

# **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 **Articles of Apparel and clothing accessories of Leather etc... & Aluminium Wire** and imports of **Carboxylamide : Amide Function Compound & Photographic Camera etc..** 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-4203 & 7605 for export and 2924 & 9006 for import ) and the latest finalized data available on the UN Comtrade Database up to year 2020 and on the DGCI&S Database up to November'2022. 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 Articles of Apparel and clothing accessories of Leather etc... & Aluminium Wire and imports of Carboxylamide : Amide Function Compound & Photographic Camera etc... We will use both the 4 digit Commodity codes, for our analysis, as appropriate.

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

- Table1: India's top 10 Export destination of Leather Clothing Accessories with their shares in percentage.
- Table 2 : World's top 10 Exporters of Leather Clothing Accessories with their shares in percentage.
- Table 3 : World's top 10 Importers of Leather Clothing Accessories with their shares in percentage.
- Annex- I : Top 3 sources of Leather Clothing Accessories r of World's top 3 Importers.
- Table4: India's top 10 Export destination of Aluminium Wire with their shares in percentage.
- Table 5 : World's top 10 Exporters of Aluminium Wire with their shares in percentage.
- Table 6 : World's top 10 Importers of Aluminium Wire with their shares in percentage.
- Annex-II : Top 3 sources of Aluminium Wire of World's top 3 Importers.
- Table 7 : India's top10 Sources of Carboxylamide : Amide Function Compound with their shares in percentage.
- Table 8 :World's top 10 Importers of Carboxylamide : Amide Function Compound with their shares in percentage.
- Table 9 : India's top 10 Sources of Photographic Camera etc... with their shares in percentage.
- Table 10 : World's top 10 Importers of Photographic Camera etc... with their shares in percentage.

## EXPORT

### Articles of Apparel and Clothing Accessories of Leather

**Leather** is a strong, flexible and durable material obtained from the tanning, or chemical treatment, of animal skins and hides to prevent decay. The most common leathers come from cattle, sheep, goats, equine animals, buffalo, pigs and hogs, and aquatic animals such as seals and alligators.

Leather can be used to make a variety of items, including clothing, footwear, handbags, furniture, tools and sports equipment, and lasts for decades. Leather making has been practiced for more than 7,000 years and the leading producers of leather today are China and India.

Critics of tanneries claim that they engage in unsustainable practices that pose health hazards to the people and the environment near them.

Leather Garments are one of the sophisticated products of finished leather. Leather Garments consist of articles of leather apparel and other cloth accessories as per ITC Classification which would include more specifically Gents Leather jackets, Long Coats, Waist/Shorts, Leather Pants/Shorts (Gents), Leather Jackets for ladies, Long Coats, Waist Coats/Shirts, Pant/Shorts and Children Garments. These are used only in cold places and usually garments made for autumn – winter are made of some what heavy leather from Hides with thick lining of either wool or artificial fur. Demand for Goat suede and light sheep nappa is generally high for European markets in spring summer while that for cow hides and somewhat heavy sheet skin is high for the autumnwinter in Europe and the USA.

Due to its excellent resistance to abrasion and wind, leather found a use in rugged occupations. The enduring image of a cowboy in leather chaps gave way to the leather-jacketed and leather-helmeted aviator. When motorcycles were invented, some riders took to wearing heavy leather jackets to protect from road rash and wind blast; some also wear chaps or full leather pants to protect the lower body.

Leather's flexibility allows it to be formed and shaped into balls and protective gear. Subsequently, many sports use equipment made with leather, such as baseball gloves and the ball used in cricket and gridiron football.

Leather fetishism is the name popularly used to describe a fetishistic attraction to people wearing leather, or in certain cases, to the garments themselves.

Many rock groups (particularly heavy metal and punk groups in the 1970s and 80s) are well known for wearing leather clothing. Extreme metal bands (especially black metal bands) and Goth rock groups have extensive black leather clothing. Leather has become less common in the punk community over the last three decades, as there is opposition to the use of leather from punks who support animal rights.

In countries with significant populations of individuals observing religions which place restrictions on material choices, vendors typically clarify the source of leather in their products. Such labeling helps facilitate religious observance, so, for example, a Muslim will not accidentally purchase pigskin or a Hindu can avoid cattleskin. Such taboos increase the demand for religiously neutral leathers such as ostrich and deer.

Many forms of artificial leather have been developed, usually involving polyurethane or vinyl coatings applied to a cloth backing. Many names and brands for such artificial leathers exist, including "pleather", a portmanteau of "plastic leather", and the brand name Naugahyde.

