0	0	0	0	0	0
EPICHLHYDRINE	8	13	19	24	13	10	4	7	14	19	28	33	54	55	49	76
ISO BUTYLENE	1	1	0	1	0	0	1815	1382	1	2	28	249	1	3	0	2
METAXYLENE	109406	71083	92344	61389	41061	32749	4	13	23	146	46	140	64	217	4	263
METHYL ISOBUTYL KETONE	107	91	539	519	5	71	24	53	206	364	287	266	918	788	940	878
PIB	6167	4020	6623	5529	4285	4739	5896	7554	4993	5925	6128	7200	2237	2448	2620	2711
POLYCARBONATE	3368	6650	2355	3671	2509	4332	3022	6103	2459	2772	4790	4597	3990	3284	4926	5370
PROPYLENE OXIDE	0	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0
PROPYLENE GLYCOL	1178	971	908	879	2593	1953	818	986	773	1043	531	724	865	1113	1117	1713
POLYVINYL ACETATE RESIN	6877	4415	10077	8188	14064	11563	15509	13643	15456	15384	11259	11415	8767	8927	6958	6522

Table 24:- Exports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

[Qty. in MT & Value in Rs. Lakh]

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
UNSATURATED POLYESTER RESIN	9131	7849	9455	9479	10709	12477	10750	14533	12660	17074	12112	15025	16263	18552	14436	18212
ETHYL BENZENE	0	0	3	1	4	4	0	0	0	0	0	2	0	0	0	0
CELLULOSE ACETATE BUTYRATE	25	31	10	15	53	78	93	163	44	93	6	81	8	30	1	18
CELLULOSE ACETATE SHEET	147	164	17	36	159	166	63	152	33	84	34	116	85	178	59	145
CELLULOSE NITRATE SHEET	112	96	8	14	46	19	3	14	12	16	3	5	19	14	2	5
MELAMINE MOULDING POWDER	1079	743	1051	914	1160	940	2168	1431	6339	2284	7993	2541	10124	3072	14754	3747
POLYACETAL RESIN	1252	933	710	703	279	403	540	654	537	598	312	383	387	439	141	279
PHTHALIC ANHYDRIDE	18480	10012	24993	17036	12812	11478	23182	20259	38634	26744	40448	22378	42033	25960	37869	25156
STYRENE	1810	1207	7521	4847	17327	16323	2242	2392	6940	6623	793	669	5088	4176	4524	3842
VINYL ACTATE MONOMER	1062	500	2227	1240	1342	822	4096	2635	1562	1392	1695	1388	11755	6285	21261	13220
ISOPROPANOL	7330	6099	9598	12753	3846	4149	3334	4053	6139	6508	3716	2805	7385	5106	11004	7850
POLYOL	11016	12353	11832	12257	15994	18515	18969	26201	18938	48254	21099	26760	28458	32760	23427	39008
TOTAL	184395	133682	184342	145504	137082	129315	96237	107611	124125	143644	128670	101261	144135	116773	193342	138613
TOTAL EXPORT OF MAJOR PETRO-CHEMICALS	3658652	2273291	4164895	3323082	4230823	3523292	4688385	4186295	4411994	3537460	5301728	3385730	5289645	3535453	7401474	4927565

Note : Data Source in respect of imports and exports is DGCIS,Kolkata, M/O Commerce and Industry.

Table 25:- Imports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES																
ACRYLIC FIBRE	23611	33365	20200	27538	29359	42077	32990	53051	36339	60959	39238	53809	36771	44394	32184	46549
NYLON FILAMENT YARN	18138	31224	22907	45227	24067	52783	24295	54650	27813	59448	28972	54485	31063	53352	22731	43317
NYLON INDUSTRIAL YARN/TYRE CORD	12269	18388	9068	16629	11912	21275	7022	13749	3750	7035	4411	6803	7741	10247	6566	10070
POLYESTER FILAMENT YARN	33692	36053	43409	52693	50013	64792	46713	67653	72718	89105	72605	86166	84367	92492	82784	100756
POLYESTER STAPLE FIBRE	31549	23070	44677	36811	29670	27653	42635	41577	81864	71552	99719	73357	99809	70113	88990	71053
POLYPROPYLENE FILAMENT YARN	1489	1827	1899	2396	1598	2673	792	1056	716	1002	697	1001	695	850	1343	1715
POLYPROPYLENE STAPLE FIBRE	122	160	336	441	331	495	401	567	329	461	1885	1997	2016	2181	3281	3378
ELASTOMERIC/SPAN DEX FILAMENT YARN	4683	17346	7186	22479	9341	35581	9288	42012	12061	56643	16247	68750	17531	69364	21753	86241
TOTAL	125553	161433	149682	204214	156291	247329	164136	274315	235590	346205	263774	346368	279993	342993	259632	363079
FIBRE INTERMEDIATES																
ACRYLONITRILE	72618	73592	77357	77714	81964	83719	100862	111632	97388	118956	160202	121692	139709	108192	159778	172707
CAPROLACTUM	6334	8158	5381	9121	15917	21673	23494	34307	32276	43571	44577	45299	52906	50601	58413	75965
DIMETHYL TEREPHTHALATE	4428	2554	2815	2021	2104	1592	1786	1466	2094	1594	2216	1400	1761	1051	2256	1520
MONO EHYLENE GLYCOL	771189	318756	634589	356418	654831	374593	820724	512134	1003540	550364	1111582	539689	1235385	604838	1066477	584695
PURIFIED TEREPHTHALIC ACID	744370	374660	594914	355686	647958	396920	978392	645130	1044572	559180	696842	318046	412468	178454	521501	237444
TOTAL	1598939	777720	1315056	800960	1402774	878497	1925258	1304669	2179870	1273665	2015419	1026126	1842229	943136	1808425	1072331

Table 25:- Imports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
POLYMERS																
LOW DENSITY POLYETHYLENE	196418	129714	197507	143289	264483	204752	256147	239302	325901	295717	374761	313547	391501	330125	464591	398992
HIGH DENSITY POLYTHYLENE	514445	306105	422712	298381	639062	464130	575117	545552	842892	811233	921743	798927	1000457	824364	993072	840665
POLYESTYRENE	29461	26062	29218	30824	35949	45289	37772	49378	39647	50104	42514	47364	44374	54225	52790	64224
POLYPROPYLENE (INC. CO-POLYMER)	425286	285760	398100	317819	497691	427654	479176	472948	611673	589950	700914	574265	781188	611882	938998	762085
EXPANDABLE POLYESTYRENE	7454	5257	5722	4740	4560	4436	3978	4682	3113	3441	2981	2723	3779	3554	2644	2744
POLY VINYL CHLORIDE	671309	329720	851336	443759	1133124	647857	1208529	755732	1293338	854467	1501311	878823	1702852	1015835	1846296	1123738
LINEAR LOW DENSITY POLYTHYLENE	584888	374061	464211	316607	538849	414080	499817	413556	550109	515931	590015	459471	469075	381387	425112	335698
PVC COMPOUND	70869	38560	66667	43449	65875	46706	64450	49858	70125	56225	79783	57368	59032	45858	27975	21140
TOTAL	2500130	1495239	2435473	1598868	3179593	2254904	3124986	2531008	3736798	3177068	4214022	3132488	4452258	3267230	4751478	3549286
SYNTHETIC RUBBER (ELASTOMERS)																
STYRENE BUTADIENE RUBBER	190300	186607	212549	329092	206663	292471	239544	287779	223549	264399	172802	155614	149559	155436	132989	161301
POLY BUTADIENE RUBBER	49000	62256	65935	111555	71052	115107	86200	109762	70471	79518	74646	63210	84910	93064	94772	122673
ETHYL PROPYLENE DIMERS	28391	37231	29231	54698	28373	60006	30347	50127	33348	54653	39370	60759	43411	54947	45099	59035
ETHYL VINYL ACETATE	90773	87925	83186	92285	108324	109280	114764	125169	139414	155970	165264	162033	144604	141686	183348	184503
NITRILE BUTADIENE RUBBER	16887	23822	19615	34667	26733	47496	29596	45051	26719	44760	51937	44391	36451	45999	40310	63203
BUTYL RUBBER	70891	142952	82117	172550	78525	173139	79882	175149	84899	159649	92082	126683	100984	136910	111349	151035
TOTAL	446242	540793	492633	794847	519670	797499	580333	793037	578400	758949	596101	612690	559919	628042	607867	741750

Table 25:- Imports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC DETERGENT INTERMEDIATES																
LINEAR ALKYL BENZENE	78759	60557	106813	96564	127440	131486	123825	139218	133994	137918	217997	176537	228092	177675	205910	163748
ETHYLENE OXIDE	100	217	39	268	53	199	21	249	41	543	100	952	137	1328	74	785
TOTAL	78859	60774	106852	96832	127493	131685	123846	139467	134035	138461	218097	177489	228229	179003	205984	164533
PERFORMANCE PLASTICS																
ABS RESIN	46224	50870	45470	53929	56897	72383	63020	86113	69910	94132	90081	100935	102685	114201	98026	131230
NYLON-6	60739	93809	74662	135583	88264	159031	114365	214028	133891	237580	144545	218291	158810	233711	175945	299915
POLYMETHYL METHACRYLATE	17748	12576	12444	17024	16488	21487	18924	25935	15367	21697	20309	30401	27175	35588	29994	47445
STYRENE																
ACRYLONITRILE	4910	4507	4480	4494	6248	7062	5973	7523	6411	7884	9569	9061	8542	8299	9430	10630
POLYESTER																
CHIPS/PET CHIPS	60290	37519	35978	27152	79743	60854	106283	90135	167015	123074	122206	74948	117996	68960	266358	113614
POLYTETRAFLUORO ETHYLENE(PTFE)	2113	9488	2139	16308	2069	15245	2334	14656	2172	12000	2086	12211	2234	11511	2939	18213
TOTAL	192024	208769	175173	254490	249709	336062	310899	438390	394766	496367	388796	445847	417442	472270	582692	621047
OLEFINS																
BUTADIENE	3077	1761	5035	4539	9187	10430	1071	820	3223	2823	994	706	2105	1657	2859	3104
ETHYLENE	114550	51549	14667	8223	23784	17219	24791	19461	43905	38467	21050	14753	80917	57116	39119	32795
PROPYLENE	164	357	153	609	1216	1667	247	1201	2127	2691	3354	4718	431	1878	8813	7384
TOTAL	117791	53667	19855	13371	34187	29316	26109	21482	49255	43981	25398	20177	83453	60651	50791	43283

Table 25:- Imports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
AROMATICS																
BENZENE	48410	22786	43465	23677	50660	32106	5250	3146	47	35	0	5	0	8	60	66
MIXED XYLENE	11	21	24	75	169	197	5567	4339	1647	1155	108	96	113	125	2424	1200
ORTHO-XYLENE	39866	20455	35499	23839	45134	37444	44879	41678	35697	23547	34502	16871	26275	14609	15730	8337
TOLUENE	187442	77449	245391	139206	307145	215447	263759	193333	287877	183823	343662	163765	392749	183101	414144	194854
PARAXYLENE	403296	205231	435785	317886	564833	479409	678944	607864	698204	504004	826053	452311	1195515	667002	888660	504091
TOTAL	679025	325942	760164	504683	967941	764603	998399	850360	1023472	712564	1204325	633048	1614652	864845	1321018	708548
OTHER PETRO-BASED CHEMICALS																
ETHYLENE DICHLORIDE	284997	65400	263401	46737	359009	53578	439537	98004	465292	117028	600033	104976	503987	86304	713334	108450
BUTANOL	25381	17294	31564	23498	36290	27372	44683	37454	56954	42657	62512	31380	57959	26234	53679	30719
OXO ALCOHOL	528	1036	842	1842	1329	2102	1698	3182	1285	3866	1270	4347	3186	6713	2272	6324
2-ETHYL HEXANOL	34155	27996	29184	27396	58418	54709	100495	88209	134894	117375	109095	66012	66867	37312	58129	39652
VINYL CHLORIDE MONOMER	385101	163983	302327	147439	296171	145623	303042	167918	317925	178829	349371	167169	344423	177368	484390	247256
EPICHLHYDRINE	19786	19868	19068	19743	19109	18276	22986	22594	33588	33629	43383	37643	48112	34563	56024	51446
ISO BUTYLENE	42939	32730	23351	20485	9260	7938	23254	21809	13010	12222	15853	10526	20051	14133	48702	36009
METAXYLENE	1541	981	9564	5960	4371	3851	3029	3223	946	902	3064	2755	2667	2600	2078	2064
METHYL ISOBUTYL KETONE	16399	12388	19209	17173	17668	20184	18318	21987	23243	26643	27576	22104	22487	17388	34684	31270
PIB	6091	4825	7536	7281	10754	11817	9456	13554	11290	16394	14367	17322	16034	16949	15041	16964

Table 25:- Imports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
POLYCARBONATE	105264	140607	116029	162876	122742	175907	123434	183633	124555	189828	138535	207756	138365	204195	158944	256209
PROPYLENE OXIDE	12561	10340	9392	9595	13141	13052	11676	13076	22914	25917	25552	25697	23064	21699	23446	23594
PROPYLENE GLYCOL	35120	24035	35736	29641	40036	34340	43547	40750	48749	50720	54045	46881	51339	39956	57333	49579
POLYVINYL ACETATE RESIN	3623	4983	4254	6302	4388	7094	4246	8824	4003	8300	3209	5941	3043	3829	3448	5059
UNSATURATED POLYESTER RESIN	36633	36032	34237	39319	36013	43468	31157	40025	28855	33910	30303	36568	39975	42255	49888	53751
ETHYL BENZENE	54	47	75	82	407	360	172	228	128	182	150	146	308	267	351	320
CELLULOSE ACETATE BUTYRATE	110	203	228	450	8	151	0	1	1	5	2	12	3	18	3	10
CELLULOSE ACETATE SHEET	318	123	459	216	692	312	980	569	1260	749	1295	775	1066	564	1346	921
CELLULOSE NITRATE SHEET	99	217	81	236	178	248	502	843	263	467	88	260	75	250	99	327
MELAMINE MOULDING POWDER	6019	5928	8006	8500	8668	9858	10210	12619	10081	12356	11872	13961	12997	15304	14699	16993
POLYACETAL RESIN	19191	14005	21082	17748	25933	23667	26266	25418	32605	29992	35212	34173	37883	37829	43672	43617
PHTHALIC ANHYDRIDE	61241	31601	38894	25948	44321	36815	54934	48521	52350	39837	79803	44118	92058	53567	130440	86282
STYRENE	458595	252983	520758	348850	591646	492433	572654	602695	617800	543696	717696	516539	729627	557571	789273	654655
VINYL ACTATE MONOMER	85369	34884	124726	67921	127536	69804	147364	87273	139553	114477	141649	88260	162004	87159	184964	117193
ISOPROPANOL	40556	23598	33441	22148	55724	42087	51271	42756	63194	51016	87606	47646	97262	55519	110464	71816
POLYOL	126162	120201	131056	161806	153222	200925	159073	232014	167916	246352	186239	243011	175766	225387	218541	281622
TOTAL	1807833	1046288	1784500	1219192	2037034	1495971	2203984	1817179	2372654	1897349	2739780	1775978	2650608	1764933	3255244	2232102
TOTAL IMPORT OF MAJOR PETRO-	7546396	4670625	7239388	5487457	8674692	6935866	9457950	8169907	10704840	8844609	11665712	8170211	12128783	8523103	12843131	9495959

Note : Data Source in respect of imports and exports is DGCIS,Kolkata, M/O Commerce and Industry.

