India's International Trade of Four Specific Commodities in the Recent Past

Some Insights

Preface

The study uses trade indicators to analyse merchandise export and import data in a way that should be useful for the purpose of policy. The indicators provide a glimpse of the trade patterns of the world and the performance of India in comparison to various other countries. They have been used in the case of India's exports of **Ceramic Sanitary Ware & Plastics Floor Covering** and imports of **Geusum etc.. and Peptone & its Derivative** to indicate the possible directions policy may take.

The data used in this study has been sourced from the Export Import Data Bank of the DGCI&S, Department of Commerce, and Government of India and from the United Nations Comtrade Database. Introduction notes of each commodities has been sourced from the various sights –viz Wikipedia, Britannica, The Economic Times etc.

Computations are based on data at ITC-HS four-digit level (ITC-HS Code-6910 & 3918 for export and 2520 & 3504 for import) and the latest finalized data available on the UN Comtrade Database up to year 2021 and on the DGCI&S Database up to January'2023. So, trends from 2018 to 2021 have been shown when we extract the data from UN Comtrade and from 2018 to 2021 have been shown when we extract the data from DGCIS Data base.

In this report, we will see various analysis and aspects of India's Precious as well as International export trade of Ceramic Sanitary Ware & Plastics Floor Covering and imports of Gypsum etc.. and Peptone & its Derivative**.** We will use both the 4 digit Commodity codes.

Trends in India's as well as International Trade i.e. Exports and Imports of above four Commodities are given below in different tables :

- Table 1 : India's top 10 Export destination of Ceramic Sanitary Ware with their shares in percentage.
- Table 2 : World's top 10 Exporters of Ceramic Sanitary Ware with their shares in percentage.
- Table 3 : World's top 10 Importers of Ceramic Sanitary Ware with their shares in percentage.
- Annex- I : Top 3 sources of Ceramic Sanitary Ware of World's top 3 Importers.
- Table 4 : India's top 10 destination of Plastics Floor Covering with their shares in percentage.
- Table 5 : World's top 10 Exporters of Plastics Floor Covering with their shares in percentage.
- Table 6 : World's top 10 Importers of Plastics Floor Covering with their shares in percentage.
- Annex-II : Top 3 sources of Plastics Floor Covering of World's top 3 Importers.
- Table 7 : India's top10 Sources of Gypsum etc… with their shares in percentage.
- Table 8 : World's top 10 Importers of Gypsum with their shares in percentage.
- Table 9 : India's top 10 Sources of Peptones and its derivatives with their shares in percentage.
- Table 10 : World's top 10 Importers of Peptones and its derivatives with their shares in percentage.

EXPORT

Sanitary Ware of Ceramics

Sanitary ware is a catch-all phrase for sanitary appliances used in toilets and bathrooms. As a result, sanitary ware refers to any product that interacts with pipes and is repaired by a plumber. It includes toilet sinks, washbasins, cisterns, urinals, pedestals, and more. You can buy sanitary ware online from the best sanitary ware brands at wholesale prices.

Initially, all sanitary wares used porcelain because of its great chemical resistance and easy-to-clean surface. However, with improved technology, today, we use several materials such as glass, granite, metals, and even plastic to manufacture sanitary products online.

The bathroom today plays a considerably larger role in the architecture and design of a home than it did in the past: it is no longer just a crossing point, but it has evolved into the family's everyday life. As a result, bathroom products are becoming increasingly important, with the goal of selecting a unique style that blends in with the rest of the house.

In reality, with the right furnishings and sanitary ware, a bathroom may be transformed into an exclusive and comfortable area appropriate for a true wellness center. The latest trends demonstrate that one of the most important aspects of bathroom design is choosing the proper sanitary wares.

The use of good sanitary ware has an impact on the aspect of saving money and water. The availability of a wide range of materials and designs for these sanitary goods strive to improve their efficiency and waste disposal.

Sanitary wares are generally placed in toilets and bathrooms. Thus, they remain surrounded by water and moisture. So, it becomes necessary for them to have a low water absorption rate. Sanitary ware with a high-water absorption tendency would result in damage and poor durability. A sanitary ware product should carry a minimum of 400 kg weight. This is to make sure that the product doesn't crack or break when exposed to a heavy load. A quality sanitary ware is durable. It comes in use several times a day. therefore, it is important that you get durable ware that serves you for a long time. It remains extremely essential for any sanitary ware product to be hygienic. A dirty toilet seat or a urinal results in terrible diseases. It should be clean and healthy at every point. Thus, the surface must remain stain-resistant, easy-to-maintain, and dirt-proof.

The first ceramic manufacturing factory was established in 1759 by Josiah Wedgwood in Stoke-on-Trent, England. Karl Bayer developed a process to separate alumina from its other components in 1888, which is still used today. In 1880, Pierre and Jacques Curie discovered the phenomenon of piezoelectricity in Rochelle salt. It has become a key property of electro ceramics.

High-performance ceramics have superior electrical and mechanical properties. They are extremely strong and lightweight, and their heat resistance is much greater than the previous ceramics. Ceramic powders are made from uniform-size particles. Ceramics are less prone to fracture. Thin ceramic fibres increase tensile strength and are used in electronics.

Traditional ceramic raw materials are clay minerals, which are recycled and reused. More recent materials are aluminum oxide and tungsten carbide, which are both highly abrasion-resistant. Ceramic materials are used in everything from body armour to aerospace parts. They're the stuff of our everyday lives, and they're still being developed. There's no end to the applications for these materials.

The manufacturing process for sanitary wares begins with body preparation. A mixture of clays, called slips, is mixed to form the item's body. These clays are made up of china clay, silica, and ball clay. They are then moulded into a tri-axial body, which includes a body former and a filler. Finally, a flux is added to lower the fusion temperature of the finished product.

The materials used in the production process for ceramic sanitary ware by are mainly composed of three phases: the matrix, the additives, and the body. The matrix is the most common phrase, as it contains crystalline components. The additives are dispersed or scattered in the matrix. Both the grain size and geometry of the grains determine the type of material used for the final product. Pores are formed by two processes: the shrinkage of the matrix and the rate of cooling. These phases vary in colour from yellow to beige.