Another alternative is cultured leather which is lab-grown using cell-culture methods, mushroom-based materials and gelatin-based textile made by upcycling meat industry waste. Leather made of fungi or mushroom-based materials are completely biodegradable.

These are broadly classified under **H.S. Code-4203**.

Table – 1

**India's Top 10 destination of Apparel and Clothing Accessories of Leather (H.S Code-4203)**

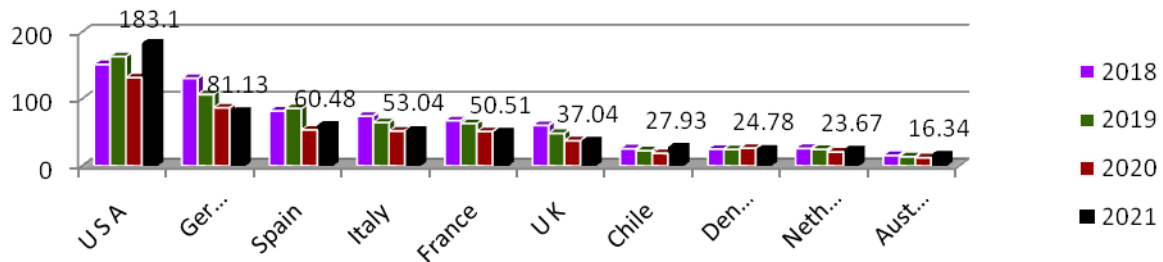
Rank	Countries	2018		2019		2020		2021	
		Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	U S A	151.43	18.41	163.23	20.47	131.50	21.75	183.10	26.92
2.	Germany	130.57	15.88	106.55	13.36	86.66	14.33	81.13	11.93
3.	Spain	81.97	9.97	85.54	10.73	53.58	8.86	60.48	8.89
4.	Italy	74.25	9.03	64.53	8.09	51.98	8.60	53.04	7.80
5.	France	67.49	8.21	63.05	7.91	51.13	8.46	50.51	7.43
6.	U K	60.22	7.32	48.58	6.09	37.44	6.19	37.04	5.45
7.	Chile	25.60	3.11	22.65	2.84	18.51	3.06	27.93	4.11
8.	Denmark	24.91	3.03	24.48	3.07	26.20	4.33	24.78	3.64
9.	Netherland	26.02	3.16	24.66	3.09	20.81	3.44	23.67	3.48
10.	Australia	15.54	1.89	13.54	1.70	12.15	2.01	16.34	2.40
	Others	164.34	19.98	180.67	22.65	114.59	18.95	122.18	17.96
	<b>Total</b>	822.34	100	797.49	100	604.54	100	680.20	100

Source: DGCI&S.

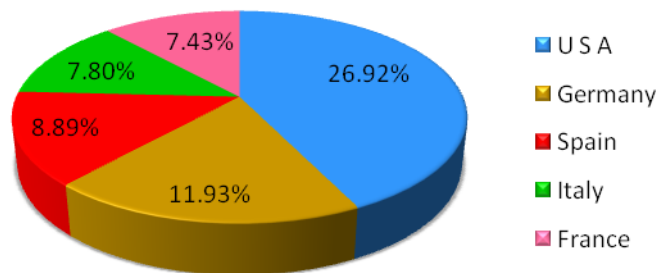
Note : India's Export including re-export

Major destinations of Clothing Accessories of Leather from India from 2018-2021( in Million \$)

Data label given on the basis of 2021



India's top 5 destinations of and Clothing Accessories of Leather by percentage India in 2021:



In the year 2021, India has exported Articles of Apparel and clothing accessories of Leather or Composition Leather worth of US \$ 680.20 million. showing the rise of 12.51% compared to the year 2020. USA is the largest importer for Articles Of Apparel Of Leather Or Composition Leather export from India. In 2021, USA imported more than 183 million worth Articles Of Apparel Of Leather Or Composition Leather from India which was accounted 26.92% share of India's total export which was followed by Germany and Spain with 11.93% and 8.89% share respectively.