Table 26:- Net Imports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

[Qty. in MT & Value in Rs. Lakh]

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
SYNTHETIC FIBRES																
ACRYLIC FIBRE	-911	-11269	-6183	-9860	10101	15894	1428	5666	-1081	1783	-8673	-5157	-11561	-15666	-7029	-5678
NYLON FILAMENT YARN	16028	26299	20984	39815	22202	47055	22272	47248	25965	52509	27333	48249	29206	46890	18717	31206
NYLON INDUSTRIAL YARN/TYRE CORD	8293	12649	5335	9650	8156	14465	4126	8053	1998	4098	3289	5332	6267	8375	4946	7831
POLYESTER FILAMENT YARN	-357528	-294224	-480684	-457765	-526211	-524116	-601019	-676115	-576055	-588637	-562194	-538278	-663670	-598344	-634930	-629526
POLYESTER STAPLE FIBRE	-120938	-82215	-131323	-117640	-140648	-116702	-162706	-146075	-101711	-79995	-82094	-55772	-114094	-80203	-138451	-98311
POLYPROPYLENE FILAMENT YARN	230	351	664	814	-410	-21	-1071	-1757	-1516	-2232	-2147	-2877	-1382	-1840	474	598
POLYPROPYLENE STAPLE FIBRE	-523	-495	-235	-357	-1969	-2162	-14491	-15653	-10282	-11401	-5646	-4888	-7739	-6586	-6216	-5285
Elastomeric/Spandex Filament Yarn	4643	17282	7158	22402	9184	35041	7951	37008	11090	52753	15548	65976	17226	68349	21068	84262
TOTAL	-450706	-331622	-584284	-512941	-619595	-530546	-743510	-741625	-651592	-571122	-614584	-487415	-745747	-579025	-741421	-614903
FIBRE INTERMEDIATES																
ACRYLONITRILE	72617	73590	71759	71666	79861	80972	100860	111627	97384	118871	157879	119560	139703	108153	158264	170807
CAPROLACTUM	-7443	-13500	-8067	-10931	12574	16820	22980	33405	32276	43570	44577	45291	51896	49734	58360	75872
DIMETHYL TEREPHTHALATE	4423	2539	2812	2010	2104	1592	1785	1464	2094	1594	2215	1399	1760	1050	2256	1520
MONO EHYLENE GLYCOL	735230	303640	568106	310698	583035	322078	753692	459126	930324	493148	1039343	487608	1173186	558906	929015	494196

Table 26:- Net Imports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
PURIFIED TEREPHTHALIC ACID	743486	374405	579711	348816	644377	395109	978068	645067	1044522	559135	523865	250874	152588	71719	309172	148867
TOTAL	1548313	740674	1214321	722259	1321951	816571	1857385	1250689	2106600	1216318	1767879	904732	1519133	789562	1457067	891262
POLYMERS																
LOW DENSITY POLYETHYLENE	184499	120547	184837	132819	247591	189456	237778	219149	304382	271864	350754	287016	364592	302804	356334	310562
HIGH DENSITY POLYTHYLENE	380960	224747	183166	139001	479721	340264	461773	442014	791229	760138	805629	701087	852315	706549	787275	685115
POLYESTYRENE	-33209	-17113	-31764	-17886	-38188	-22746	-46190	-42387	-34048	-19070	-43776	-24937	-38168	-21258	-17024	-3228
POLYPROPYLENE (INC. CO-POLYMER)	-156999	-61746	-417905	-253834	-330545	-189163	-464108	-359866	-115233	-30795	-34496	71141	206954	229204	386996	364439
EXPANDABLE POLYESTYRENE	7276	5130	5345	4460	730	747	332	269	-1697	-2048	-781	-1012	82	6	-475	-528
POLY VINYL CHLORIDE	660459	324535	847704	440769	1131857	646395	1207197	752978	1291350	852382	1498257	875551	1696368	1009708	1839634	1117723
LINEAR LOW DENSITY POLYTHYLENE	570079	363633	441204	299873	517028	395498	486366	400190	539255	505664	574190	445311	415860	339829	196160	172066
PVC COMPOUND	64857	35070	59403	38341	58737	40867	54204	40410	58294	45383	65906	45834	42131	32956	14345	11366
TOTAL	1677922	994803	1271990	783543	2066931	1401318	1937352	1452757	2833532	2383518	3215683	2399991	3540134	2599798	3563245	2657515
SYNTHETIC RUBBER (ELASTOMERS)																
STYRENE BUTADIENE RUBBER	182912	180622	205033	319950	199017	284010	232061	279755	205542	246438	141749	131645	122420	128013	92285	124919
POLY BUTADIENE RUBBER	47126	60484	65750	111147	69879	113160	85933	109374	68552	77540	68658	59202	79796	88122	87760	115297

Table 26:- Net Imports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
ETHYL PROPYLENE DIMERS	25814	33973	26168	49868	27191	58090	28272	43031	30433	46539	36645	51877	40129	45416	42582	51339
ETHYL VINYL ACETATE	89701	86939	82812	91832	107520	108432	113549	123675	138273	154236	163990	160523	143110	139935	182447	183189
NITRILE BUTADIENE RUBBER	15483	21536	8837	24608	26302	46199	29150	43494	26275	43636	51537	43421	36000	44907	39883	62075
BUTYL RUBBER	70420	142356	81905	171982	78272	172526	78534	172111	83285	156068	90834	123594	100260	135262	111021	150342
TOTAL	431456	525910	470505	769387	508181	782417	567499	771440	552360	724457	553413	570262	521715	581655	555978	687161
SYNTHETIC DETERGENT INTERMEDIATES																
LINEAR ALKYL BENZENE	-54609	-32840	32258	9832	77372	81352	91332	104561	106795	110714	208741	169503	221652	172859	204980	162939
ETHYLENE OXIDE	-241	-290	-270	-518	-357	-595	-457	-939	-752	-1257	-278	218	-481	203	-409	126
TOTAL	-54850	-33130	31988	9314	77015	80757	90875	103622	106043	109457	208463	169721	221171	173062	204571	163065
PERFORMANCE PLASTICS																
ABS RESIN	40952	45945	44663	53014	56231	71603	62717	85689	69685	93851	89616	100253	102391	113728	97753	130785
NYLON-6	56631	87872	68750	125779	78349	142678	99057	188067	117176	208805	129968	192970	141154	204118	154592	265141
POLYMETHYL METHACRYLATE	12251	6945	6899	11277	8639	12861	9149	13820	6061	10482	11151	19860	18618	25358	26431	43861
STYRENE ACRYLONITRILE	4899	4486	4447	4428	6205	6993	5698	7274	6291	7726	8990	8602	7871	7849	8251	9948
POLYESTER CHIPS/PET CHIPS	-285781	-182732	-254916	-202715	-244564	-196093	-336821	-281967	-208406	-151869	-660900	-385839	-819255	-488225	-748230	-541712

Table 26:- Net Imports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
POLYTETRAFLUOROETHYLENE(PTFE)	-3305	-9348	-4263	-24505	-3067	-9431	-3429	-14717	-5406	-26120	-3996	-17736	-6087	-27008	-6653	-34247
TOTAL	-174353	-46832	-134420	-32722	-98207	28611	-163629	-1834	-14599	142875	-425171	-81890	-555308	-164180	-467856	-126224
OLEFINS																
BUTADIENE	-131010	-119437	-116358	-172136	-108439	-124668	-118339	-87481	-69256	-42478	-128814	-66255	-104733	-95611	-100567	-70267
ETHYLENE	114506	51518	14660	8217	23783	17215	24790	19454	43905	38466	15931	10964	80890	57093	-97307	-64532
PROPYLENE	-24208	-10169	-8919	-3901	-4984	-2199	247	1201	2127	2691	-11108	-587	-10069	-2573	-11932	-1722
TOTAL	-40712	-78088	-110617	-167820	-89640	-109652	-93302	-66826	-23224	-1321	-123991	-55878	-33912	-41091	-209806	-136521
AROMATICS																
BENZENE	-519307	-202800	-458429	-256321	-602303	-413629	-630499	-434667	-576694	-348865	-914875	-371283	-789425	-366814	-1286263	-662342
MIXED XYLENE	-72323	-29631	-148488	-87875	-141395	-104275	-181672	-135055	-8817	-5768	100	47	47	15	2006	922
ORTHO-XYLENE	-302052	-140145	-151584	-97200	-165688	-125893	-184131	-130512	-191310	-114794	-199884	-90750	-128072	-60152	-169945	-78544
TOLUENE	183323	75240	239926	135671	301733	211280	248961	181884	277883	177414	338394	160451	386906	179337	410041	192082
PARAXYLENE	37595	10349	-166573	-174608	-15066	8959	-43511	24171	-365865	-158725	-52553	-8224	396023	227323	-937862	-498568
TOTAL	-672764	-286987	-685148	-480333	-622719	-423558	-790852	-494179	-864803	-450738	-828818	-309759	-134521	-20291	-1982023	-1046450

Table 26:- Net Imports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

[Qty. in MT & Value in Rs. Lakh]

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
OTHER PETRO-BASED CHEMICALS																
ETHYLENE DICHLORIDE	284997	65400	263401	46734	355809	53024	439528	97999	465271	117014	584194	101873	503971	86296	668473	101940
BUTANOL	19927	12831	27973	19040	31528	21386	42497	33871	56195	41664	62317	31218	55667	25045	52816	30016
OXO ALCOHOL	189	-379	459	1102	517	1119	510	2049	94	2959	688	3782	1915	5982	1382	5642
2-ETHYL HEXANOL	34135	27466	29106	26588	58371	53708	100174	87555	128503	110970	108349	65358	64812	35875	55493	37951
VINYL CHLORIDE MONOMER	385075	163944	302327	147439	296171	145623	303041	167910	317925	178829	349371	167169	344423	177368	484390	247256
EPICHLHYDRINE	19778	19855	19049	19719	19096	18266	22982	22587	33574	33610	43355	37610	48058	34508	55975	51370
ISO BUTYLENE	42938	32729	23351	20484	9260	7938	21439	20427	13009	12220	15825	10277	20050	14130	48702	36007
METAXYLENE	-107865	-70102	-82780	-55429	-36690	-28898	3025	3210	923	756	3018	2615	2603	2383	2074	1801
METHYL ISOBUTYL KETONE	16292	12297	18670	16654	17663	20113	18294	21934	23037	26279	27289	21838	21569	16600	33744	30392
PIB	-76	805	913	1752	6469	7078	3560	6000	6297	10469	8239	10122	13797	14501	12421	14253
POLYCARBONATE	101896	133957	113674	159205	120233	171575	120412	177530	122096	187056	133745	203159	134375	200911	154018	250839
PROPYLENE OXIDE	12561	10336	9392	9595	13141	13052	11676	13076	22914	25917	25552	25697	23064	21698	23446	23594
PROPYLENE GLYCOL	33942	23064	34828	28762	37443	32387	42729	39764	47976	49677	53514	46157	50474	38843	56216	47866
POLYVINYL ACETATE RESIN	-3254	568	-5823	-1886	-9676	-4469	-11263	-4819	-11453	-7084	-8050	-5474	-5724	-5098	-3510	-1463

Table 26:- Net Imports of Major Petrochemicals (Product-wise) 2010-11 to 2017-18

[Qty. in MT & Value in Rs. Lakh]

PRODUCT	2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL	QTY	VAL
UNSATURATED POLYESTER RESIN	27502	28183	24782	29840	25304	30991	20407	25492	16195	16836	18191	21543	23712	23703	35452	35539
ETHYL BENZENE	54	47	72	81	403	356	172	228	128	182	150	144	308	267	351	320
CELLULOSE ACETATE BUTYRATE	85	172	218	435	-45	73	-93	-162	-43	-88	-4	-69	-5	-12	2	-8
CELLULOSE ACETATE SHEET	171	-41	442	180	533	146	917	417	1227	665	1261	659	981	386	1287	776
CELLULOSE NITRATE SHEET	-13	121	73	222	132	229	499	829	251	451	85	255	56	236	97	322
MELAMINE MOULDING POWDER	4940	5185	6955	7586	7508	8918	8042	11188	3742	10072	3879	11420	2873	12232	-55	13246
POLYACETAL RESIN	17939	13072	20372	17045	25654	23264	25726	24764	32068	29394	34900	33790	37496	37390	43531	43338
PHTHALIC ANHYDRIDE	42761	21589	13901	8912	31509	25337	31752	28262	13716	13093	39355	21740	50025	27607	92571	61126
STYRENE	456785	251776	513237	344003	574319	476110	570412	600303	610860	537073	716903	515870	724539	553395	784749	650813
VINYL ACTATE MONOMER	84307	34384	122499	66681	126194	68982	143268	84638	137991	113085	139954	86872	150249	80874	163703	103973
ISOPROPANOL	33226	17499	23843	9395	51878	37938	47937	38703	57055	44508	83890	44841	89877	50413	99460	63966
POLYOL	115146	107848	119224	149549	137228	182410	140104	205813	148978	198098	165140	216251	147308	192627	195114	242614
TOTAL	1623438	912606	1600158	1073688	1899952	1366656	2107747	1709568	2248529	1753705	2611110	1674717	2506473	1648160	3061902	2093489
TOTAL NET IMPORT OF MAJOR PETRO-CHEMICALS	3887744	2397334	3074493	2164375	4443869	3412574	4769565	3983612	6292846	5307149	6363984	4784481	6839138	4987650	5441657	4568394

Note : Data Source in respect of imports and exports is DGCIS,Kolkata, M/O Commerce and Industry.