These are broadly classified under **H.S. Code-6910**

Table - 1

India's Top 10 destination of Sanitary Ware of Ceramics (H.S Code-6910)

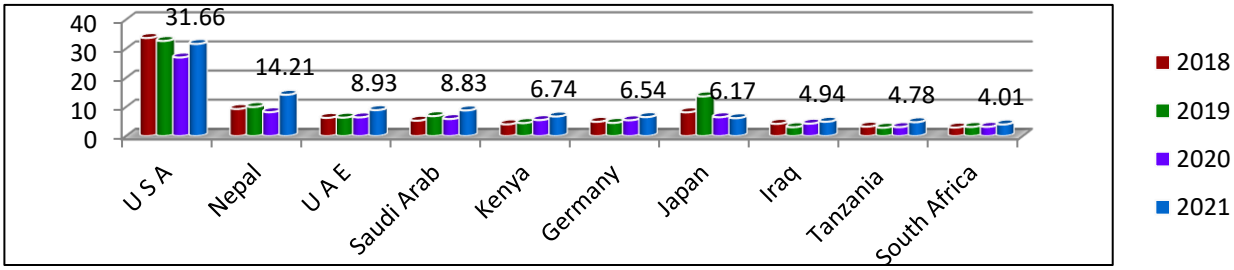
Rank	Countries	2018		2019		2020		2021	
		Value (million$)	Share (%)	Value (million$)	Share (%)	Value (million $)	Share (%)	Value (million$)	Share (%)
1.	U S A	33.71	25.80	32.69	23.32	27.00	20.57	31.66	18.02
2.	Nepal	9.32	7.13	10.01	7.14	8.22	6.26	14.21	8.09
3.	U A E	6.27	4.80	6.35	4.53	6.44	4.91	8.93	5.08
4.	Saudi Arab	5.30	4.05	6.87	4.90	5.87	4.47	8.83	5.03
5.	Kenya	4.05	3.10	4.49	3.20	5.52	4.21	6.74	3.84
6.	Germany	4.92	3.76	4.55	3.24	5.45	4.15	6.54	3.72
7.	Japan	8.18	6.26	13.65	9.73	6.49	4.94	6.17	3.51
8.	Iraq	4.22	3.23	3.07	2.19	4.28	3.26	4.94	2.81
9.	Tanzania	3.26	2.50	2.88	2.06	3.10	2.36	4.78	2.72
10.	South Africa	2.95	2.26	3.15	2.25	3.20	2.44	4.01	2.28
	Others	48.47	37.11	52.47	37.43	55.66	42.41	78.91	44.91
	Total	130.63	100	140.16	100	131.23	100	175.72	100

Source: DGCI&S.

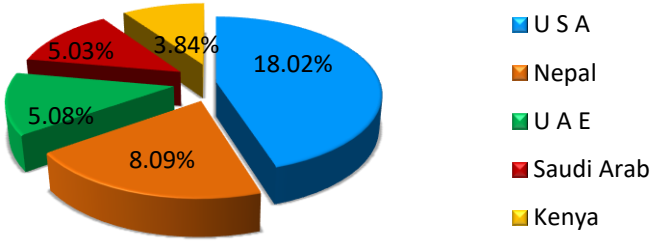
Note : India's Export including re-export

Leading importers of Ceramics Sanitary Wares from India from 2018-2021**(Values in million USD)**

Data label given on the basis of 2021



India's top 5 destinations of Ceramics Sanitary Wares by percentage India in 2021:



In India has exported Ceramics Sanitary Wares worth of US $ 175.72 million which was 33.90% more than the year 2020. The figures show the great potential for India's export of these types of Commodities to increase its share in global market. USA is the largest market for Ceramics Sanitary Wares export from India. In 2021, USA imported US $ 31.66 million worth Ceramics Sanitary Wares from India, which was accounted 18.02% of India's total export. It was followed by Nepal (8.09%) and UAE (5.08%). The top 10 countries account for 55.09% of the total Ceramics Sanitary Wares export from India in that year.

Table-2

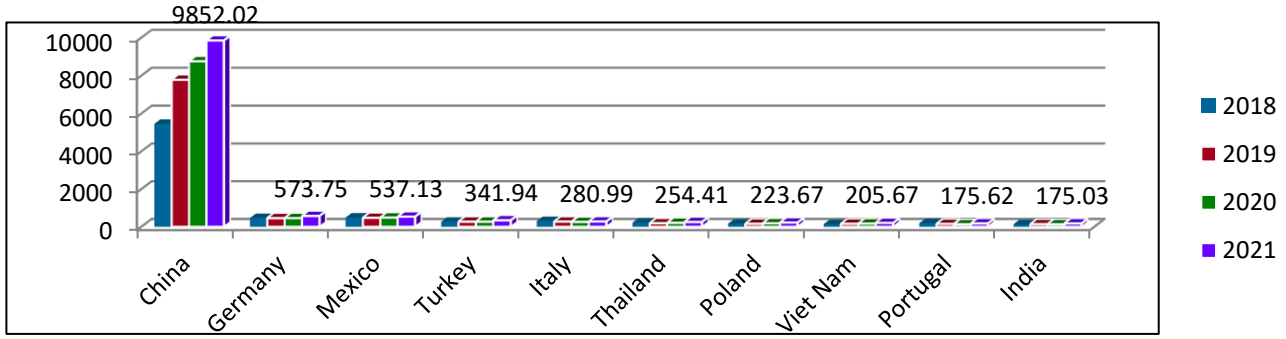
World's Top 10 exporter of Sanitary Ware of Ceramics (H.S Code-6910)

Rank	Countries	2018		2019		2020		2021	
		Value (million $)	Share (%)	Value (million$)	Share (%)	Value (million$)	Share (%)	Value (million$)	Share (%)
1.	China	5457.11	58.23	7781.57	67.62	8755.04	70.67	9852.02	69.16
2.	Germany	463.26	4.94	457.20	3.97	461.03	3.72	573.75	4.03
3.	Mexico	488.41	5.21	475.19	4.13	489.38	3.95	537.13	3.77
4.	Turkey	260.94	2.78	272.68	2.37	271.04	2.19	341.94	2.40
5.	Italy	302.88	3.23	276.94	2.41	257.36	2.08	280.99	1.97
6.	Thailand	215.96	2.30	187.07	1.63	207.88	1.68	254.41	1.79
7.	Poland	162.70	1.74	158.76	1.38	185.78	1.50	223.67	1.57
8.	Viet Nam	136.58	1.46	156.71	1.36	171.00	1.38	205.67	1.44
9.	Portugal	187.97	2.01	154.50	1.34	132.11	1.07	175.62	1.23
10.	**India**	**129.97**	**1.39**	**139.85**	**1.22**	**130.68**	**1.05**	**175.03**	**1.23**
	Others	1566.20	16.71	1447.59	12.58	1326.77	10.71	1624.45	11.40
	Total	9371.99	100	11508.08	100	12388.06	100	14244.70	100

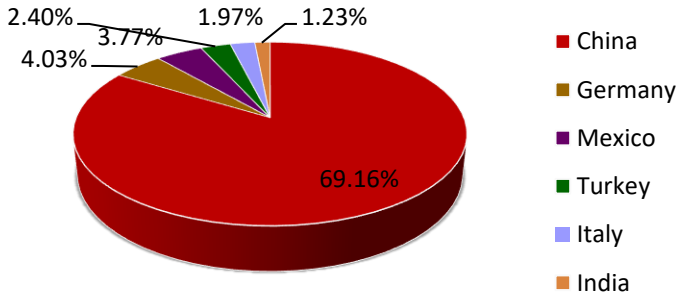
Source: UN Comtrade

Leading Exporters of Ceramics Sanitary Wares of world from 2018 to 2021 **(Values in million USD)**

Data label given on the basis of 2021



Country wise world's leading exporter of Ceramics Sanitary Wares by percentage in 2021 :



The total worth value of Ceramics Sanitary Wares export around the world in year 2021 was US $ 14.24 Billion. Between 2020 and 2021 the exports of Ceramics Sanitary Wares increased by 15%, from U $ $12.38 Billion to US $ 14.24 Billion. China was the largest exporter of Ceramics Sanitary Wares in the world in 2021. In that year China exported US $ 9.85 Billion worth value of these commodities, which was accounted 69.16% of world export, which was distantly followed by Germany and Mexico with share of 4.03% and 3.77% respectively. **India** occupied the 10th position in ranking in the world with 1.23% share of world export.