Table-2

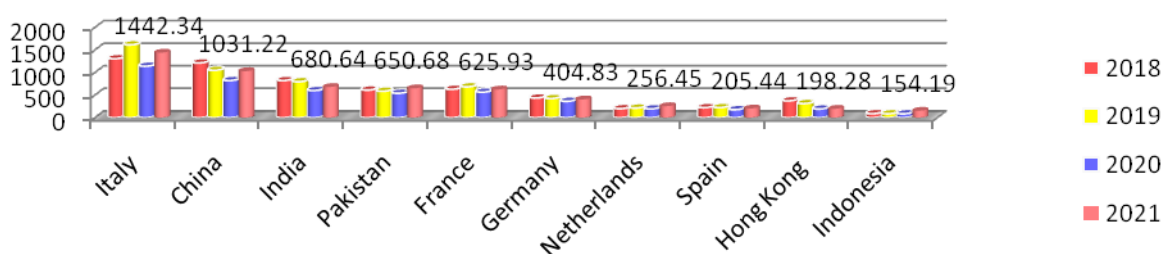
**World's Top 10 exporter of Apparel and Clothing Accessories of Leather (H.S Code-4203)**

Rank	Countries	2018		2019		2020		2021	
		Value (million \$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	Italy	1307.89	17.26	1615.44	20.80	1141.23	18.37	1442.34	19.51
2.	China	1214.04	16.02	1050.82	13.53	823.80	13.26	1031.22	13.95
3.	<b>India</b>	<b>823.24</b>	<b>10.86</b>	<b>797.67</b>	<b>10.27</b>	<b>602.64</b>	<b>9.70</b>	<b>680.64</b>	<b>9.21</b>
4.	Pakistan	613.03	8.09	587.68	7.57	541.83	8.72	650.68	8.80
5.	France	630.75	8.32	685.09	8.82	567.17	9.13	625.93	8.47
6.	Germany	436.75	5.76	425.15	5.47	363.93	5.86	404.83	5.48
7.	Netherlands	200.23	2.64	213.85	2.75	196.29	3.16	256.45	3.47
8.	Spain	223.50	2.95	224.64	2.89	179.06	2.88	205.44	2.78
9.	Hong Kong	374.81	4.95	313.61	4.04	192.90	3.11	198.28	2.68
10.	Indonesia	89.72	1.18	87.69	1.13	87.02	1.40	154.19	2.09
	Others	1663.17	21.95	1763.86	22.71	1515.13	24.39	1743.06	23.58
	<b>Total</b>	<b>7577.12</b>	<b>100</b>	<b>7765.50</b>	<b>100</b>	<b>6210.99</b>	<b>100</b>	<b>7393.04</b>	<b>100</b>

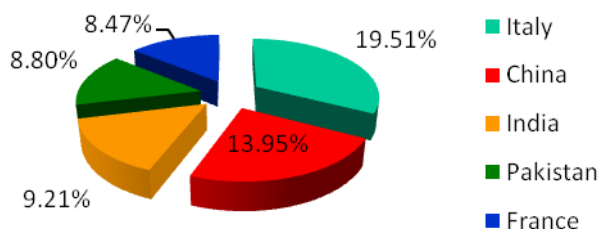
Source: UN Comtrade

Leading exporters of Clothing Accessories of Leather of world from 2018 to 2021 (in million \$)

Data label given on the basis of 2021



Country wise leading exporter of Clothing Accessories of Leather by percentage in 2021 :



In 2021, the worth of Articles of Apparel and clothing accessories of Leather or Composition Leather exported worldwide was US \$ 7.39 Billion showing the positive growth by + 19% compare to that than 2020. Over the period under review, global composition leather exports reached its maximum level of US \$ 7.76 Billion in 2019. Italy was the top ranked global Articles of Apparel and Clothing accessories of Leather Or Composition Leather exporter with a share of approximately US \$ 1.44 Billion, or 19.51% share of world export. In that year China and India appeared as the countries with the 2<sup>nd</sup> and 3<sup>rd</sup> largest exporter of Articles of Apparel and clothing accessories of Leather or Composition Leather with 13.95% and 9.21% share of world wide.

Table-3

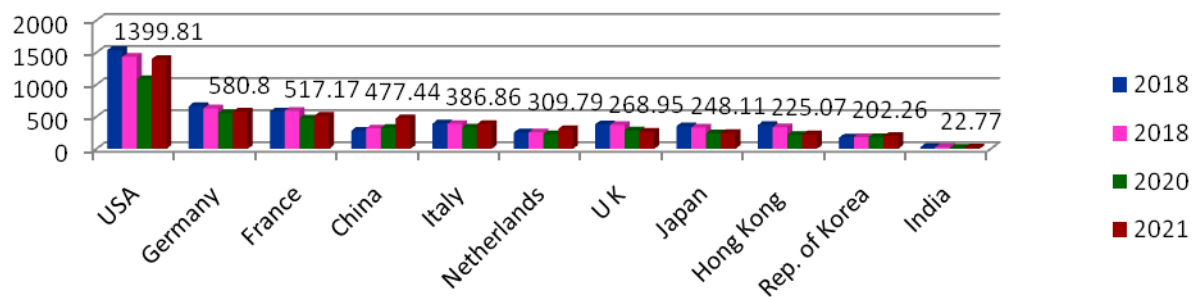
**World's top 10 Importers of Apparel and Clothing Accessories of Leather (H.S Code-4203)**