Table 27:- Top Five Export Destinations of Selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ACRYLIC FIBRE	IRAN	16550.374	22011.720
	KENYA	8157.831	6066.178
	ETHIOPIA	3170.182	2446.828
	CHINA P RP	1606.410	2276.047
	SOUTH AFRICA	956.055	2724.570
	Product Total	30440.852	35525.343
NYLON FILAMENT YARN	TURKEY	829.461	1696.407
	BRAZIL	456.850	1260.176
	NEW ZEALAND	376.461	1165.307
	SPAIN	356.181	1100.461
	U S A	250.573	1031.483
	Product Total	2269.526	6253.834
NYLON INDUSTRIAL YARN/TYRE CORD	THAILAND	251.907	458.142
	U S A	199.106	254.210
	MEXICO	158.683	213.537
	NEPAL	145.771	164.393
	ITALY	89.276	114.701
	Product Total	844.743	1204.983
POLYESTER FILAMENT YARN	TURKEY	197713.625	196721.522
	BRAZIL	181233.579	162098.787
	BANGLADESH PR	36265.924	41876.183
	EGYPT A RP	29686.380	28631.101
	KOREA RP	25252.005	24650.091
	Product Total	470151.513	453977.684
POLYESTER STAPLE FIBRE	U S A	42774.544	34560.393
	NEPAL	28402.429	20199.175
	BANGLADESH PR	21853.134	15566.533
	BELGIUM	16029.542	11227.549
	TURKEY	15665.049	12194.012
	Product Total	124724.698	93747.662
POLYPROPYLENE FILAMENT YARN	ETHIOPIA	121.385	139.323
	NEPAL	105.693	136.740
	TAIWAN	91.417	111.665
	BANGLADESH PR	90.078	104.302
	MALAWI	51.249	58.330
	Product Total	459.822	550.360
POLYPROPYLENE STAPLE FIBRE	U S A	8655.973	7643.773
	AUSTRALIA	377.012	426.351
	NEPAL	205.006	249.039
	U ARAB EMTS	183.158	260.474
	SAUDI ARAB	47.959	46.763
	Product Total	9469.108	8626.400

Table 27:- Top Five Export Destinations of Selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ELASTOMERIC/ SPANDEX FILAMENT YARN	TURKEY	242.991	608.747
	PERU	105.048	323.212
	BANGLADESH PR	95.135	288.794
	TAIWAN	64.344	188.107
	COLOMBIA	53.112	151.570
	Product Total	560.630	1560.430
ACRYLONITRILE	IRAN	1500.000	1818.608
	CHINA P RP	13.250	80.015
	NEPAL	0.300	1.470
	NORWAY	0.016	0.013
	BHUTAN	0.004	0.032
	Product Total	1513.570	1900.138
CAPROLACTUM	LEBANON	15.500	22.425
	INDONESIA	13.250	25.821
	AUSTRALIA	10.000	15.926
	SAUDI ARAB	9.000	12.359
	U S A	3.786	15.337
	Product Total	51.536	91.868
MONO EHYLENE GLYCOL	CHINA P RP	76691.200	45903.689
	U S A	31575.111	23607.731
	TAIWAN	6468.920	4742.388
	NETHERLAND	6270.000	4506.910
	AFGHANISTAN	4200.000	2483.237
	Product Total	125205.231	81243.955
PURIFIED TEREPHTHALIC ACID	OMAN	61603.000	25697.761
	PAKISTAN IR	59154.000	25135.791
	ARGENTINA	31510.000	13086.988
	SOUTH AFRICA	26285.000	10600.309
	RUSSIA	25014.000	10497.872
	Product Total	203566.000	85018.721
LOW DENSITY POLYETHYLENE	CHINA P RP	66780.770	49183.896
	TURKEY	12291.050	10468.084
	BANGLADESH PR	3414.005	3088.329
	VIETNAM SOC REP	2623.150	2217.114
	PORTUGAL	2036.005	2058.346
	Product Total	87144.980	67015.769
HIGH DENSITY POLYTHYLENE	CHINA P RP	116724.322	83090.636
	VIETNAM SOC REP	24831.500	17757.748
	NEPAL	10553.174	8513.976
	TURKEY	7145.005	5252.356
	BANGLADESH PR	5622.382	4089.796
	Product Total	164876.383	118704.512

Table 27:- Top Five Export Destinations of Selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
POLYESTYRENE	EGYPT A RP	10681.000	9077.095
	BANGLADESH PR	9671.020	7640.530
	ITALY	9134.200	8816.019
	TURKEY	4782.440	4112.338
	U ARAB EMTS	3555.960	6729.670
	Product Total	37824.620	36375.652
POLYPROPYLENE (INC. CO-POLYMER)	TURKEY	122000.300	87457.670
	CHINA P RP	96713.981	67581.831
	PAKISTAN IR	55435.000	41015.927
	ITALY	53680.168	40247.914
	VIETNAM SOC REP	31433.318	23168.769
	Product Total	359262.767	259472.111
EXPANDABLE POLYESTYRENE	INDONESIA	792.000	860.222
	U ARAB EMTS	491.550	546.892
	EGYPT A RP	353.000	307.359
	PAKISTAN IR	300.000	342.482
	QATAR	188.080	169.666
	Product Total	2124.630	2226.621
POLY VINYL CHLORIDE	U ARAB EMTS	3678.150	3289.846
	NEPAL	1167.330	988.465
	SRI LANKA DSR	711.716	806.606
	NIGERIA	197.000	141.055
	QATAR	177.000	90.017
	Product Total	5931.196	5315.989
LINEAR LOW DENSITY POLYTHYLENE	CHINA P RP	124436.887	87155.886
	VIETNAM SOC REP	25229.000	17308.822
	TURKEY	16367.493	11751.929
	PAKISTAN IR	11914.000	8661.514
	BANGLADESH PR	11403.396	8214.285
	Product Total	189350.776	133092.436
PVC COMPOUND	QATAR	2447.308	1193.057
	KENYA	2089.650	1368.618
	BANGLADESH PR	1583.848	1212.027
	NIGERIA	1572.075	1086.651
	NEPAL	1453.917	989.598
	Product Total	9146.798	5849.951
STYRENE BUTADIENE RUBBER	PAKISTAN IR	9368.833	8133.604
	THAILAND	8665.450	8083.331
	CHINA P RP	3276.306	2894.454
	SRI LANKA DSR	2078.303	2242.652
	SAUDI ARAB	2013.856	1430.864
	Product Total	25402.748	22784.905

Table 27:- Top Five Export Destinations of Selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
POLY BUTADIENE RUBBER	SRI LANKA DSR	2137.660	2331.960
	THAILAND	1523.563	1515.102
	CHINA P RP	1213.836	1179.668
	PAKISTAN IR	748.419	854.565
	KOREA RP	368.000	367.290
	Product Total	5991.478	6248.585
ETHYL PROPYLENE DIMERS	TURKEY	1923.424	6588.930
	U ARAB EMTS	203.629	293.113
	SAUDI ARAB	86.760	162.313
	COLOMBIA	70.381	211.127
	U K	48.041	76.228
	Product Total	2332.235	7331.711
ETHYL VINYL ACETATE	U S A	452.090	479.243
	IRAN	320.135	403.536
	NEPAL	35.033	81.719
	U ARAB EMTS	32.324	81.061
	KENYA	14.280	34.759
	Product Total	853.862	1080.318
NITRILE BUTADIENE RUBBER	U S A	170.051	430.393
	THAILAND	98.520	279.239
	SINGAPORE	37.084	56.285
	JAPAN	35.280	160.124
	SOUTH AFRICA	20.220	32.607
	Product Total	361.155	958.648
BUTYL RUBBER	SRI LANKA DSR	264.456	539.067
	SAUDI ARAB	19.312	51.319
	NEPAL	19.222	34.731
	JAPAN	14.319	44.504
	UGANDA	4.000	6.260
	Product Total	321.309	675.881
LINEAR ALKYL BENZENE	BANGLADESH PR	505.000	378.047
	NEPAL	140.420	118.519
	NETHERLAND	127.000	89.804
	SRI LANKA DSR	84.550	129.583
	U ARAB EMTS	41.160	61.136
	Product Total	898.130	777.089
ETHYLENE OXIDE	VIETNAM SOC REP	131.000	120.406
	INDONESIA	112.000	92.531
	THAILAND	104.289	177.386
	MALAYSIA	64.640	63.267
	SPAIN	34.960	125.743
	Product Total	446.889	579.333

Table 27:- Top Five Export Destinations of Selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ABS RESIN	NEPAL	52.950	62.558
	CHINA P RP	47.825	50.066
	RUSSIA	36.000	33.375
	INDONESIA	35.125	102.979
	MALAYSIA	16.700	21.885
	Product Total	188.600	270.863
NYLON-6	JAPAN	4497.252	6259.140
	HONG KONG	2167.981	3658.100
	THAILAND	1703.349	2832.526
	U ARAB EMTS	1281.870	2212.240
	CHINA P RP	1177.149	1730.755
	Product Total	10827.601	16692.761
POLYMETHYL METHACRYLATE	NEPAL	689.232	510.960
	TANZANIA REP	523.500	329.276
	IRAN	417.242	821.654
	SRI LANKA DSR	290.860	220.900
	NIGERIA	229.860	146.065
	Product Total	2150.694	2028.855
STYRENE ACRYLONITRILE	NIGERIA	970.960	521.148
	U ARAB EMTS	96.440	54.911
	PHILIPPINES	62.000	79.667
	SYRIA	40.000	11.656
	JAPAN	4.998	8.361
	Product Total	1174.398	675.743
POLYESTER CHIPS/PET CHIPS	ITALY	111494.970	72209.832
	U ARAB EMTS	98498.700	64061.791
	EGYPT A RP	76787.200	47985.184
	BANGLADESH PR	67416.202	44726.680
	URUGUAY	58015.510	37159.380
	Product Total	412212.582	266142.867
POLYTETRAFLUOROETHYLENE(PTFE)	U S A	2882.815	14266.815
	GERMANY	2589.605	14088.640
	ITALY	1549.788	7812.817
	CHINA P RP	652.084	4298.177
	TURKEY	410.173	2760.271
	Product Total	8084.465	43226.720
BUTADIENE	MALAYSIA	45675.000	34030.290
	KOREA RP	41350.000	28811.224
	THAILAND	4725.000	3026.926
	TAIWAN	4651.000	3857.791
	CHINA P RP	3950.000	1674.949
	Product Total	100351.000	71401.180

Table 27:- Top Five Export Destinations of Selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ETHYLENE	CHINA P RP	69066.000	50672.038
	QATAR	53063.000	37936.024
	INDONESIA	14293.000	8698.675
	BHUTAN	2.760	3.257
	SRI LANKA DSR	1.000	16.229
	Product Total	136425.760	97326.223
PROPYLENE	CHINA P RP	5252.640	2687.360
	SPAIN	5250.000	2444.094
	KOREA RP	5181.000	2603.204
	INDONESIA	5061.000	1371.636
	GERMANY	0.005	0.155
	Product Total	20744.645	9106.449
BENZENE	SAUDI ARAB	603271.010	310851.432
	CHINA P RP	152103.001	78593.016
	U ARAB EMTS	100965.000	56160.868
	SPAIN	100429.785	50835.359
	NETHERLAND	82113.000	42387.544
	Product Total	1038881.796	538828.219
MIXED XYLENE	QATAR	314.822	182.998
	KENYA	39.160	22.364
	TANZANIA REP	23.148	13.353
	SRI LANKA DSR	14.000	8.715
	BANGLADESH PR	11.260	6.475
	Product Total	402.390	233.905
ORTHO-XYLENE	CHINA P RP	85764.000	41435.489
	INDONESIA	35026.000	15638.861
	TAIWAN	32115.000	15081.737
	PAKISTAN IR	21366.900	9765.152
	BELGIUM	8041.000	3524.415
	Product Total	182312.900	85445.654
TOLUENE	PAKISTAN IR	710.000	356.848
	KENYA	680.930	381.654
	NIGERIA	556.500	316.732
	SRI LANKA DSR	487.540	255.924
	BANGLADESH PR	328.360	182.701
	Product Total	2763.330	1493.859
PARAXYLENE	CHINA P RP	1079842.000	594538.046
	MALAYSIA	256809.000	140950.404
	INDONESIA	187646.000	103144.480
	PAKISTAN IR	93751.000	53015.135
	TAIWAN	61336.000	31153.758
	Product Total	1679384.000	922801.823