Table-3

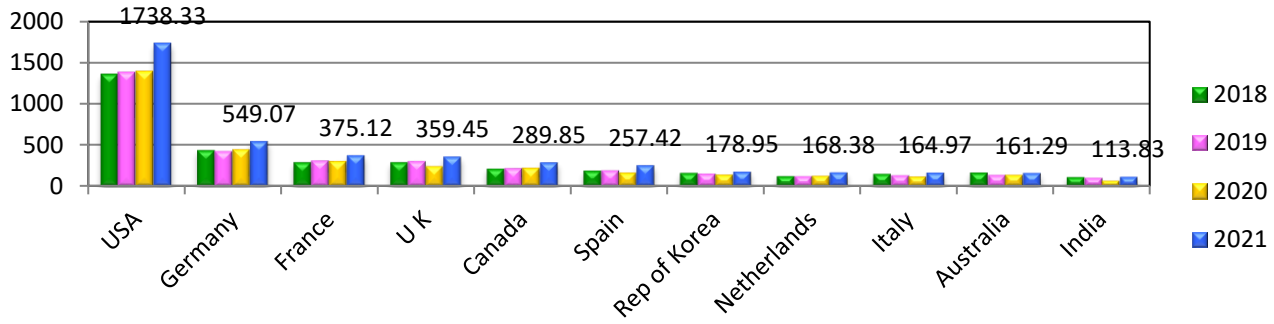
World's top 10 Importers of Sanitary Ware of Ceramics (H.S Code-6910)

Rank	Countries	2018		2019		2020		2021	
		Value (million $)	Share (%)	Value (million$)	Share (%)	Value (million$)	Share (%)	Value (million$)	Share (%)
1.	USA	1351.66	22.61	1387.51	22.79	1388.74	23.87	1738.33	23.62
2.	Germany	436.82	7.31	428.39	7.04	446.75	7.68	549.07	7.46
3.	France	291.21	4.87	314.26	5.16	304.69	5.24	375.12	5.10
4.	U K	291.42	4.87	306.51	5.04	242.42	4.17	359.45	4.88
5.	Canada	212.62	3.56	221.16	3.63	223.46	3.84	289.85	3.94
6.	Spain	188.26	3.15	191.87	3.15	167.15	2.87	257.42	3.50
7.	Rep of Korea	161.27	2.70	155.23	2.55	140.96	2.42	178.95	2.43
8.	Netherlands	121.11	2.03	123.53	2.03	126.39	2.17	168.38	2.29
9.	Italy	148.64	2.49	135.95	2.23	118.47	2.04	164.97	2.24
10.	Australia	166.12	2.78	136.68	2.25	139.13	2.39	161.29	2.19
14.	**India**	**109.89**	**1.84**	**104.03**	**1.71**	**67.37**	**1.16**	**113.83**	**1.55**
	Others	2499.06	41.80	2582.39	42.42	2452.46	42.15	3003.85	40.81
	Total	5978.09	100	6087.51	100	5818.00	100	7360.52	100

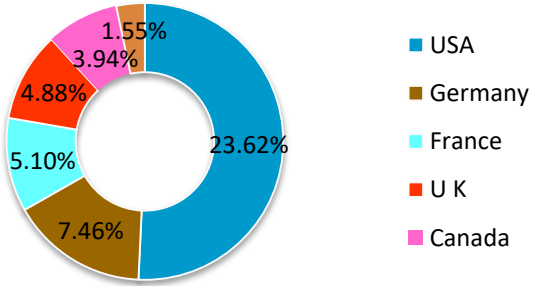
Source : UN Comtrade

Leading Ceramics Sanitary Wares importers of world from 2018 to 2021 **(Values in million USD)**

Data label given on the basis of 2021



Country wise world's leading importers of Ceramics Sanitary Wares by percentage in 2021

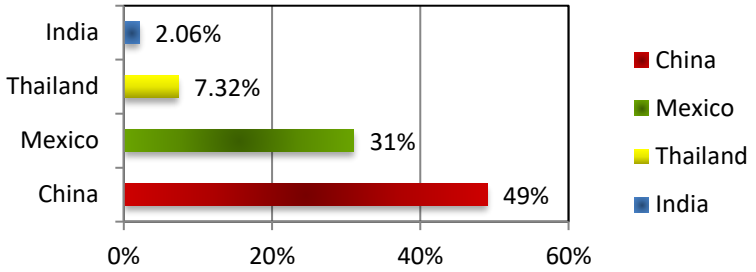


The total value of import for Ceramics Sanitary Wares was US $ 7.36 Billion in 2021 which was US $ 5.82 in 2020, which shows the increase by 26.52%. In that year the top three importing countries were USA (US $ 1.72 B), Germany (US $ 547.07 M) and France (US $ 375.12 M). In that year India imported 1.55% share of global import and stood at 14th rank in the world. In 2021 the top 10 importing countries together imported 59.19% share of world import of Ceramics Sanitary Wares.

Annexure-1

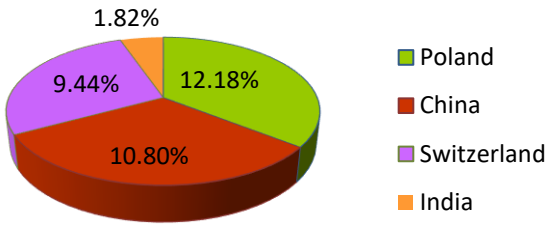
Sources of world's top 3 importers of Sanitary Ware of Ceramics (H.S Code-6910)

i) Top 3 Sources of Ceramics Sanitary Wares to USA in 2021 by percentage*:*



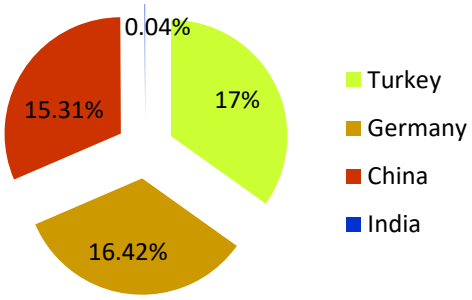
USA imported most of its Ceramics Sanitary Wares from China, 49% share of USA's total import value of it came from China in 2021 followed by Mexico (31%) and Thailand (7.32%). India exports 2.06% share of Ceramics Sanitary Wares to USA in 2021. **(Source : UN Comtrade).**

ii) Top 3 Sources of Ceramics Sanitary Wares to Germany in 2020 by percentage*:*



Poland was the largest source of Ceramics Sanitary Wares to Germany, exported 12.18 % share of Germany's total import. 2021, followed by China (10.80%) & Switzerland (9.44%). **India** exported 1.82% share of Germany's total import of Ceramics Sanitary Wares in that year.**(Source : UN Comtrade)**

iii) Top 3 Sources of Ceramics Sanitary Wares to France in 2020 by percentage*:*



France's 3 major source countries of Ceramics Sanitary Wares in 2021 were Turkey (17%), Germany (16.42%) and China (15.31%) in 2021. In that year India's account was only 0.04% share of France's total import. **(Source: UN Comtrade)**

Plastics Floor Covering

Floor covering, material made from textiles, felts, resins, rubber, or other natural or man-made substances applied or fastened to, or laid upon, the level base surface of a room to provide comfort, durability, safety, and decoration. Such materials include both handmade and machine-made rugs and carpets and smooth-surfaced floor coverings. Although the words carpet and rug are frequently used interchangeably in referring to textile floor coverings, in modern usage carpets are fastened to the floor and usually cover an entire floor area, and rugs are not fastened and rarely cover the entire floor. Carpets and rugs may be classified as handmade or machine-made. Smooth-surfaced coverings generally adhere to a subfloor and are manufactured as sheet goods.

Prehistoric man may have happened upon a method of forming thread from twisted grass or hair. Evidence obtained from recent excavations near the Caspian Sea indicates that the shearing of sheep and goats, and the spinning and weaving of the fibres obtained, was practiced as early as 6000 bc. Before the development of weaving, fibres were probably interlaced to produce a simple form of plaited basket-work matting, replacing still earlier crude mats made of strands of dry stalks and tendrils.

Plastic flooring A wide range of colours ,designs ,textures are available in these types of tiles they are very cheap and hence are versatile Any sub floor ios suitable for these type of flooring except for Thermoplastic and vinylized thermo plastic tiles, Which need solid construction All types of plastic are resistant to wear , water , indentation, and to most of the cleaning agents the various types of plastic floor covering are underlined here :

Thermoplastic and vinylized thermoplastic tiles These are made from a variety of asphaltic binders with inert fillers and pigments .they are rigid tiles, set as closely as possible in adhesive .They are laid down in a thermoplastic state, but harden on cooling and may be carried up the wall to form a small covered skirting .these floorings are porous. However they are hard and noisy since they are non resilient these floorings are normally used in bathrooms, Corridors and offices they dent and scratch easily, Soften with heat and are damaged by strong alkalies they are also harmed by grease and spirits

Vinyl asbestos tiles and flooring These use vinyl as binding agent and asbestos as a filler.

Vinyl composition flooring Vinyl composition flooring are a finished flooring material used primarily in commercial and institutional applications. Vinyl flooring are composed of colored vinyl chips formed into solid sheets of varying thicknesses (1/8” is most common) by heat and pressure. Floorings are applied to a smooth, leveled sub-floor using a specially formulated vinyl adhesive that remains tacky but does not completely dry. Flooring are typically waxed and buffed using special materials and equipment. Vinyl flooring is favored over other kinds of flooring materials in high-traffic areas because of its low cost, durability, and ease of maintenance. Vinyl flooring have high resilience to abrasion and impact damage and can be repeatedly refinished with chemical strippers and mechanical buffing equipment. If properly installed, flooring can be easily removed and replaced when damaged. flooring are available in a variety of colors from several major flooring manufacturers. Homogeneous flexible vinyl This has become the most popular of all types of flooring. it is flexible, so it doesn't not crack, it is also very tolerant to most of the cleaning agents it is available as sheets or tiles with embossed or textured finishes

Reverse printed PVC This type of flooring is produced by a process in which a pattern is printed on the reverse side of clear PVC sheet, which in turn bonded to a PVC backing or printed directly onto the backing This process allows any type of pattern imitating. However the durability is only that of the clear PVC layer that protects the pattern

These are broadly classified under **H.S. Code-3918**.

Table - 4

India's Top 10 destination of Plastics Floor Covering (HS Code –3918)

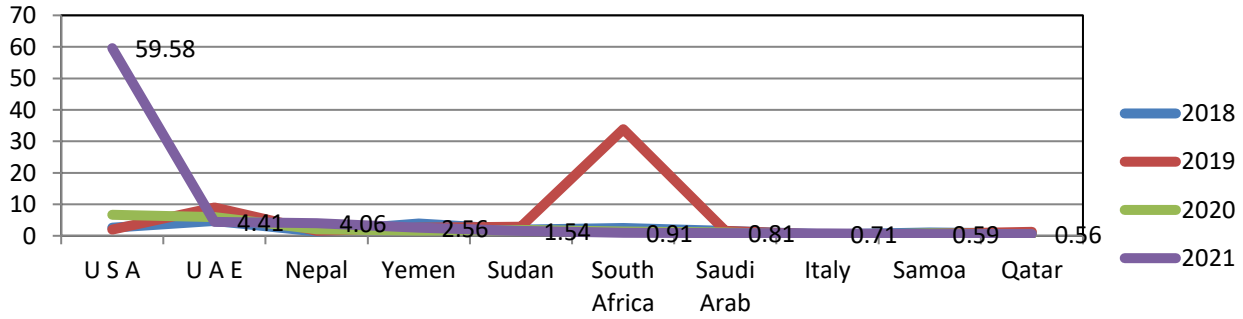
Rank	Countries	2018		2019		2020		2021	
		Value (million$)	Share (%)	Value (million$)	Share (%)	Value (million$)	Share (%)	Value (million$)	Share (%)
1.	U S A	2.63	4.66	2.01	2.17	6.68	19.98	59.58	69.72
2.	U A E	4.72	8.37	8.99	9.71	5.93	17.73	4.41	5.16
3.	Nepal	1.40	2.48	1.55	1.67	2.10	6.27	4.06	4.75
4.	Yemen	3.87	6.87	2.57	2.78	1.72	5.14	2.56	2.99
5.	Sudan	1.95	3.46	2.92	3.16	1.87	5.59	1.54	1.81
6.	South Africa	2.47	4.39	33.85	36.55	1.39	4.16	0.91	1.07
7.	Saudi Arab	1.60	2.84	1.61	1.74	1.05	3.13	0.81	0.95
8.	Italy	0.46	0.82	0.33	0.35	0.21	0.62	0.71	0.83
9.	Samoa	1.05	1.86	0.66	0.71	0.72	2.14	0.59	0.69
10.	Qatar	0.72	1.28	1.24	1.34	0.43	1.29	0.56	0.66
	Others	35.50	62.97	36.86	39.81	11.35	33.94	9.73	11.39
	Total	56.37	100	92.60	100	33.43	100	85.45	100

Source: DGCI&S

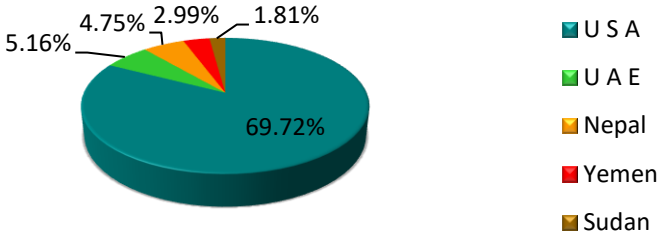
Note : India's Export including re-export

India's major destination of Plastics Floor Covering from 2018-2021**(Values in million $)**

Data label given on the basis of 2021



India's top 5 major destinations of Plastics Floor Covering by percentage India in 2021:



The data provided on the export analysis shows that there are so many countries, which actively import Plastics Floor Covering from India. The combined value of total export is US $ 84.45 Million in 2021. In the year 2020 the total value of Plastics Floor Covering export was US $ 33.43 million, which shows a considerable more than 156% greater in 2021. . In the same year India's Plastics Floor Covering export Value to USA was US $ 59.58 Million, which holds the top position with the share of 69.72% of the total export value of India. With 5.16% share UAE took runner up position in the global importers of Plastics Floor Covering from India and Nepal was the 2nd runner up with 4.75 % share of India's total export.