Table 27:- Top Five Export Destinations of Selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ETHYLENE DICHLORIDE	U ARAB EMTS	39798.000	5528.691
	IRAN	5000.050	966.235
	PAKISTAN IR	62.000	13.942
	BRAZIL	0.400	0.300
	NEPAL	0.230	0.347
	Product Total	44860.680	6509.515
BUTANOL	IRAN	661.000	505.355
	NEPAL	60.141	48.295
	SRI LANKA DSR	48.454	33.401
	QATAR	46.791	36.958
	KENYA	24.048	17.573
	Product Total	840.434	641.582
OXO ALCOHOL	CHINA P RP	444.800	132.671
	U S A	240.061	272.099
	NETHERLAND	153.000	119.445
	POLAND	28.000	26.596
	BANGLADESH PR	12.415	17.020
	Product Total	878.276	567.831
2-ETHYL HEXANOL	TURKEY	1381.000	883.216
	PAKISTAN IR	1216.000	783.926
	U ARAB EMTS	20.000	14.099
	NEPAL	17.940	17.582
	BANGLADESH PR	1.170	1.354
	Product Total	2636.110	1700.177
EPICHLHYDRINE	SOUTH AFRICA	36.000	47.402
	BANGLADESH PR	8.740	11.013
	IRAN	4.140	5.654
	NEPAL	0.070	0.064
	U ARAB EMTS	0.025	6.350
	Product Total	48.975	70.483
METAXYLENE	DENMARK	3.000	245.664
	SAUDI ARAB	1.005	2.462
	BELGIUM	0.200	14.933
	NEPAL	0.052	0.070
	SOUTH AFRICA	0.001	0.006
	Product Total	4.258	263.135
METHYL ISOBUTYL KETONE	U ARAB EMTS	472.000	424.244
	NIGERIA	113.000	107.921
	VIETNAM SOC REP	105.000	99.461
	SRI LANKA DSR	56.000	56.555
	KENYA	48.046	49.217
	Product Total	794.046	737.398

Table 27:- Top Five Export Destinations of Selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
PIB	SINGAPORE	1035.000	834.133
	SAUDI ARAB	278.796	336.768
	SRI LANKA DSR	263.840	264.919
	U ARAB EMTS	229.400	246.360
	INDONESIA	135.000	156.034
	Product Total	1942.036	1838.214
POLYCARBONATE	KOREA RP	1125.154	1106.704
	TAIWAN	829.770	861.565
	ITALY	791.000	826.502
	HONG KONG	776.000	667.645
	VIETNAM SOC REP	212.000	293.423
	Product Total	3733.924	3755.839
PROPYLENE GLYCOL	U ARAB EMTS	465.548	461.936
	NEPAL	113.129	144.572
	IRELAND	94.680	437.121
	BANGLADESH PR	72.820	157.892
	QATAR	59.815	75.356
	Product Total	805.992	1276.877
POLYVINYL ACETATE RESIN	U S A	1400.720	1652.577
	BELGIUM	898.000	948.743
	TURKEY	476.575	507.388
	SPAIN	474.000	522.011
	CHINA P RP	430.990	448.985
	Product Total	3680.285	4079.704
UNSATURATED POLYESTER RESIN	QATAR	2464.749	3402.450
	NEPAL	1304.135	1242.368
	NIGERIA	1197.055	1068.671
	SPAIN	1143.960	1054.046
	BANGLADESH PR	923.830	1502.125
	Product Total	7033.729	8269.660
CELLULOSE ACETATE BUTYRATE	BRAZIL	0.600	13.335
	VIETNAM SOC REP	0.560	4.755
	U S A	0.006	0.071
	SWITZERLAND	0.005	0.169
	Product Total	1.171	18.330
CELLULOSE ACETATE SHEET	THAILAND	42.419	135.215
	HONG KONG	15.000	6.594
	NEPAL	1.223	2.287
	POLAND	0.200	0.688
	ST LUCIA	0.012	0.046
	Product Total	58.854	144.830

Table 27:- Top Five Export Destinations of Selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
MELAMINE MOULDING POWDER	NEPAL	13253.075	2383.011
	GABON	559.400	462.439
	NIGERIA	316.552	271.729
	MYANMAR	150.100	102.693
	BANGLADESH PR	97.010	92.572
	Product Total	14376.137	3312.444
POLYACETAL RESIN	BANGLADESH PR	66.695	104.372
	U S A	20.402	92.606
	NEPAL	17.676	14.219
	U ARAB EMTS	11.981	13.410
	SRI LANKA DSR	6.190	8.619
	Product Total	122.944	233.226
PHTHALIC ANHYDRIDE	SAUDI ARAB	18632.000	12322.012
	U ARAB EMTS	9685.015	6410.731
	TURKEY	1643.000	1178.240
	KUWAIT	1581.000	1050.641
	BANGLADESH PR	1401.000	871.674
	Product Total	32942.015	21833.298
STYRENE	U ARAB EMTS	3170.288	2514.107
	PAKISTAN IR	673.000	602.380
	SRI LANKA DSR	597.200	595.683
	KENYA	48.000	52.557
	NEPAL	17.255	54.267
	Product Total	4505.743	3818.994
VINYL ACTATE MONOMER	TURKEY	7997.000	4601.265
	ITALY	4230.000	2557.570
	BELGIUM	2640.000	1834.179
	U ARAB EMTS	2050.000	1251.204
	TUNISIA	1043.000	714.009
	Product Total	17960.000	10958.227
ISOPROPANOL	U ARAB EMTS	2403.743	1509.415
	BELGIUM	1335.000	810.383
	TURKEY	1088.800	824.413
	EGYPT A RP	967.640	709.360
	AUSTRALIA	856.000	618.897
	Product Total	6651.183	4472.468
POLYOL	EGYPT A RP	2876.615	758.823
	SINGAPORE	2374.177	3732.479
	INDONESIA	1938.410	2488.822
	U ARAB EMTS	1649.593	1940.480
	BANGLADESH PR	1546.137	2177.924
	Product Total	10384.932	11098.528

Note : Data Source in respect of imports and exports is DGCIS,Kolkata, M/O Commerce and Industry.

Table 28:- Top Five Sources (countries) of Import of selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ACRYLIC FIBRE	GERMANY	11075.694	15190.777
	THAILAND	8337.320	10983.031
	NEPAL	3495.217	6248.201
	JAPAN	2213.983	4284.071
	PERU	2104.843	2447.647
	Product Total	27227.057	39153.727
NYLON FILAMENT YARN	VIETNAM SOC REP	13346.014	22693.276
	CHINA P RP	2522.740	5757.157
	TAIWAN	2499.203	4884.381
	ITALY	862.114	1816.844
	FRANCE	511.832	1017.315
	Product Total	19741.903	36168.973
NYLON INDUSTRIAL YARN/TYRE CORD	CHINA P RP	4635.233	6920.207
	BELARUS	1204.534	2101.790
	KOREA RP	287.254	199.647
	INDONESIA	163.529	213.234
	RUSSIA	75.822	131.261
	Product Total	6366.372	9566.139
POLYESTER FILAMENT YARN	CHINA P RP	37377.131	41584.611
	INDONESIA	13989.963	15334.191
	KOREA RP	8168.849	10053.949
	MALAYSIA	7000.406	6720.157
	TAIWAN	4861.299	7257.495
	Product Total	71397.648	80950.403
POLYESTER STAPLE FIBRE	CHINA P RP	51210.041	36318.346
	KOREA RP	13950.726	13012.851
	INDONESIA	7194.487	6563.158
	THAILAND	5697.272	4227.146
	TAIWAN	3611.055	3980.222
	Product Total	81663.581	64101.723
POLYPROPYLENE FILAMENT YARN	TURKEY	1179.227	1450.178
	CHINA P RP	72.405	69.808
	U K	28.199	66.568
	KOREA RP	20.751	34.456
	U ARAB EMTS	14.911	19.241
	Product Total	1315.493	1640.251
POLYPROPYLENE STAPLE FIBRE	SAUDI ARAB	1390.235	1316.880
	U ARAB EMTS	1240.000	1274.422
	CHINA P RP	412.059	444.877
	BELGIUM	92.600	131.023
	VIETNAM SOC REP	89.178	86.899
	Product Total	3224.072	3254.101

Table 28:- Top Five Sources (countries) of Import of selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ELASTOMERIC/ SPANDEX FILAMENT YARN	VIETNAM SOC REP	12576.840	44283.268
	KOREA RP	3461.482	12014.875
	SINGAPORE	2929.728	15837.969
	CHINA P RP	1587.693	6268.678
	JAPAN	467.389	2448.789
	Product Total	21023.132	80853.579
ACRYLONITRILE	KOREA RP	38723.551	41732.093
	NETHERLAND	26348.261	29071.510
	TAIWAN	25057.400	25065.606
	RUSSIA	21588.000	23081.535
	BRAZIL	21305.000	24118.694
	Product Total	133022.212	143069.438
CAPROLACTUM	KOREA RP	29248.752	38863.287
	RUSSIA	15450.000	18925.278
	POLAND	8250.000	10094.790
	NETHERLAND	1713.240	2689.995
	BELGIUM	1330.000	1976.935
	Product Total	55991.992	72550.285
DIMETHYL TEREPHTHALATE	KOREA RP	1782.000	1201.852
	TURKEY	438.000	294.939
	KOREA DP RP	36.000	23.454
	U K	0.003	0.038
	GERMANY	0.001	0.022
	Product Total	2256.004	1520.305
MONO EHYLENE GLYCOL	SAUDI ARAB	484208.851	263271.866
	KUWAIT	421114.861	230554.471
	SINGAPORE	83970.269	47827.315
	U ARAB EMTS	76125.200	42372.682
	BELGIUM	396.020	177.676
	Product Total	1065815.201	584204.010
PURIFIED TEREPHTHALIC ACID	THAILAND	207537.000	94294.826
	KOREA RP	170500.000	77760.288
	TAIWAN	77770.000	35137.780
	CHINA P RP	41268.630	19383.274
	MALAYSIA	12254.000	5616.991
	Product Total	509329.630	232193.159
LOW DENSITY POLYETHYLENE	SAUDI ARAB	102718.331	84413.829
	U ARAB EMTS	75999.506	61024.303
	QATAR	54067.791	44744.480
	GERMANY	37066.160	38100.996
	U S A	29551.587	24902.474
	Product Total	299403.375	253186.082

Table 28:- Top Five Sources (countries) of Import of selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
HIGH DENSITY POLYTHYLENE	U ARAB EMTS	198766.767	165348.180
	SAUDI ARAB	197798.085	153674.165
	SINGAPORE	160083.810	136384.707
	QATAR	135773.579	108316.262
	THAILAND	65154.199	59827.876
	Product Total	757576.440	623551.190
POLYESTYRENE	KOREA RP	10135.342	14470.100
	TAIWAN	7163.242	7074.260
	IRAN	6290.740	5584.267
	SINGAPORE	6131.109	6509.382
	U S A	5753.807	6996.571
	Product Total	35474.240	40634.580
POLYPROPYLENE (INC. CO-POLYMER)	SAUDI ARAB	262410.969	185876.686
	SINGAPORE	198694.470	170822.003
	U ARAB EMTS	129637.800	97298.861
	KOREA RP	75278.581	67900.802
	THAILAND	71824.856	61682.208
	Product Total	737846.676	583580.560
EXPANDABLE POLYESTYRENE	CHINA P RP	1717.300	1607.672
	TAIWAN	612.000	619.311
	AUSTRIA	57.500	87.210
	SAUDI ARAB	51.000	38.513
	GERMANY	44.258	63.766
	Product Total	2482.058	2416.472
POLY VINYL CHLORIDE	TAIWAN	374772.675	232411.990
	JAPAN	316015.221	198259.614
	KOREA RP	299058.281	179495.831
	CHINA P RP	231315.872	137162.525
	THAILAND	123099.438	76312.902
	Product Total	1344261.487	823642.862
LINEAR LOW DENSITY POLYTHYLENE	SAUDI ARAB	135752.675	105696.078
	U ARAB EMTS	100955.179	77879.772
	QATAR	70028.215	55082.898
	SINGAPORE	19575.835	16037.024
	KUWAIT	17628.132	12771.190
	Product Total	343940.036	267466.962
PVC COMPOUND	KOREA RP	7733.251	5432.342
	CHINA P RP	3295.028	2432.930
	TAIWAN	3027.360	1949.895
	THAILAND	2178.025	2713.441
	U S A	1923.960	1039.883
	Product Total	18157.624	13568.491

Table 28:- Top Five Sources (countries) of Import of selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
STYRENE BUTADIENE RUBBER	KOREA RP	59642.012	69404.484
	POLAND	22829.786	25535.967
	GERMANY	6881.722	8962.857
	JAPAN	5335.343	8132.456
	THAILAND	5240.792	6168.339
	Product Total	99929.655	118204.103
POLY BUTADIENE RUBBER	KOREA RP	48554.527	62197.111
	SINGAPORE	12355.640	16297.714
	IRAN	6101.770	6704.556
	RUSSIA	5624.200	8231.950
	MALAYSIA	3979.060	5765.621
	Product Total	76615.197	99196.952
ETHYL PROPYLENE DIMERS	U S A	11414.378	13621.507
	JAPAN	10929.781	15454.896
	KOREA RP	9282.331	11511.585
	NETHERLAND	4117.555	5930.222
	SAUDI ARAB	2661.386	3128.361
	Product Total	38405.431	49646.571
ETHYL VINYL ACETATE	KOREA RP	76592.845	76538.956
	SAUDI ARAB	40690.187	37113.969
	THAILAND	26396.000	26465.776
	BELGIUM	12686.750	12650.864
	CANADA	6118.800	5617.629
	Product Total	162484.582	158387.194
NITRILE BUTADIENE RUBBER	KOREA RP	18987.696	26358.264
	JAPAN	4411.452	8502.396
	RUSSIA	3524.201	4960.742
	TAIWAN	3343.555	5149.151
	FRANCE	3196.898	7476.956
	Product Total	33463.802	52447.509
BUTYL RUBBER	RUSSIA	60547.031	71950.096
	U S A	16990.473	27517.640
	SINGAPORE	10255.697	13858.424
	U K	9405.805	16086.679
	BELGIUM	6527.337	10691.391
	Product Total	103726.343	140104.230
LINEAR ALKYL BENZENE	SAUDI ARAB	68456.000	57144.171
	THAILAND	47361.719	39024.697
	QATAR	43070.000	33750.401
	IRAN	36962.530	25706.865
	EGYPT A RP	5611.000	4209.847
	Product Total	201461.249	159835.981

Table 28:- Top Five Sources (countries) of Import of selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ETHYLENE OXIDE	U S A	57.053	674.560
	CHINA P RP	16.000	89.507
	BELGIUM	0.525	3.166
	ARGENTINA	0.083	16.738
	RUSSIA	0.005	0.511
	Product Total	73.666	784.482
ABS RESIN	KOREA RP	76390.560	99659.856
	MALAYSIA	6857.560	10010.438
	THAILAND	5900.269	9247.005
	TAIWAN	4294.500	5110.169
	CHINA P RP	1211.923	1889.234
	Product Total	94654.812	125916.702
NYLON-6	TAIWAN	52987.259	75429.822
	RUSSIA	29425.208	39718.875
	KOREA RP	20601.504	34472.806
	U S A	17930.504	31019.993
	CHINA P RP	15972.323	36211.243
	Product Total	136916.798	216852.739
POLYMETHYL METHACRYLATE	KOREA RP	13705.655	22955.844
	SINGAPORE	4833.735	6817.842
	JAPAN	2760.510	4672.958
	CHINA P RP	1860.580	2953.750
	THAILAND	1601.335	1522.834
	Product Total	24761.815	38923.228
STYRENE ACRYLONITRILE	KOREA RP	5216.185	5840.606
	GERMANY	1595.988	1855.659
	THAILAND	1171.164	1245.938
	JAPAN	969.500	1099.177
	CHINA P RP	171.105	218.724
	Product Total	9123.942	10260.104
POLYESTER CHIPS/PET CHIPS	CHINA P RP	93464.850	62571.705
	NIGERIA	74063.942	292.732
	IRAN	26053.290	16016.947
	BANGLADESH PR	16257.583	5644.063
	TAIWAN	12315.905	7841.356
	Product Total	222155.570	92366.803
POLYTETRAFLUOR OETHYLENE(PTFE)	CHINA P RP	702.553	4509.779
	U S A	585.784	4025.977
	RUSSIA	567.448	2451.300
	NETHERLAND	497.486	3363.618
	ITALY	239.169	1213.741
	Product Total	2592.440	15564.415

Table 28:- Top Five Sources (countries) of Import of selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
BUTADIENE	NETHERLAND	1425.000	1421.224
	KOREA RP	1302.000	1568.030
	EGYPT A RP	130.000	96.818
	GERMANY	2.160	17.662
	Product Total	2859.160	3103.734
ETHYLENE	ITALY	17627.413	14335.735
	INDONESIA	9648.000	8667.006
	MALAYSIA	5250.000	4901.175
	THAILAND	3465.000	2218.100
	SINGAPORE	3100.000	2576.626
	Product Total	39090.413	32698.642
PROPYLENE	MALAYSIA	8209.000	4793.938
	CHINA P RP	600.102	2581.240
	ITALY	1.900	3.030
	U S A	1.555	5.897
	U K	0.004	0.207
	Product Total	8812.561	7384.312
BENZENE	CHINA P RP	60.001	57.952
	GERMANY	0.057	3.986
	NETHERLAND	0.042	1.180
	U S A	0.037	2.417
	Product Total	60.137	65.535
MIXED XYLENE	ISRAEL	1509.000	676.266
	KOREA RP	801.392	419.786
	GERMANY	64.969	74.584
	IRAN	36.000	15.912
	U ARAB EMTS	12.960	10.771
	Product Total	2424.321	1197.319
ORTHO-XYLENE	SINGAPORE	5540.391	2679.549
	RUSSIA	4010.000	2178.778
	SPAIN	2940.000	1600.847
	THAILAND	1907.000	974.621
	ISRAEL	600.000	320.016
	Product Total	14997.391	7753.811
TOLUENE	SINGAPORE	164458.000	77592.963
	THAILAND	131664.024	62259.475
	PORTUGAL	49474.000	22837.181
	KOREA RP	32161.594	15832.576
	IRAN	15450.000	6787.073
	Product Total	393207.618	185309.268
PARAXYLENE	SAUDI ARAB	267409.968	150453.643
	KUWAIT	219531.000	124977.880
	SINGAPORE	201843.780	115215.878
	OMAN	133102.651	76367.118
	KOREA RP	66632.619	36951.153
	Product Total	888520.018	503965.672

Table 28:- Top Five Sources (countries) of Import of selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
ETHYLENE DICHLORIDE	SAUDI ARAB	274582.000	40110.062
	U S A	183864.193	29279.539
	GERMANY	129417.389	20879.722
	QATAR	93200.000	13392.327
	TAIWAN	20000.000	2458.033
	Product Total	701063.582	106119.683
BUTANOL	SAUDI ARAB	18013.110	9765.878
	MALAYSIA	13516.000	8062.397
	SINGAPORE	9971.000	5716.240
	SOUTH AFRICA	7756.600	4293.337
	TAIWAN	1539.000	1006.485
	Product Total	50795.710	28844.337
OXO ALCOHOL	INDONESIA	923.145	2239.511
	THAILAND	778.580	1876.551
	PHILIPPINES	237.710	579.697
	MALAYSIA	157.230	370.976
	CHINA P RP	146.624	789.922
	Product Total	2243.289	5856.657
2-ETHYL HEXANOL	SINGAPORE	23718.550	16315.743
	U S A	8916.760	5515.461
	MALAYSIA	8676.000	6170.404
	GERMANY	6531.031	4432.539
	NETHERLAND	4388.000	3035.146
	Product Total	52230.341	35469.293
VINYL CHLORIDE MONOMER	QATAR	338001.178	171787.967
	JAPAN	98413.463	51847.625
	FRANCE	25717.000	12659.791
	INDONESIA	9202.000	5097.639
	GERMANY	7056.000	3374.285
	Product Total	478389.641	244767.307
EPICHLHYDRINE	THAILAND	40597.363	37057.778
	KOREA RP	6962.200	6116.101
	GERMANY	5135.653	5019.531
	JAPAN	1357.530	1038.850
	TAIWAN	1054.495	1026.202
	Product Total	55107.241	50258.462
ISO BUTYLENE	KOREA RP	23872.000	17276.104
	SINGAPORE	13974.000	11193.194
	BRAZIL	3633.000	2027.378
	TAIWAN	2457.000	1855.593
	BELGIUM	2000.000	1730.713
	Product Total	45936.000	34082.982

Table 28:- Top Five Sources (countries) of Import of selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
METAXYLENE	JAPAN	1021.680	1072.072
	CHINA P RP	648.000	606.798
	TAIWAN	408.320	383.766
	GERMANY	0.139	0.766
	U K	0.013	0.522
	Product Total	2078.152	2063.924
METHYL ISOBUTYL KETONE	KOREA RP	16114.440	14852.485
	JAPAN	6319.900	5483.993
	SOUTH AFRICA	5957.380	5093.095
	U S A	3144.432	2505.640
	NETHERLAND	2656.000	2318.956
	Product Total	34192.152	30254.169
PIB	KOREA RP	8547.342	8700.108
	U S A	3224.053	3186.424
	FRANCE	1996.303	2136.272
	GERMANY	600.175	1883.375
	BELGIUM	178.193	185.031
	Product Total	14546.066	16091.210
POLYCARBONATE	THAILAND	80907.384	127897.913
	KOREA RP	21648.890	39985.745
	SPAIN	16295.528	24110.483
	SAUDI ARAB	10287.418	15751.869
	NETHERLAND	9737.286	15409.076
	Product Total	138876.506	223155.086
PROPYLENE OXIDE	SAUDI ARAB	12080.371	12461.163
	SINGAPORE	7637.000	6632.633
	KOREA RP	2628.620	3168.627
	U S A	537.341	603.635
	CHINA P RP	414.920	519.736
	Product Total	23298.252	23385.794
PROPYLENE GLYCOL	SINGAPORE	17355.726	15236.553
	THAILAND	14116.660	11441.048
	CHINA P RP	10821.402	9722.494
	SAUDI ARAB	6548.940	5051.708
	KOREA RP	3703.750	3405.104
	Product Total	52546.478	44856.907
POLYVINYL ACETATE RESIN	GERMANY	1772.452	2087.848
	CHINA P RP	895.818	1342.880
	INDONESIA	266.684	181.693
	UNSPECIFIED	132.000	187.034
	BELGIUM	74.425	319.380
	Product Total	3141.379	4118.835

Table 28:- Top Five Sources (countries) of Import of selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
UNSATURATED POLYESTER RESIN	CHINA P RP	19702.700	16382.882
	TAIWAN	10497.755	9194.562
	U ARAB EMTS	6846.644	6757.111
	IRAN	3790.010	2477.783
	ITALY	3219.860	5272.683
	Product Total	44056.969	40085.021
ETHYL BENZENE	GERMANY	137.116	152.175
	CHINA P RP	112.800	121.106
	SINGAPORE	83.200	23.167
	KOREA RP	18.000	20.132
	U K	0.193	1.436
	Product Total	351.309	318.016
CELLULOSE ACETATE BUTYRATE	U S A	3.403	10.063
	Product Total	3.403	10.063
CELLULOSE ACETATE SHEET	CHINA P RP	786.347	571.500
	ITALY	542.146	239.408
	GERMANY	9.764	32.097
	HONG KONG	5.592	12.610
	U S A	1.303	13.804
	Product Total	1345.152	869.419
CELLULOSE NITRATE SHEET	JAPAN	84.540	262.105
	CHINA P RP	10.835	29.454
	GERMANY	3.190	32.111
	ITALY	0.680	2.416
	U K	0.062	1.158
	Product Total	99.307	327.244
MELAMINE MOULDING POWDER	THAILAND	5961.760	6041.306
	TAIWAN	2231.270	2321.174
	CHINA P RP	1675.411	1546.412
	JAPAN	1583.587	1970.985
	GERMANY	884.802	1491.505
	Product Total	12336.830	13371.382
POLYACETAL RESIN	MALAYSIA	13786.115	13425.515
	KOREA RP	10270.999	9892.987
	THAILAND	9228.400	8000.264
	NETHERLAND	3322.965	2630.500
	U S A	2508.238	2845.751
	Product Total	39116.717	36795.017
PHTHALIC ANHYDRIDE	KOREA RP	41664.200	27910.304
	INDONESIA	25144.001	16969.494
	THAILAND	20024.140	13294.032
	TAIWAN	17655.530	11594.583
	RUSSIA	10037.200	6229.028
	Product Total	114525.071	75997.441

Table 28:- Top Five Sources (countries) of Import of selected Petrochemicals during 2017-18

PRODUCT	COUNTRY	QUANTITY(MT)	VALUE(RS.Lakhs)
STYRENE	SINGAPORE	336112.102	280727.810
	SAUDI ARAB	212722.621	173154.298
	KUWAIT	153224.000	127357.571
	INDONESIA	32200.000	26668.847
	FRANCE	14892.000	12207.285
	Product Total	749150.723	620115.811
VINYL ACTATE MONOMER	SINGAPORE	115720.255	74794.655
	SAUDI ARAB	36025.000	22118.257
	CHINA P RP	30379.000	18605.839
	TAIWAN	2033.000	1276.650
	KOREA RP	500.000	307.248
	Product Total	184657.255	117102.649
ISOPROPANOL	KOREA RP	21474.873	13468.771
	CHINA P RP	19320.765	12328.264
	TAIWAN	18132.118	12095.436
	U S A	16273.905	11258.280
	SINGAPORE	9831.630	6022.534
	Product Total	85033.291	55173.285
POLYOL	CHINA P RP	55190.324	56478.655
	KOREA RP	34467.230	44149.334
	SINGAPORE	28235.957	33264.793
	THAILAND	22168.324	28754.641
	U S A	16883.501	36783.512
	Product Total	156945.336	199430.935

Note : Data Source in respect of imports and exports is DGCIS,Kolkata, M/O Commerce and Industry.

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

MONTH	RS./US\$
October-18	73.63
September-18	72.22
August-18	69.55
July-18	68.69
June-18	67.79
May-18	67.54
April-18	65.64
March-18	65.02
February-18	64.37
January-18	63.64
December-17	64.24
November-17	64.86
October-17	65.08
September-17	64.44
August-17	63.97
July-17	64.46
June-17	64.44
May-17	64.42
April-17	64.51
March-17	65.88
February-17	67.08
January-17	68.08
December-16	67.90
November-16	67.63
October-16	66.75
September-16	66.74
August-16	66.94
July-16	67.21
June-16	67.30
May-16	66.91
April-16	66.47
March-16	67.02
February-16	68.24
January-16	67.25
December-15	66.60
November-15	66.12
October-15	65.06
September-15	66.22
August-15	65.07

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

MONTH	RS./US\$
July-15	63.63
June-15	63.86
May-15	63.80
April-15	62.75

Note : Worked out on the basis of average daily exchange rates, as notified by RBI.