Table - 5

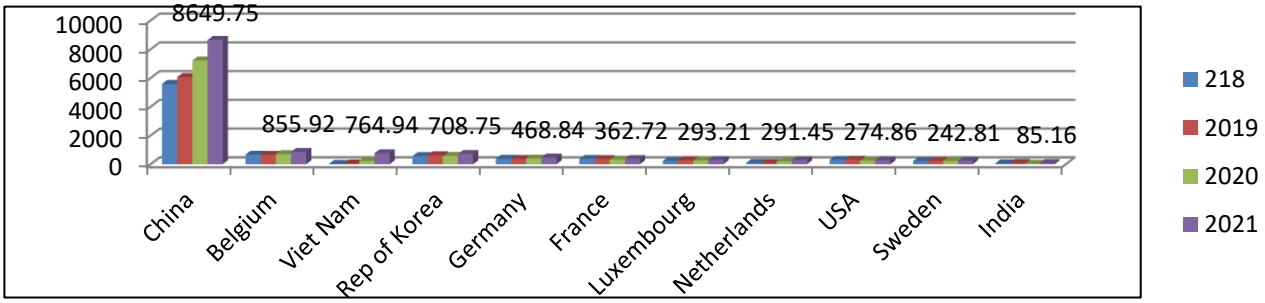
World's Top 10 exporters of Plastics Floor Covering (HS Code –3918)

Rank	Countries	2018		2019		2020		2021	
		Value (million $)	Share (%)	Value (million$)	Share (%)	Value (million$)	Share (%)	Value (million$)	Share (%)
1.	China	5591.33	56.74	6065.88	58.15	7221.83	61.98	8649.75	59.69
2.	Belgium	664.60	6.74	653.16	6.26	700.33	6.01	855.92	5.91
3.	Viet Nam	26.00	0.26	60.58	0.58	235.66	2.02	764.94	5.28
4.	Rep of Korea	566.37	5.75	628.60	6.03	575.39	4.94	708.75	4.89
5.	Germany	380.39	3.86	364.03	3.49	392.14	3.37	468.84	3.24
6.	France	363.99	3.69	361.50	3.47	320.35	2.75	362.72	2.50
7.	Luxembourg	229.11	2.32	281.70	2.70	260.24	2.23	293.21	2.02
8.	Netherlands	93.39	0.95	94.29	0.90	197.01	1.69	291.45	2.01
9.	USA	304.73	3.09	312.30	2.99	249.22	2.14	274.86	1.90
10.	Sweden	218.60	2.22	220.42	2.11	229.86	1.97	242.81	1.68
15.	**India**	**55.30**	**0.56**	**92.22**	**0.88**	**33.26**	**0.29**	**85.16**	**0.59**
	Others	1361.23	13.81	1296.45	12.43	1235.65	10.61	1492.85	10.30
	Total	9855.03	100	10431.13	100	11650.94	100	14491.27	100

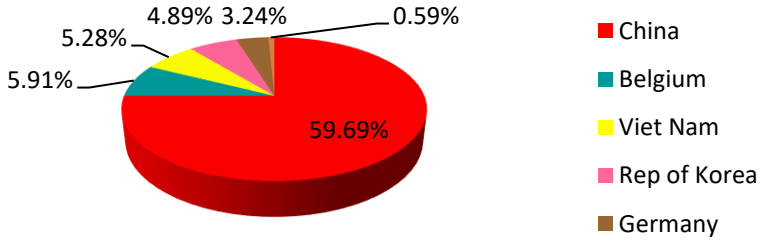
Source: UN Comtrade

Leading Plastics Floor Covering exporters of world from 2018 to 2021 **(in million USD)**

Data label given on the basis of 2021



Export trends in world's leading Plastics Floor Covering exporters by percentage in 2021:



In value terms, world exports Plastics Floor Covering amounted to US $ 14.49 Billion in 2021, rose by 24.37% over the last year. China was the main global supplier of Plastics Floor Covering with a worth value of US $ 8.65 Billion which was accounted by almost 59.69% share of global exports in that year. It was distantly followed by Belgium (5.91%), Viet Nam (5.28%). **India** was far behind from China in the global export of Plastics Floor Covering and stood at 15th position in ranking in the world with 0.59% share of world export in 2021.

Table - 6

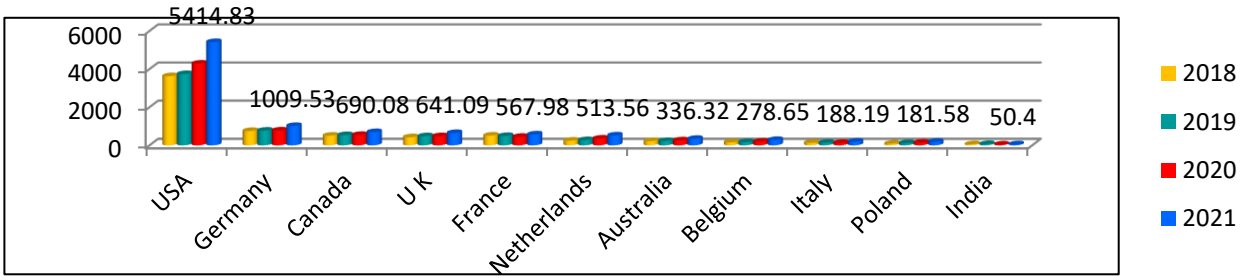
World's Top 10 Importers of Plastics Floor Covering (HS Code –3918)

Rank	Countries	2018		2019		2020		2021	
		Value (million $)	Share (%)	Value (million$)	Share (%)	Value (million$)	Share (%)	Value (million$)	Share (%)
1.	USA	3624.04	38.68	3736.09	38.17	4284.12	41.58	5414.83	40.92
2.	Germany	748.02	7.98	766.44	7.83	775.87	7.53	1009.53	7.63
3.	Canada	502.76	5.37	531.94	5.43	541.92	5.26	690.08	5.21
4.	U K	421.39	4.50	472.74	4.83	477.27	4.63	641.09	4.84
5.	France	507.31	5.41	485.31	4.96	442.92	4.30	567.98	4.29
6.	Netherlands	241.85	2.58	268.93	2.75	351.69	3.41	513.56	3.88
7.	Australia	218.73	2.33	218.97	2.24	256.02	2.48	336.32	2.54
8.	Belgium	155.60	1.66	163.56	1.67	187.62	1.82	278.65	2.11
9.	Italy	126.88	1.35	132.12	1.35	121.95	1.18	188.19	1.42
10.	Poland	84.81	0.91	109.25	1.12	134.09	1.30	181.58	1.37
37.	**India**	**53.23**	**0.57**	**63.96**	**0.65**	**40.21**	**0.39**	**50.40**	**0.38**
	Others	2685.02	28.66	2839.77	29.01	2689.36	26.10	3360.76	25.40
	Total	9369.63	100	9789.09	100	10303.06	100	13232.97	100

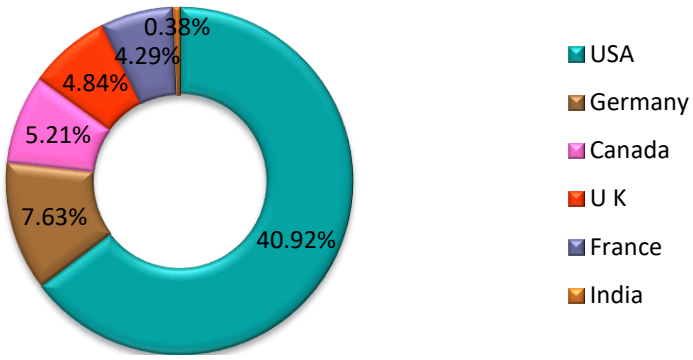
Source :UNComtrade

Leading Plastics Floor Covering importers of world from 2018 to 2021 **(in million USD)**

Data label given on the basis of 2021



Country wise leading Importer world's Plastics Floor Covering import by percentage in 2021 :

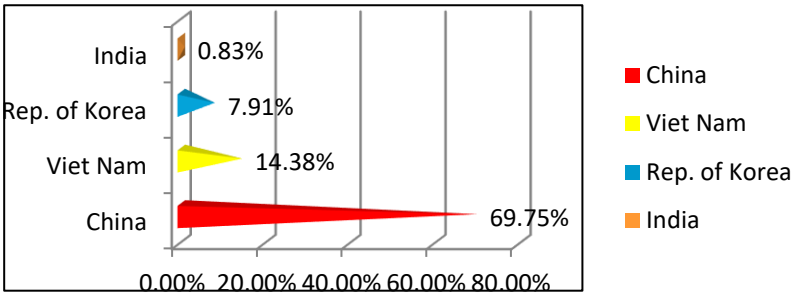


The volume of global imports of Plastics Floor Covering totaled US $ 13.23 Billion in 2021. The U.S. Remains the Largest Global Importer of Plastics Floor Covering, comprising 40.92% of global imports in 2021. Imports into the U.S. increased by nearly 26.40% over the last year's export. It was followed by Germany (7.63%) and Canada (5.21%), of global import respectively. In that year India imported only 0.38% share of global import and stood at 37th rank in the world.

Annexure-II

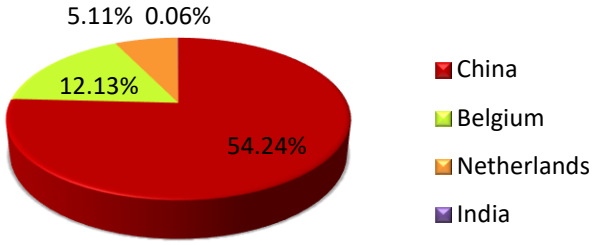
Sources of top three importers of Plastics Floor Covering (HS Code –3918)

i) Top 3 Sources of Plastics Floor Covering to USA in 2021 by percentage**:**



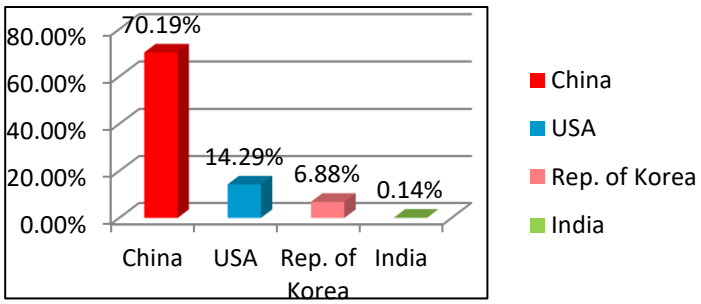
USA's source most of its Plastics Floor Covering from China with 69.75% share of its import of the commodity comes from China in 2021. Vietnam and Rep. of Korea are found to be the 2nd and 3rd largest exporters of Plastics Floor Covering to USA by 14.38% and 7.91% shares of USA's total import respectively in 2021. In the same year India has exported the same to USA only 0.83% share of USA's total **(Source: UN Comtrade)**

ii) Top 3 Sources of Plastics Floor Covering to Germany in 2021 by percentage**:**



54.24% share of Plastics Floor Covering imports to Germany came from China in 2021, followed by Belgium (12.13%) and Netherlands (5.11%). In the same year Germany imported only 0.06% share of Plastics Floor Covering from India. **(Source: UN Comtrade)**

iii) Top 3 Sources of Plastics Floor Covering to Canada in 2021 by percentage**:**



With 70.19% share of Canada's total import, China became the largest source of Plastics Floor Covering to Canada in 2021. USA (14.29%) and Rep of Korea (6.88%) were other major sources of Plastics Floor Covering to Canada in that year. India's share was only 0.14%. **(Source : UN Comtrade)**

IMPORT

Gypsum; Anhydrites; Plasters etc

Gypsum is a soft sulfate mineral composed of calcium sulfate dihydrate, with the chemical formula $CaSO_4 \cdot 2H_2O$. It is widely mined and is used as a fertilizer and as the main constituent in many forms of plaster, blackboard or sidewalk chalk, and drywall.[5][6][7][8] Alabaster, a fine-grained white or lightly tinted variety of gypsum, has been used for sculpture by many cultures including Ancient Egypt, Mesopotamia, Ancient Rome, the Byzantine Empire, and the Nottingham alabasters of Medieval England. Gypsum also crystallizes as translucent crystals of selenite. It forms as an evaporite mineral and as a hydration product of anhydrite.

The word *gypsum* is derived from the Greek word, "plaster". Because the quarries of the Montmartre district of Paris have long furnished burnt gypsum (calcined gypsum) used for various purposes, this dehydrated gypsum became known as plaster of Paris. Upon adding water, after a few dozen minutes, plaster of Paris becomes regular gypsum (dihydrate) again, causing the material to harden or "set" in ways that are useful for casting and construction.