*Source:1. <https://www.rbi.org.in/scripts/ReferenceRateArchive.aspx>
(information up to 09.07.2018)*

2. <https://www.fbil.org.in> (informtion from 10.07.2018)

Table 30:- World Exports of Chemicals by top 10 countries- 2017

Rank	Value in US\$ Million									
	HS Code									
	28		29		30		31		32	
	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value
1st	China	15004	China	49736	Germany	84468	Russian Federation	7217	Germany	12984
2nd	USA	13159	USA	37725	Switzerland	70282	China	6043	USA	8246
3rd	Germany	8583	Belgium	28968	USA	49290	Canada	4577	China	6991
4th	Australia	6157	Germany	25146	Belgium	43179	USA	4512	Japan	4682
5th	Japan	4642	Ireland	23832	Ireland	38322	Belarus	2642	Belgium	3881
6th	Rep. of Korea	4367	Rep. of Korea	22692	United Kingdom	32716	Netherlands	2020	Netherlands	3560
7th	Brazil	3852	Switzerland	19874	France	31407	Belgium	1918	United Kingdom	3529
8th	France	3573	Japan	17884	Italy	28415	Israel	1202	Italy	3228
9th	Netherlands	3512	Netherlands	16746	Netherlands	23722	Egypt	1053	France	3066
10th	Canada	3492	Singapore	15541	Denmark	12943	Germany	998	Spain	2897
World Export		104776		356054		530519		44708		77540

Table - 30 : World Exports of Chemicals by top 10 countries- 2017

Rank	Value in US\$ Million									
	HS Code									
	38		39		4002		54		55	
	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value
1st	USA	28810	China	70000	Rep. of Korea	2991	China	17954	China	12061
2nd	Germany	25279	USA	65483	USA	2790	Rep. of Korea	2837	USA	2238
3rd	China	16194	Germany	63604	Japan	2485	Other Asia, nes	2801	India	2145
4th	France	12204	Rep. of Korea	31481	Russian Federation	1746	India	2126	Indonesia	2064
5th	Japan	10313	Belgium	29654	Germany	1692	Japan	2102	Rep. of Korea	1712
6th	Netherlands	9642	Japan	25141	Malaysia	1267	Italy	2048	Turkey	1429
7th	Belgium	7796	Netherlands	23543	Belgium	1265	USA	1913	Austria	1235
8th	United Kingdom	6279	France	21500	Singapore	1220	Germany	1644	Japan	1200
9th	Singapore	5824	Italy	20707	Other Asia, nes	1126	Turkey	1539	Germany	1117
10th	Italy	5503	Other Asia, nes	20301	France	675	Indonesia	950	Italy	1018
World Export		186492		549435		21515		43791		34046

Table - 30 : World Exports of Chemicals by top 10 countries- 2017

Value in US\$ Million

HS Code				
	All Chemicals		All Chemicals excluding Pharmaceuticals	
Rank	Country	Trade Value	Country	Trade Value
1st	Germany	225517	China	194584
2nd	USA	214166	USA	164876
3rd	China	201948	Germany	141048
4th	Belgium	121373	Belgium	78194
5th	Switzerland	99331	Rep. of Korea	72329
6th	France	84973	Japan	68575
7th	Netherlands	83652	Netherlands	59930
8th	Rep. of Korea	75224	France	53566
9th	Japan	73132	Italy	43159
10th	Italy	71574	Other Asia, nes	41819
	World Export	1948876	World Export	1418357

@-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)

Date : 04.12.2018

Table 31:- World Imports of Chemicals by top 10 countries- 2017

Value in US\$ Million

Rank	HS Code									
	28		29		30		31		32	
	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value
1st	USA	11528	China	56081	USA	96586	Brazil	7328	Germany	6894
2nd	China	10474	USA	46042	Germany	54012	USA	6061	China	4682
3rd	Rep. of Korea	7204	Germany	34309	Belgium	34685	India	4244	USA	4130
4th	Germany	7173	Belgium	30759	United Kingdom	33187	China	2316	France	3798
5th	Japan	6804	India	17966	Switzerland	28720	Indonesia	2225	Italy	2849
6th	India	5588	France	15993	China	25376	France	1952	Rep. of Korea	2734
7th	France	4883	Japan	15879	France	23259	Australia	1411	United Kingdom	2669
8th	Canada	3611	Italy	14138	Italy	23256	Turkey	1365	Netherlands	2502
9th	Other Asia, nes	3051	Rep. of Korea	12752	Japan	22394	Mexico	1345	Mexico	2292
10th	Russian Federation	2955	Netherlands	12623	Netherlands	14064	Germany	1249	Canada	2230
World Import		111515		395818		532916		54964		72817

Table - 31 : World Imports of Chemicals by top 10 countries- 2017

Rank	HS Code									
	38		39		4002		54		55	
	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value	Country	Trade Value
1st	China	16133	China	70767	China	8491	China	3185	China	2548
2nd	Germany	14975	USA	54852	USA	1569	Turkey	2287	Turkey	2149
3rd	USA	13825	Germany	44468	Germany	1399	USA	2155	USA	1735
4th	France	9165	France	24428	Belgium	1114	Germany	1743	Germany	1723
5th	Rep. of Korea	7481	Mexico	23164	Malaysia	1068	Italy	1597	Indonesia	1275
6th	Netherlands	7399	Italy	20575	India	1004	Indonesia	1428	Italy	1200
7th	Italy	6258	Belgium	19412	Indonesia	729	Brazil	1224	Brazil	828
8th	Other Asia, nes	6232	United Kingdom	18392	Italy	665	Mexico	1083	Rep. of Korea	795
9th	Belgium	6123	Canada	16119	Turkey	634	Rep. of Korea	1033	Spain	779
10th	Canada	5451	Japan	15053	Poland	616	Egypt	945	Mexico	757
World Import		183181		564528		25742		34041		29057

Table - 31 : World Imports of Chemicals by top 10 countries- 2017

Rank	Value in US\$ Million			
	HS Code			
	All Chemicals		All Chemicals excluding Pharmaceuticals	
	Country	Trade Value	Country	Trade Value
1st	USA	238484	USA	174676
2nd	China	200052	China	141898
3rd	Germany	167946	Rep. of Korea	113934
4th	Belgium	99119	Germany	64434
5th	France	85602	Japan	62343
6th	United Kingdom	73915	India	50482
7th	Italy	73510	France	50253
8th	Japan	69469	Canada	47075
9th	Netherlands	56229	Other Asia, nes	44721
10th	India	52292	Russian Federation	44140
	World Import	2004580	World Import	1471664

@-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)

Date : 04.12.2018

Table 32:- India's share in World Exports and Imports of Chemicals-2017

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		
28	INORGANIC CHEMICALS	1618	104776	1.54	17	5588	111515	5.01	6
29	ORGANIC CHEMICALS	13557	356054	3.81	12	17966	395818	4.54	5
30	PHARMACEUTICAL PRODUCTS	12885	530519	2.43	11	1809	532916	0.34	41
31	FERTILISERS.	89	44708	0.20	49	4244	54964	7.72	3
32	TANNING OR DYEING	2783	77540	3.59	11	1978	72817	2.72	13
38	MISCELLANEOUS CHEMICAL PRODUCTS.	3710	186492	1.99	15	5233	183181	2.86	12
39	PLASTIC AND ARTICLES THEREOF.	5921	549435	1.08	21	13009	564528	2.30	13
4002	SYNTHETIC RUBBER AND FACTICE	86	21515	0.40	23	1004	25742	3.90	6
54	MAN-MADE FILAMENTS.	2126	43791	4.85	4	811	34041	2.38	15
55	MAN-MADE STAPLE FIBRES.	2145	34046	6.30	3	651	29057	2.24	14
All Chemicals @		44919	1948876	2.30	14	52292	2004580	2.61	10
Chemicals (excluding Pharmaceutical products)		32034	1418357	2.26	13	50482	1471664	3.43	6
Total of all HS code commodities		294364	16285073	1.81	19	444052	16505848	2.69	11

@-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:- Sector-wise FDI Inflows (in US \$ million)

Industry Groups	2013-14	2014-15	2015-16	2016-17	2017-18	Total
Food products	4007.5	692.0	646.0	851.6	997.9	7195.0
Fermentation Industries	814.6	225.4	202.4	110.9	38.5	1391.8
Textiles	199.4	198.8	230.1	619.0	454.5	1701.8
Wood Products	6.2	9.0	53.2	10.2	9.9	88.5
Paper	140.6	189.5	208.0	250.8	299.6	1088.5
Leather	6.1	34.2	17.1	2.3	22.0	81.7
Chemicals	2196.2	2739.4	2442.5	2445.0	2485.3	12308.4
Rubber, Plastic & Petroleum Products (including oil exploration)	482.8	1363.5	399.2	443.2	416.4	3105.1
Non Metallic Minerals	447.2	286.1	96.7	2197.2	140.5	3167.7
Metals and Metal Products	567.6	359.3	456.3	1440.2	371.8	3195.2
Machinery and Equipments	2759.6	4442.3	8101.7	7537.6	7842.8	30684.0
Transport Equipments	1517.3	2725.6	2526.8	1609.3	2089.5	10468.5
Others Manufacturing	511.3	1046.1	727.3	420.3	631.8	3336.8
Mining (including mining services)	15.7	684.4	520.7	55.8	36.4	1313.0
Power	1480.3	1323.0	1645.3	1896.6	2825.5	9170.7
Telecommunication	1307.0	2894.9	1324.4	5563.7	6211.8	17301.8
Total (Industry)	16459.3	19213.5	19597.7	25453.5	24874.1	105598.1
Services	7840.0	11717.0	20403.3	18024.8	19982.7	77967.8
Others	0.0	0.0	0.0	0.0	0.0	0.0
Total	24299.3	30930.5	40001.0	43478.3	44856.8	183565.9

Source: DIPP <http://eaindstry.nic.in>

Section - V

Index of Industrial Production

Table 34:- Monthly Production Growth in 'Chemicals and Chemical Products' vis-a-vis Manufacturing Sector during April 2017 to March 2018 (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-17	-12.9	-11.6	-11.9
May-17	4.6	7.1	6.4
Jun-17	-3.0	-4.2	-4.4
Jul-17	1.4	-0.8	-1.1
Aug-17	4.8	4.0	3.5
Sep-17	1.2	1.2	0.8
Oct-17	-1.4	-1.5	-0.5
Nov-17	1.9	3.2	2.7
Dec-17	-0.1	3.4	3.8
Jan-18	0.9	1.4	1.3
Feb-18	-7.7	-3.1	-3.7
Mar-18	14.4	8.1	10.1
Index of Industrial Production (Base : 2011-12=100)			
Mar-17	124.7	132.7	133.2
Apr-17	108.6	117.3	117.3
May-17	113.6	125.6	124.8
Jun-17	110.2	120.3	119.3
Jul-17	111.7	119.3	118.0
Aug-17	117.1	124.1	122.1
Sep-17	118.5	125.6	123.1
Oct-17	116.9	123.7	122.5
Nov-17	119.1	127.7	125.8
Dec-17	119	132.0	130.6
Jan-18	120.1	133.8	132.3
Feb-18	110.9	129.7	127.4
Mar-18	126.9	140.2	140.3

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 2012-13 to 2017-18 (Based on Index on Industrial Production with Base year: 2011-12)

Years	Chemicals and Chemical Products	Manufacturing	General
Weight	7.87	77.63	100.00
Production Growth (%)			
2012-13	3.9	4.8	3.3
2013-14	4.7	3.6	3.3
2014-15	0.4	3.8	4.0
2015-16	4.1	2.8	3.3
2016-17	2.5	4.4	4.6
2017-18	-0.3	4.6	4.4
Index of Industrial Production (Base: 2011-12=100)			
2012-13	103.9	104.8	103.3
2013-14	108.8	108.6	106.7
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

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)

NIC 2008	Item groups	Weights (in %)	Name of Source Agencies
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 (thermocol)	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

Table 36:- Weights of Products Covered Under Chemical and Chemical Products (Industry Division 20 of NIC- 2008)

NIC 2008	Item groups	Weights (in %)	Name of Source Agencies
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
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 2013-14 to 2017-18 (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(%)				
2013-2014	5.24	12.26	3.04	4.62
2014-2015	1.24	5.62	2.49	2.47
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
Wholesale Price Index(Base : 2011-12=100)				
2012-2013	106.90	110.90	105.30	108.30
2013-2014	112.50	124.50	108.50	113.30
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

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

Table 38:- Monthly Inflation of Chemicals & Chemical Products vis-a-vis Other Commodities during April 17 to March 18 (Based on Wholesale Price Index with base year: 2011-12)

Month	All Commodities	Food Articles	Manufactured Products	Chemicals & Chemical Products
Apr-17	0.00	0.73	0.27	-0.09
May-17	-0.27	-0.51	0.00	0.09
Jun-17	-0.18	0.94	0.00	-0.18
Jul-17	1.06	6.25	0.00	-0.36
Aug-17	0.79	2.03	0.18	0.00
Sep-17	0.09	-4.04	0.80	0.18
Oct-17	0.61	2.21	0.00	0.54
Nov-17	0.69	2.09	0.26	0.45
Dec-17	-0.60	-4.63	0.18	0.71
Jan-18	0.26	-2.29	0.61	0.80
Feb-18	0.09	-2.06	0.52	0.88
Mar-18	0.17	-0.44	0.26	0.35
Whole Sale Price Index (Base: 2011-12)				
Mar-17	113.20	137.60	112.30	111.70
Apr-17	113.20	138.60	112.60	111.60
May-17	112.90	137.90	112.60	111.70
Jun-17	112.70	139.20	112.60	111.50
Jul-17	113.90	147.90	112.60	111.10
Aug-17	114.80	150.90	112.80	111.10
Sep-17	114.90	144.80	113.70	111.30
Oct-17	115.60	148.00	113.70	111.90
Nov-17	116.40	151.10	114.00	112.40
Dec-17	115.70	144.10	114.20	113.20
Jan-18	116.00	140.80	114.90	114.10
Feb-18	116.10	137.90	115.50	115.10
Mar-18	116.30	137.30	115.80	115.50

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

Table 39 :- WPI (Base year 2011-12) of Chemicals & Chemical Products (Group Wise) during 2012-13 to 2017-18

DESCRIPTION	WEIGHT	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Chemicals and Chemical Products	6.47	108.30	113.30	116.10	112.60	111.00	112.50
Basic Chemicals	1.43	107.20	112.10	114.10	105.80	104.70	111.20
Fertilizers and Nitrogen Compounds	1.48	113.50	116.50	118.90	121.40	118.70	117.10
plastic and synthetic rubber in primary form	1.00	108.90	118.50	124.40	115.30	113.70	113.00
Pesticides and Other Agrochemical Products	0.45	107.50	111.10	120.70	122.60	116.80	115.30
paints, Varnishes and Similar Coatings, Printing Ink and Mastics	0.49	105.50	109.70	111.90	109.80	108.50	108.60
Soap and Detergents, Cleaning and Polishing Preparations, Perfumes and Toilet Preparations	0.61	106.80	111.50	112.40	112.30	113.70	115.20
Other Chemical Products	0.69	104.80	110.70	111.80	108.40	106.50	110.10
Man-Made Fibres	0.30	102.30	105.60	100.90	93.30	94.10	97.50

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

Section - VII

Miscellaneous

Table 40:- Selected Indicators of the Indian Economy

S.No.	Indicator	Unit/base	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1	Human Population (mid FY)*	Million	1220	1235	1251	1267	1283	1299	1316
2	GDP*								
	(i) At current prices	Rs.'000 crore	8736	9944	11234	12468	13764	15254	16773
	(ii) At 2011-12 prices	Rs.'000 crore	8736	9213	9801	10528	11386	12196	13011
	at 2011-12 prices	Growth (%)		5.5	6.4	7.4	8.2	7.1	6.7
3	GVA at basic prices*								
	(i) At current prices	Rs.'000 crore	8107	9203	10363	11504	12567	13842	15182
	(ii) At 2011-12 prices	Rs.'000 crore	8107	8546	9064	9712	10503	11248	11976
	at 2011-12 prices	Growth (%)		5.4	6.1	7.2	8.1	7.1	6.5
4	Per capita Net National Income*								
	(i) At current prices	Rupees	63462	70983	79118	86648	94731	103870	112835
	(ii) At 2011-12 prices	Rupees	63462	65538	68572	72805	77826	82229	86668
5	Ratio of Gross Saving to Gross National Disposable Income at current prices*	Rates	33.8	33.1	31.4	31.6	30.7	29.6	
6	Ratio of Gross Capital Formation to GDP at current prices*	Rates	39	38.7	33.8	33.5	32.3	30.6	
7	Index of Industrial Production(base year 2011-12)*	Growth (%)	-	3.3	3.3	4	3.3	4.6	4.4
8	Foreign Trade**								
	(i) Exports	US \$ billion	306.0	300.4	314.4	310.4	262.3	275.9	303.4
	(ii) Imports	US \$ billion	489.3	490.7	450.2	448.0	381.0	384.4	464.7
	(iii) Trade Balance	US \$ billion	-183.4	-190.3	-135.8	-137.7	-118.7	-108.5	-161.3
9	Current Account Balance	US \$ million	-78155	-88163	-32296	-26859	-22151	-14417	-48717
10	Foreign Exchange Reserves(End of FY)	US \$ billion	294.4	292.0	304.2	341.6	360.2	370.0	424.5
11	Nominal Exchange Rate	Rs./US\$	47.92	54.41	60.50	61.14	65.5	67.07	64.45
12	Foreign Investment (Net FDI + net Portfolio Investment)	US \$ million	39231	46711	26386	73456	31891	43224	52401
13	Fiscal Deficit (Central Government)	Rs. Crore	515990	490190	502858	510725	532791	535618	594849
		% of GDP	5.9	4.9	4.5	4.1	3.9	3.5	3.5
14	WPI(Average of 12 months)(base year 2011-12) #	Inflation (%)	-	6.90	5.24	1.24	-3.69	1.73	2.96
15	Agricultural Production (Food grain)	MMT	259.3	257.1	265.0	252.0	251.6	275.1	284.8
									(4th AE)
16	Consumer Price Index ***								
	Industrial Workers	2001=100	195	215	236	251	265	276	284
	Agricultural Labourers	1986-87=100	611	672	750	800	835	870	889
	Rural Labourers	1986-87=100	611	673	751	802	839	875	895
	Rural	2010=100	113.1	124.5	136.4				
	Urban	2010=100	110.4	121.8	133.3				
	Combined	2010=100	111.9	123.3	135.0				
	Rural	2012=100			112.6	119.5	126.1	132.4	137.2
	Urban	2012=100			112	118.1	123.0	127.9	132.5
	Combined	2012=100			112.3	118.9	124.7	130.3	135.0

Source: * Central Statistics Office, Ministry of Statistics & PI, ** Reserve Bank of India, # office of Economic Adviser, Ministry of Commerce & Industry and *** Labour Bureau
 AE: Advanced Estimate

Table 41:- Growth Rates of Core Industries (in %)(Base Year 2011-12)

Sector	Weight	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Apr-Sep 2017-18	Apr-Sep 2018-19
Coal	10.3335	3.2	1.0	8.0	4.8	3.2	2.6	1.4	9.6
Crude Oil	8.9833	-0.6	-0.2	-0.9	-1.4	-2.5	-0.9	-0.2	-3.4
Natural Gas	6.8768	-14.4	-12.9	-5.3	-4.7	-1.0	2.9	5.0	-0.8
Refinery Products	28.0376	7.2	1.4	0.2	4.9	4.9	4.6	2.1	6.6
Fertilizers	2.6276	-3.3	1.5	1.3	7.0	0.2	0.0	-2.1	1.8
Steel	17.9166	7.9	7.3	5.1	-1.3	10.7	5.6	5.6	3.5
Cement	5.3720	7.5	3.7	5.9	4.6	-1.2	6.3	-1.4	14.4
Electricity	19.8530	4.0	6.1	14.8	5.7	5.8	5.3	5.7	6.2
Overall Index	100	3.8	2.6	4.9	3.0	4.8	4.3	3.2	5.5

#Refinery Products' yearly growth rate of 2012-13 is not comparable with other years on account of inclusion of RIL (SEZ) production data since April, 2012.

Source: Office of Economic Adviser, DIPP <http://eaindustry.nic.in/home.asp> Accessed on 15/11/2018

Table 41(A):- Index of Core Industries (Base year 2011-12)

Sector	Weight	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Apr-Sep	Apr-Sep
								2017-18	2018-19
Coal	10.3335	103.2	104.2	112.6	118.0	121.8	124.9	104.2	114.3
Crude Oil	8.9833	99.4	99.2	98.4	97.0	94.5	93.7	94.6	91.4
Natural Gas	6.8768	85.6	74.5	70.5	67.2	66.5	68.4	68.8	68.2
Refinery Products	28.0376	107.2	108.6	108.8	114.1	119.7	125.2	120.8	128.7
Fertilizers	2.6276	96.7	98.1	99.4	106.4	106.6	106.6	104.0	105.9
Steel	17.9166	107.9	115.8	121.7	120.2	133.1	140.5	137.3	142.1
Cement	5.3720	107.5	111.5	118.1	123.5	122.0	129.7	123.7	141.6
Electricity	19.8530	104.0	110.3	126.6	133.8	141.6	149.2	152.3	161.7
Overall Index	100	103.8	106.5	111.7	115.1	120.5	125.7	122.1	128.8

Source: Office of Economic Adviser, DIPP <http://eaindstry.nic.in/home.asp> Accessed on 15/11/2018

Table 42:- Consumption of Naphtha, Natural Gas and Fuel oil

Name of Product	Description	Unit	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18*
Naphtha	Production	K Tonnes	19018	18505	17391	17861	19946	20006
	Import	K Tonnes	1762	1020	1034	2931	2777	2150
		Value in Rs. Crore	9272	6044	4592	9581	8374	7797
	Export	K Tonnes	8647	8322	7008	7116	8727	8951
		Value in Rs. Crore	43533	46059	31619	20057	24616	29075
	Availability	K Tonnes	12133	11204	11416	13676	13996	13204
	Consumption	K Tonnes	12289	11305	11082	13271	13241	12549
Natural Gas	Production	MMSCM	40679	35407	33657	32249	31897	32649
	Import\$	MMSCM	13136	12995	14092	16142	18631	19870
		Value in Rs. Crore	41902	53123	57384	45038	40804	49941
	Availability	MMSCM	53815	48401	47750	48391	50528	52519
	Consumption **	MMSCM	53915	48994	46955	47850	50778	52832
Fuel Oil	Production	K Tonnes	15054	13405	11919	9727	9962	9486
	Import	K Tonnes	1038	1331	902	1170	925	1273
		Value in Rs. Crore	4218	5759	3659	2380	1848	3468
	Export	K Tonnes	5922	6159	4762	2806	2248	2492
		Value in Rs. Crore	20415	22407	14251	4471	3930	5211
	Availability	K Tonnes	10170	8578	8059	8091	8639	8267
	Consumption	K Tonnes	7656	6236	5961	6632	7150	6761
Naphtha	Fertilizers Sector	K Tonnes	898	516	301	316	349	364
	Petrochemical Sector	K Tonnes	9412	9464	9530	10350	10351	10362
Natural Gas **	Fertilizer Industries	MMSCM	14733	15869	15190	16135	15429	14676
	Petrochemicals Industry	MMSCM	2486	2405	2890	3733	4170	4024
Fuel Oil (Furnace oil+LSHS)	Chemicals & allied	K Tonnes	228	204	212	214	243	238

*: Provisional

** : Includes consumption of LNG.

\$: Imports of LNG

Note: The reasons for the variation between the consolidated availability and the consumption can be attributed to stock changes, conversion factor (volume/energy), Flaring (in case of Natural gas) and the provisional data reported by the companies.

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	Rural	Urban	Rural + Urban
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 activities) (in %)	0.23	0.19	0.20
Share of GVA from Industry Division 21 (Unincorporated) in GVA Unincorporated sector (All activities) (in %)	0.04	0.02	0.02
Share of GVA from Manufacturing sector (Unincorporated) in GVA Unincorporated sector (All activities) (in %)	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), NSSO

Table 44:- Employment in Chemicals and Chemicals products (Industry Division 20, NIC-2008) during 2010-11 to 2015-16							
S.No.	Industry	Number of Person Engaged					
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
1	Chemicals and Chemicals products (Industry Division 20, NIC 2008)	630017	674018	633659	708401	712994	743438
2	Industries Other than Chemicals and Chemicals products	12064836	12755938	12316366	12829713	13168392	13556272
3	All Industries	12694853	13429956	12950025	13538114	13881386	14299710
4	Share in Employment (%)						
	(a) Share of Chemicals and Chemicals products	4.96	5.02	4.89	5.23	5.14	5.20
	(b) Share of Other than C&PC	95.04	94.98	95.11	94.77	94.86	94.80
5	Growth Rate in Employment (%)						
	(a) Chemicals and Chemicals products	7.02	6.98	-5.99	11.80	0.65	4.27
	(b) Industries Other Than Chemicals and Chemicals products	7.69	5.73	-3.45	4.17	2.64	2.95
	(c) All Industries	7.66	5.79	-3.57	4.54	2.54	3.01

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

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

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	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Industry Division 20: Chemical and chemical products (Corporate)	121309	126614	127623	133521	175026	184864
Industry Division 20: Chemical and chemical products (Household)	995	1317	950	1067	1215	1228
Industry Division 20: Chemical and chemical products (Corporate +Household)	122304	127931	128573	134588	176241	186092
Growth over previous year (%)		4.6	0.5	4.7	30.9	5.6
Industry Division 21: Pharmaceutical; medicinal chemicals and botanical products (Corporate)	89780	85196	100555	112675	147963	205785
Industry Division 21: Pharmaceutical; medicinal chemicals and botanical products (Household)	764	413	708	625	571	761
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	90544	85609	101263	113300	148534	206546
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	212848	213540	229836	247888	324775	392638
Growth over previous year (%)		0.3	7.6	7.9	31.0	20.9
Manufacturing (Corporate)	1230439	1362291	1474509	1631823	1849757	2058087
Manufacturing (Household)	179546	210546	238943	246546	266361	271133
Manufacturing (Corporate +Household)	1409985	1572837	1713452	1878369	2116118	2329220
Growth over previous year (%)		11.5	8.9	9.6	12.7	10.1
GVA at basic prices for All Economic activities	8106946	9202692	10363153	11504279	12566646	13841591
Growth over previous year (%)		13.5	12.6	11.0	9.2	10.1
Share of GVA of Manufacturing sector in GVA for All Economic Activities	17.4	17.1	16.5	16.3	16.8	16.8
Share of GVA of Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20) in GVA for All Economic Activities	1.51	1.39	1.24	1.17	1.40	1.34
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	2.63	2.32	2.22	2.15	2.58	2.84
Share of GVA of chemical and chemical products (Industry Division 20) in GVA for Manufacturing Sector	8.67	8.13	7.50	7.17	8.33	7.99
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	15.10	13.58	13.41	13.20	15.35	16.86