Gypsum is a common mineral, with thick and extensive evaporite beds in association with sedimentary rocks. Deposits are known to occur in strata from as far back as the Archaean eon. Gypsum is deposited from lake and sea water, as well as in hot springs, from volcanic vapors, and sulfate solutions in veins. Hydrothermal anhydrite in veins is commonly hydrated to gypsum by groundwater in near-surface exposures. It is often associated with the minerals halite and sulfur. Gypsum is the most common sulfate mineral. Pure gypsum is white, but other substances found as impurities may give a wide range of colors to local deposits.

Because gypsum dissolves over time in water, gypsum is rarely found in the form of sand. However, the unique conditions of the White Sands National Park in the US state of New Mexico have created a 710 km^2 (270 sq mi) expanse of white gypsum sand, enough to supply the US construction industry with drywall for 1,000 years. Commercial exploitation of the area, strongly opposed by area residents, was permanently prevented in 1933 when President Herbert Hoover declared the gypsum dunes a protected national monument.

Gypsum is also formed as a by-product of sulfide oxidation, amongst others by pyrite oxidation, when the sulfuric acid generated reacts with calcium carbonate. Its presence indicates oxidizing conditions. Under reducing conditions, the sulfates it contains can be reduced back to sulfide by sulfate-reducing bacteria. This can lead to accumulation of elemental sulfur in oil-bearing formations, such as salt domes, where it can be mined using the Frasch process Electric power stations burning coal with flue gas desulfurization produce large quantities of gypsum as a byproduct from the scrubbers.

Commercial quantities of gypsum are found in the cities of Araripina and Grajaú in Brazil; in Pakistan, Jamaica, Iran (world's second largest producer), Thailand, Spain (the main producer in Europe), Germany, Italy, England, Ireland, Canada[25] and the United States. Large open pit quarries are located in many places including Fort Dodge, Iowa, which sits on one of the largest deposits of gypsum in the world,[26] and Plaster City, California, United States, and East Kutai, Kalimantan, Indonesia. Several small mines also exist in places such as Kalannie in Western Australia, where gypsum is sold to private buyers for additions of calcium and sulfur as well as reduction of aluminum toxicities on soil for agricultural purposes.

On heating gypsum stone a white coloured powder is obtained. This white powder is smooth and is called gypsum powder. Gypsum is first crushed, heat-dried and then powdered. Gypsum gives nutrients to plants by providing sulphur and calcium where calcium helps in the absorption of nutrients in the roots. and sulphur improves crop yield. Gypsum board is also known as plasterboard, drywall or wall board. It consists of the paper surface and non-combustible core. These boards are easy to install. It has excellent fire resistance. Helps in sound isolation by preventing the transfer of unnecessary sound. It is less expensive and has great durability.

These are broadly classified under **H. S. Code 2520**.

Table - 7

India's Top 10 Sources of Gypsum etc…(H.S. Code - 2520)

Rank	Countries	2018		2019		2020		2021	
		Value (million $)	Share (%)	Value (million$)	Share (%)	Value (million$)	Share (%)	Value (million$)	Share (%)
1.	Oman	53.76	39.66	39.51	32.69	32.39	31.16	77.37	50.12
2.	U A E	13.19	9.73	40.33	33.38	50.09	48.18	46.00	29.80
3.	Iran	32.90	24.27	17.03	14.09	6.96	6.69	10.48	6.79
4.	Thailand	9.06	6.69	9.68	8.01	6.82	6.56	9.49	6.15
5.	Bhutan	0.00	0.00	6.93	5.74	4.80	4.62	5.72	3.71
6.	Saudi Arab	1.50	1.11	1.26	1.05	0.75	0.72	1.85	1.20
7.	U S A	0.60	0.44	0.68	0.56	0.55	0.53	1.29	0.84
8.	Germany	0.49	0.36	0.67	0.56	0.60	0.58	0.71	0.46
9.	Singapore	1.06	0.78	0.55	0.45	0.48	0.46	0.51	0.33
10.	Cina	0.53	0.39	0.50	0.41	0.22	0.21	0.45	0.29
	Others	22.47	16.58	3.69	3.05	0.30	0.29	0.50	0.33
	Total	135.55	100	120.84	100	103.96	100	154.38	100

Source: DGCI&S

Note : India's Import including re-import

The dollar value of Gypsum etc… import in 2021 stood at US $ 154.38 Million. In the 2021 the import of Gypsum etc… in India grew by more than 48.49% compare to the year 2020. In 2021 India imported Gypsum etc…maximum worth value of US $ 77.37 Million from Oman or 50.12% of India's total import, which was greater than the previous year Gypsum etc…shipments from Oman into India. In second and third place were UAE and Iran, from where India imported around 29.80% and 6.79% share of Gypsum etc…. The top 10 countries shared 99.67% of the Gypsum etc…import to India in 2021.

Table - 8

World's Top 10 Importer of Gypsum etc…(H.S. Code - 2520)

Rank	Countries	2018		2019		2020		2021	
		Value (million$)	Share (%)	Value (million$)	Share (%)	Value (million $)	Share (%)	Value (million$)	Share (%)
1.	USA	112.58	7.30	150.23	9.55	152.01	9.77	191.71	10.54
2.	**India**	**134.32**	**8.71**	**120.83**	**7.68**	**103.90**	**6.68**	**155.19**	**8.53**
3.	Nigeria	68.89	4.47	85.18	5.42	147.98	9.51	152.68	8.39
4.	Japan	96.72	6.27	99.11	6.30	91.03	5.85	98.44	5.41
5.	Indonesia	85.96	5.58	82.36	5.24	65.12	4.18	81.14	4.46
6.	Belgium	56.29	3.65	56.39	3.59	60.53	3.89	75.53	4.15
7.	Viet Nam	50.22	3.26	45.86	2.92	41.09	2.64	67.84	3.73
8.	U K	61.73	4.00	64.44	4.10	69.86	4.49	60.72	3.34
9.	China	45.24	2.93	47.41	3.01	46.26	2.97	59.11	3.25
10.	Canada	28.64	1.86	42.61	2.71	47.94	3.08	51.74	2.84
	Others	801.16	51.96	778.24	49.49	730.63	46.94	825.69	45.37
	Total	1541.74	100	1572.66	100	1556.35	100	1819.78	100

Source :UNComtrade

In 2021, the global Gypsum etc… imports amounted to US $ 1.82 Billion, increasing by nearly 16.66% against the previous year figure. Over the period under review, global refined Gypsum etc… imports reached its maximum level of US $ 1.82 Billion in 2021, however, from 2018 to 2020, it failed to regain its strength. In 2021 USA (US $ 191.71 M) constitutes the largest market for imported Gypsum etc…worldwide, making up 10.54% of global imports. The second position in the ranking was occupied by **India** (US $ 155.19 M), with the share of 8.53% of global imports. It was followed by the Nigeria, with the share of 8.39%. These three major importing countries represented 27.46% of total global import of Gypsum etc…in 2021.

Peptones & their Derivatives , etc..

Peptone, a protein decomposition product, is made by incomplete hydrolysis process of the protein originated from beef, casein, milk powder, gelatin, soy protein, silk protein, fibrin, etc. The commercially available products are mainly light yellow to brown yellow powder. Its molecular weight is between proteose and peptide (about 2000Da).

The most critical term for this concept: one point is incomplete hydrolysis which is a non-quantitative term. Therefore, for each company, the types of enzymes used for protein decomposition and the degree of enzymolysis will be different, therefor, different peptones, for precisely controlled biological processes, are not universal and need to be tested to verify their usability. The catalytic effect of the enzyme itself is also not precise, and the hydrolysis activity of the enzyme will also be impacted by the enzyme itself and the catalytic environment.

Another key term of this concept is protein: different species, even different parts of the same species, have different types of proteins, so their products are also complex and changeable.

Proteins can also form peptones after being hydrolyzed by acids, alkalis or proteases. Different sources of protein and different hydrolysis conditions would make the composition of hydrolysate vary widely, so peptone is often a complex mixture of peptides. In addition to amino acids, peptone also includes many other components, so it can provide carbon sources, nitrogen sources, growth factors and other nutrients for biological cultivation and fermentation.

In general, proteins used for peptone production include proteins of animal origin, plant origin, and microbial origin. At present, the research on artificial meat has become a hot spot. It is believed that by-products of artificial meat in the future may also become the source of peptone raw materials, which is beyond the scope of this article.

Animal protein mainly include: tryptone, meat peptone, bone peptone, silk pupae peptone, blood peptone, fish and shrimp powder, milk powder, etc.

Peptone, produced from peanut meal and soybean, are vegetable peptones. Vegetable peptone has a relatively high sugar content.

Accurately weigh 5g of defatted cold-pressed peanut meal and dissolve it in 250 mL of deionized water, adjust the pH to 2.0 with hydrochloric acid, add 5% pepsin (based on the substrate, 3 000 U / g) and stir at 37 ℃, do enzymatic hydrolysis for 200 min, regularly monitoring the degree of hydrolysis; After completion of the hydrolysis, adjust the pH of the hydrolysate to 8.0 with NaOH, add 2% alkaline protease (based on substrate, 50 000 U / g), enzymatic hydrolysis was carried out at 50 ℃for 190 min, and the DH%(Degree of hydrolysis) was monitored regularly; After the completion of the hydrolysis, the enzymolysis solution was placed in a boiling water bath for 10 min to kill the enzyme. After cooling to room temperature, centrifuge at 5,000 5 000×g for 25 min at 4 ° C, and the supernatant was freeze-dried, that is, cold-pressed peanut meal peptone.

Peptone Water is used as a growth medium and as a base for carbohydrate fermentation media. It is a broth medium used for the detection of indole. It is minimal growth medium which is used for determining carbohydrate fermentation patterns of non-fastidious organisms.

These are broadly classified under **H. S. Code - 3504**.

Table - 9

India's Top 10 Source Countries of Peptones & their Derivatives etc. (HS Cod 3504)

Rank	Countries	2018		2019		2020		2021	
		Value (million $)	Share (%)	Value (million$)	Share (%)	Value (million$)	Share (%)	Value (million$)	Share (%)
1.	China	9.14	26.75	9.21	26.76	9.04	22.68	29.77	51.76
2.	U S A	7.83	22.93	5.90	17.14	7.01	17.59	12.27	21.34
3.	Netherland	1.38	4.05	0.98	2.84	2.64	6.62	5.74	9.97
4.	France	1.60	4.67	2.10	6.09	2.65	6.65	1.56	2.72
5.	Switzerland	9.71	28.43	11.76	34.15	13.43	33.69	1.13	1.97
6.	Spain	0.07	0.20	0.17	0.48	0.73	1.83	1.10	1.92
7.	Germany	0.25	0.73	0.86	2.50	0.30	0.75	0.95	1.66
8.	Australia	0.26	0.76	0.47	1.36	1.06	2.65	0.92	1.60
9.	Belgium	2.22	6.50	0.47	1.36	0.51	1.27	0.77	1.34
10.	U K	0.30	0.89	0.55	1.59	0.44	1.09	0.72	1.26
	Others	1.39	4.08	1.97	5.72	2.06	5.17	2.56	4.46
	Total	34.16	100	34.43	100	39.86	100	57.51	100

Source: DGCI&S

Note : India's Import including Re-import

Collectively India imported US $ 57.51 Million of Peptones & its derivatives, etc from different countries in 2021. Peptones & its derivatives, etc imports to India reached its maximum level of US $ 57.51 Million in this year. The data table shows the increasing trends of import to India. To import Peptones & its derivatives, etc to India, the best countries according to Indian shipment records are China (US $ 29.77 M), USA (US $ 12.27 M), Netherlands (US $ 5.74 M), France(US $ 1.56 M) & Switzerland (US $ 1.13 M). Together they sold US $ 50.47 Million worth value of Peptones & its derivatives, etc to India in 2021 which was accounted 87.76% share of India's total import of Peptones & its derivatives, etc.

Table - 10

World Top 10 Importer of Peptones & their Derivatives etc. (HS Cod 3504)

Rank	Countries	2018		2019		2020		2021	
		Value (million$)	Share (%)	Value (million$)	Share (%)	Value (million $)	Share (%)	Value (million$)	Share (%)
1.	USA	340.61	12.46	512.99	16.34	544.49	15.46	728.67	17.20
2.	Netherlands	287.15	10.51	356.08	11.34	432.86	12.29	478.99	11.30
3.	Germany	224.23	8.21	260.99	8.31	288.68	8.20	343.15	8.10
4.	Japan	250.70	9.17	274.46	8.74	295.81	8.40	336.57	7.94
5.	Canada	130.39	4.77	135.92	4.33	145.67	4.14	181.40	4.28
6.	Rep. of Korea	75.25	2.75	108.08	3.44	156.99	4.46	177.33	4.19
7.	China	96.09	3.52	99.69	3.18	123.62	3.51	150.58	3.55
8.	France	146.37	5.36	142.23	4.53	131.13	3.72	132.46	3.13
9.	Russia	108.31	3.96	108.82	3.47	111.52	3.17	128.60	3.04
10.	U K	62.06	2.27	76.98	2.45	87.14	2.47	125.29	2.96
18.	**India**	**34.21**	**1.25**	**34.48**	**1.10**	**40.02**	**1.14**	**57.65**	**1.36**
	Others	977.25	35.76	1028.84	32.77	1164.69	33.06	1396.46	32.96
	Total	2732.62	100	3139.56	100	3522.63	100	4237.15	100

Source :UNComtrade

Peptones & its derivatives, etc imports stood at US $ 4.23 Billion globaly in 2021, which was the highest during the period from 2018 to 2021. The trend pattern indicated increasing trend throughout the analyzed period. The global import of Peptones & its derivatives, etc has increased by 20.45% in 2021 from the previous year' import. USA was the key importer of Peptones & its derivatives, etc in 2021, accounting for 17.20% of total global imports. The second position in the ranking was occupied by Netherlands with the share of 11.30% of global imports. It was followed by Germany, with the share of 8.10%. **India** occupied 18th position in the world with 1.36% share of global import of Peptones & its derivatives, etc in the same year.