Source: National Accounts Statistics 2018, CSO, 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	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Industry Division 20: Chemical and chemical products (Corporate)	121309	116682	112375	115005	155440	157858
Industry Division 20:Chemical and chemical products (Household)	995	1214	837	919	1079	1106
Industry Division 20: Chemical and chemical products (Corporate +Household)	122304	117896	113212	115924	156519	158964
Growth over previous year (%)		-3.6	-4.0	2.4	35.0	1.6
Industry Division 21:Pharmaceutical; medicinal chemicals and botanical products (Corporate)	89780	81284	93090	98406	124653	139031
Industry Division 21:Pharmaceutical; medicinal chemicals and botanical products (Household)	764	394	656	546	481	636
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	90544	81678	93746	98952	125134	139667
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	212848	199574	206958	214876	281653	298631
Growth over previous year (%)		-6.2	3.7	3.8	31.1	6.0
Manufacturing (Corporate)	1230439	1288919	1346108	1468900	1664853	1814653
Manufacturing (Household)	179546	197954	214601	215038	233937	234058
Manufacturing (Corporate +Household)	1409985	1486873	1560709	1683938	1898790	2048711
Growth over previous year (%)		5.5	5.0	7.9	12.8	7.9
GVA at basic prices for All Economic activities	8106946	8546275	9063649	9712133	10503348	11247629
Growth over previous year (%)		5.4	6.1	7.2	8.1	7.1
Share of GVA of Manufacturing sector in GVA for All Economic Activies	17.4	17.4	17.2	17.3	18.1	18.2
Share of GVA of Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20)in GVA for All Economic Activies	1.51	1.38	1.25	1.19	1.49	1.41
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 Activies	2.63	2.34	2.28	2.21	2.68	2.66
Share of GVA of chemical and chemical products (Industry Division 20) in GVA for Manufacturing Sector	8.67	7.93	7.25	6.88	8.24	7.76
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	15.10	13.42	13.26	12.76	14.83	14.58

Source: National Accounts Statistics 2018, CSO, 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	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Manufacturing (Corporate)	6000370	6574610	7289565	7803213	7599521	8118839
Manufacturing (Household)	543076	605579	678919	698250	745217	758871
Manufacturing (Corporate +Household)	6543446	7180189	7968484	8501463	8344738	8877710
Chemical and chemical products (Corporate) (Industry Division 20)	462850	509110	553764	626716	657203	677408
Chemical and chemical products (Household) (Industry Division 20)	4971	6578	4745	5327	6065	6130
Total Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20)	467821	515688	558509	632043	663268	683538
Pharmaceutical; medicinal chemicals and botanical products --Corporate (Industry Division 21)	190144	204098	230764	257134	289183	393927
Pharmaceutical; medicinal chemicals and botanical products --Household (Industry Division 21)	3814	2063	3536	3121	2851	3800
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	193958	206161	234300	260255	292034	397727
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	661779	721849	792809	892298	955302	1081265

Source: National Accounts Statistics 2018, 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 prices (2011-12)
(Rs. In crore)*

VALUE OF OUTPUT	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Manufacturing (Corporate)	6000370	6210073	6615483	7057882	7372786	7810303
Manufacturing (Household)	543076	569651	611979	612028	660729	659065
Manufacturing (Corporate +Household)	6543446	6779724	7227462	7669910	8033515	8469368
Chemical and chemical products (Corporate) (Industry Division 20)	462850	469170	487601	539807	583662	610278
Chemical and chemical products (Household) (Industry Division 20)	4971	6062	4178	4588	5386	5522
Total Chemical and chemical products excluding Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20)	467821	475232	491779	544395	589048	615800
Pharmaceutical; medicinal chemicals and botanical products -Corporate (Industry Division 21)	190144	194724	213633	224571	243625	329095
Pharmaceutical; medicinal chemicals and botanical products -Household (Industry Division 21)	3814	1968	3274	2725	2402	3174
Total Pharmaceutical; medicinal chemicals and botanical products (Industry Division 21)	193958	196692	216907	227296	246027	332269
Total Chemical and chemical products including Pharmaceutical; medicinal chemicals and botanical products (Industry Division 20 and 21)	661779	671924	708686	771691	835075	948069

Source: National Accounts Statistics 2018, CSO, 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 Magnetic and Optical Media (industry Division 268)

Description	2011-12	2012-13	2013-14	2014-15	2015-16
Industry Division 20: Chemical and chemical products					
No of factories (no.)	11276	11426	11465	11715	12015
No of workers (no.)	505122	463645	494253	519000	541343
Total Output (Rs. crore)	449007	472968	513903	557244	609216
Total Inputs (Rs. crore)	362970	383618	420686	461953	473764
Gross Value Added (Rs. crore)	86036	89350	93217	95292	135452
Industry Division 21: Pharmaceutical; medicinal chemicals and botanical products					
No of factories (no.)	4839	4907	4961	4908	5036
No of workers (no.)	325294	328437	381664	369196	395988
Total Output (Rs. crore)	181536	190282	214564	231834	265742
Total Inputs (Rs. crore)	117495	128906	142230	150713	174162
Gross Value Added (Rs. crore)	64041	61376	72333	81120	91581
Industry Division 268: Manufacture of Magnetic and Optical Media					
No of factories (no.)	3	6	4	4	5
No of workers (no.)	21	221	28	48	491
Total Output (Rs. crore)	590	3303	875	1105	31259
Total Inputs (Rs. crore)	424	2495	775	760	23350
Gross Value Added (Rs. crore)	166	808	100	345	7909

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

Table 50:- State wise 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)			
	2012-13	2013-14	2014-15	2015-16	2011-12	2012-13	2013-14	2015-16	2012-13	2013-14	2014-15	2015-16
Andhra Pradesh	378	375	401	401	260128	256195	241972	399763	1761153	1710297	1709055	1940284
Assam	79	82	82	109	105575	123235	123649	251355	304291	327554	280134	594954
Bihar	43	45	48	51	4035	2759	4850	3609	32945	38559	45252	44830
Chhattisgarh	96	94	94	102	18035	13741	12167	10499	83044	99698	90695	92515
Goa	50	43	49	45	259201	111388	185975	206736	1098234	865753	873829	986279
Gujarat	1974	2160	2241	2316	2840257	3048975	2310593	3685024	13890876	15899266	16377573	19313596
Haryana	212	203	258	257	76494	109458	230883	253744	673573	829529	1144328	1059595
Himachal Pradesh	214	225	200	228	527844	419399	811380	844599	1741534	1815860	2902117	2255720
Jammu & Kashmir	130	131	155	131	156320	145075	177220	212274	648032	629763	633314	843376
Jharkhand	95	92	83	96	14008	44009	52409	85458	198556	197773	204030	294274
Karnataka	467	507	553	567	205278	252251	308325	315071	985707	1349510	1627636	1540735
Kerala	217	141	140	149	106808	109558	112723	100787	632972	661040	580152	529190
Madhya Pradesh	250	271	259	278	172617	168386	289811	190960	978568	1065138	1113758	1294751
Maharashtra	1941	1851	1866	1898	1873331	2227826	1805835	2711485	7784602	9639069	9148788	10805377
Meghalya	8	4	3	3	3943	3839	3305	4452	6689	7968	7283	9496
Odisha	84	78	78	82	116561	231234	214559	71247	1078033	1072839	1225941	995024
Punjab	160	154	158	156	86748	97894	75556	64196	781526	804384	936265	724185
Rajasthan	356	326	323	308	387218	237822	235706	279905	3516023	2081775	1920567	1994750
Sikkim	4	4	4	4	35217	27236	121330	42560	95775	95497	32172	161410
Tamil Nadu	2432	2477	2495	2588	411248	359028	513454	628206	2393999	2530250	3501312	3669539
Tripura	7	11	10	9	294	304	307	226	605	727	686	438
Uttarkhand	217	201	240	243	347148	356180	626942	1276355	1247479	1463263	2609193	3134378
Uttar Pradesh	636	646	688	675	443090	450180	529410	502485	2658686	2951198	3412604	2974091
West Bengal	294	297	291	322	49802	31444	73656	336783	2333733	2621475	2033195	2585047
Dadra & N Haveli	188	181	172	168	96072	68725	204414	84365	680746	499422	1566385	702076
Daman & Diu	154	140	113	108	71943	114631	114664	144797	543772	947205	570041	693514
Chandigarh	4	4	NA	NA	304	379	NA	NA	4487	6024	NA	NA
Delhi	88	78	75	77	94368	61320	41718	20789	356089	288526	260479	103882
Puducheery	128	134	106	91	60541	130624	87953	182471	230776	399319	242372	503611
Telagana	520	512	528	548	110508	118521	106993	634399	554181	491508	579136	1066936
All India	11426	11465	11715	12015	8935034	9321718	9529158	13545238	47296827	51390338	55724410	60921631

Note: \$ figures for 2009-10 to 2011-12 pertain to combined Andhra Pradesh

Source :Annual Survey of Industries (Factory Sector) 2012-13, 2013-14, 2014-15 & 2015-16 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									
<i>(In Thousand Tonnes)</i>									
Group	Description	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Major Chemicals	Production	9121	9409	9459	9643	9660	9884	10234	11068
Major Petrochemicals									
A. Basic major Petrochemicals		11950	12755	13050	13410	13448	14905	15510	15670
B. Intermediates		13722	15722	16138	16313	16816	18690	18743	19063
C. Other Petro-based Chemicals		1739	1940	1979	1970	1963	2159	2174	2080
Total Major Chemicals and Petrochemicals		36531	39827	40626	41336	41887	45638	46661	47882
Major Chemicals	Exports	1337	1429	1220	1221	1061	1138	1484	1496
Major Petrochemicals									
A. Basic major Petrochemicals		1913	2304	2298	2616	2254	2743	2956	3293
B. Intermediates		1561	1677	1795	1977	2034	2430	2190	3915
C. Other Petro-based Chemicals		184	184	137	96	124	129	144	193
Total Major Chemicals and Petrochemicals		4996	5594	5451	5909	5473	6440	6773	8897
Major Chemicals	Imports	2792	3397	4253	4333	5025	5360	5400	5937
Major Petrochemicals									
A. Basic major Petrochemicals		3343	3360	4233	4304	5080	5681	5938	6408
B. Intermediates		2396	2095	2405	2950	3253	3245	3540	3180
C. Other Petro-based Chemicals		1808	1785	2037	2204	2373	2740	2651	3255
Total Major Chemicals and Petrochemicals		10339	10637	12928	13791	15729	17025	17529	18780

Table 51:- Production, Import, Export, Consumption of Major Chemicals and Petrochemicals and Export as % of Production and Import as % of Consumption									
<i>(In Thousand Tonnes)</i>									
Group	Description	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Major Chemicals	Consumption\$	10576	11377	12493	12756	13623	14105	14150	15510
Major Petrochemicals									
A. Basic major Petrochemicals		13379	13811	14984	15099	16274	17842	18492	18785
B. Intermediates		14557	16141	16748	17286	18034	19505	20094	18328
C. Other Petro-based Chemicals		3362	3540	3879	4078	4211	4770	4680	5142
Total Major Chemicals and Petrochemicals		41874	44869	48103	49218	52143	56223	57416	57764
Major Chemicals	Exports as % of Production	14.7	15.2	12.9	12.7	11.0	11.5	14.5	13.5
Major Petrochemicals									
A. Basic major Petrochemicals		16.0	18.1	17.6	19.5	16.8	18.4	19.1	21.0
B. Intermediates		11.4	10.7	11.1	12.1	12.1	13.0	11.7	20.5
C. Other Petro-based Chemicals		10.6	9.5	6.9	4.9	6.3	6.0	6.6	9.3
Total Major Chemicals and Petrochemicals		13.7	14.0	13.4	14.3	13.1	14.1	14.5	18.6
Major Chemicals	Imports as % of Consumption	26.4	29.9	34.0	34.0	36.9	38.0	38.2	38.3
Major Petrochemicals									
A. Basic major Petrochemicals		25.0	24.3	28.2	28.5	31.2	31.8	32.1	34.1
B. Intermediates		16.5	13.0	14.4	17.1	18.0	16.6	17.6	17.4
C. Other Petro-based Chemicals		53.8	50.4	52.5	54.0	56.3	57.4	56.6	63.3
Total Major Chemicals and Petrochemicals		24.7	23.7	26.9	28.0	30.2	30.3	30.5	32.5

Note: Product coverage under each group is given at page v and vi. \$ 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	2012-13	2013-14	2014-15	2015-16	2016-17
Exports of Pharmaceutical products	HS code 30	54774	67404	70815	84481	86705
Exports of Fertilizers	HS code 31	480	492	555	673	466
Exports of all Chemicals (including Pharmaceutical products and Fertilizers)	HS codes 28,29,30,31,32,38,39,4002,54 and 55	206082	245758	249183	266516	277364
Imports of Pharmaceutical products	HS code 30	9522	9371	9961	10742	11515
Imports of Fertilizers	HS code 31	40412	32639	39106	45973	28754
Imports of Chemicals and Chemical products	HS codes 28,29,30,31,32,38,39,4002,54 and 55	259844	283322	311790	318595	309458
Value of Output of Chemicals and Chemical products at current prices	Industry Division 20 and 21: NIC 2008	721849	792809	892298	955302	1081265
Consumption of Chemicals and Chemical products	Value of Output + Imports - Exports	775610	830373	954905	1007381	1113359
Exports of all Chemicals as % of Value of Output		28.5	31.0	27.9	27.9	25.7
Imports of all Chemicals as % of Derived Consumption		33.5	34.1	32.7	31.6	27.8

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 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 as on 31.07.2018

Note 2: Data Source in respect of value of output is National Account Statistics, 2018 (CSO)

**STATISTICS AND MONITORING DIVISION
DEPARTMENT OF CHEMICALS AND PETROCHEMICALS
MINISTRY OF CHEMICALS AND FERTILIZERS
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