Rank	Countries	2018		2019		2020		2021	
		Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	USA	1541.38	20.14	1434.03	19.20	1085.31	17.80	1399.81	19.63
2.	Germany	664.81	8.69	631.17	8.45	555.69	9.11	580.80	8.14
3.	France	581.38	7.60	593.72	7.95	473.11	7.76	517.17	7.25
4.	China	281.73	3.68	319.62	4.28	328.91	5.39	477.44	6.69
5.	Italy	395.62	5.17	389.68	5.22	331.22	5.43	386.86	5.42
6.	Netherlands	255.18	3.33	256.39	3.43	227.34	3.73	309.79	4.34
7.	U K	382.25	4.99	373.02	4.99	287.60	4.72	268.95	3.77
8.	Japan	352.45	4.61	333.50	4.46	240.31	3.94	248.11	3.48
9.	Hong Kong	372.30	4.86	338.23	4.53	217.89	3.57	225.07	3.16
10.	Rep. of Korea	175.68	2.30	183.50	2.46	184.33	3.02	202.26	2.84
<b>36.</b>	<b>India</b>	<b>27.12</b>	<b>0.35</b>	<b>26.11</b>	<b>0.35</b>	<b>15.31</b>	<b>0.25</b>	<b>22.77</b>	<b>0.32</b>
	Others	2623.49	34.28	2591.09	34.69	2151.58	35.28	2493.41	34.96
	<b>Total</b>	<b>7653.41</b>	<b>100</b>	<b>7470.06</b>	<b>100</b>	<b>6098.60</b>	<b>100</b>	<b>7132.43</b>	<b>100</b>

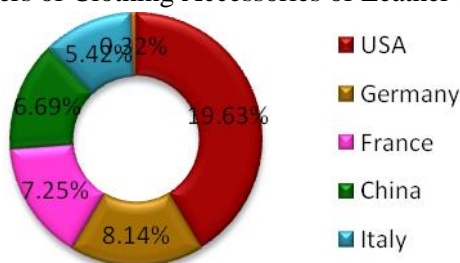
Source : UN Comtrade

Leading Clothing Accessories of Leather importers of world from 2018 to 2021(in million \$)

Data label given on the basis of 2021



Country wise leading importers of Clothing Accessories of Leather by percentage in 2021

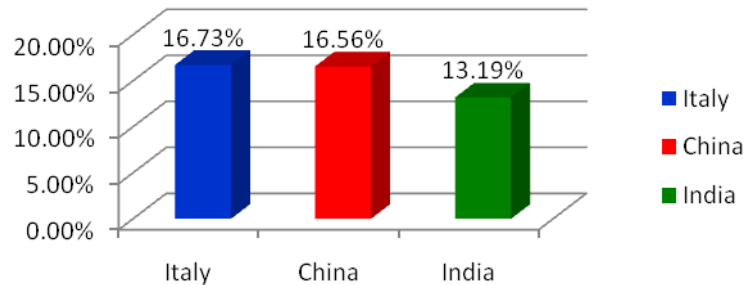


The global import value of leather apparel and clothing accessories was US \$ 7.13 billion in 2021, which jumped more than 17% from US \$ 6.09 billion in 2020. USA imports the largest amount of leather apparel and clothing accessories from world and imports US \$ 1.40 billion leather apparel and clothing accessories in 2021, 19.63% of world import. followed by Germany and France those imported leather apparel and clothing accessories of US \$ 580.80 million and US \$ 517.17 million respectively. India Imported only US \$ 22.77 million worth of the commodity group from world in 2021.

## Annexure-1

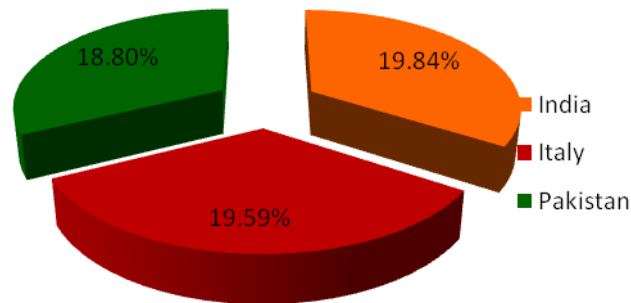
**Major sources of world's top 3 importers of Clothing Accessories of Leather (H.S Code (4203) Top 3**

Sources of Clothing Accessories of Leather to USA in 2021 by percentage:



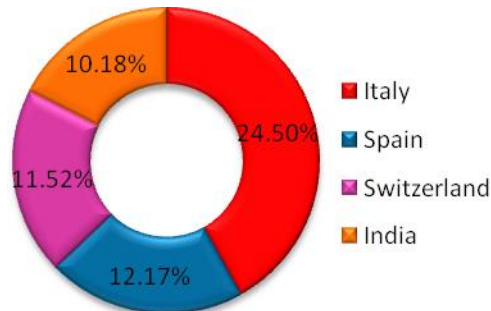
Italy was the primary source of Apparel and Clothing accessories of leather etc.. to USA , USA imports 16.73% share of its total import from Italy in 2021. China stood at 2<sup>nd</sup> largest source of the commodity group of USA with 16.56%. In the same year India appeared as the country with third largest source source of Apparel and Clothing accessories of leather USA with 13.19% share USA's total import. **(Source: UN Comtrade)**

ii) Top 3 Sources of Clothing Accessories of Leather to Germany in 2021 by percentage:



In 2021 India was the primary source country of Apparel and Clothing accessories of leather to Germany. Germany has imported 19.84% share from India. It was followed by Italy (19.59%) and Pakistan (18.80%)..**(Source: UN Comtrade)**

iii) Top 3 Sources of Clothing Accessories of Leather to France in 2021 by percentage:



Italy was the largest source of Apparel and Clothing accessories of leather to France in 2021, 24.50% of total Apparel and Clothing accessories of leather import by France from Italy in 2021. Spain (12.17%), Switzerland (11.52%) and India (10.18%) were other important sources of Apparel and Clothing accessories of leather to France in that year. **(Source : UN Comtrade)**

## Aluminium Wire

Aluminum wire is a wire that is used for electrical wiring in houses, power grids and airplanes. Aluminum wire is an alternative conducting material considering its electrical and mechanical properties and price compared to copper wire. Aluminum is a poorer electrical conductor compared to copper, so it is infrequently used in small applications such as home wiring.

Aluminum is a relatively soft and weak metal compared to copper, and when the temperature of the circuit rises the wire expands and flows into empty spaces within electrical connectors. When an electric current passes through this circuit it creates pressure, which heats the aluminum wire connector. Later, the aluminum cools and contracts when the electricity is switched off. This creates small gaps between the aluminum wire and the connector. This gap increases the risk of corrosion, which further increases the resistance. As current passes through the same connector it encounters more resistance and generates more heat that can cause the connector material to ignite.

However, solutions to alleviate corrosion on aluminum wire connectors has been developed whereby tightly adhering corrosion inhibitors work as antioxidants to deter corrosion and subsequent adverse heating and high electrical resistance.

Aluminum wire has been used as an electrical conductor for a considerable period of time, particularly by electrical utilities related to power transmission lines in use shortly after the beginning of modern power distribution systems being constructed starting in the late 1880s. Aluminum wire requires a larger wire gauge than copper wire to carry the same current, but is still less expensive than copper wire for a particular application.

Modern 500-kV overhead power lines used in an electrical power distribution system supplied by a utility.

Aluminum alloys used for electrical conductors are only approximately 61% as conductive as copper of the same cross-section, but aluminum's density is 30.5% that of copper. Accordingly, one pound of aluminum has the same current carrying capacity as two pounds of copper.<sup>[3]</sup> Since copper costs about three times as much as aluminum by weight (roughly US\$3/lb vs. USD \$1/lb as of 2017), aluminum wires are one-sixth the cost of copper wire of the same conductivity. The lower weight of aluminum wires in particular makes these electrical conductors well suited for use in power distribution systems by electrical utilities, as supporting towers or structures only need to support half the weight of wires to carry the same current.

The first aluminium wires appeared in the late 19th century in the USA. In 1880 in Chicago, the head of a train station noticed that all of the outdoor copper wires were deteriorating quickly. This, he concluded was down to fact that the copper was being corroded by locomotive smoke. The reason he decided to use aluminium as a substitute is unknown, but a copper wire several hundreds metre long was replaced with an aluminium one that turned out to be far more durable despite the fact that the number of trains at the station grew each year.

Electricity is undoubtedly one of humanity's most important discoveries. It sets everything on our planet in motion, allowing connecting continents to connect in just a fraction of a second. Without electricity, today's scientific and technological advances would be impossible. And we would not be able to produce aluminium without electricity. It is interesting that today exactly this metal is responsible for power transmission over thousands of miles.

Using aluminium cables also has a significant economic effect. First, aluminium is much cheaper than copper, second, a higher conductance of aluminium allows transmitting more electricity using the same infrastructure. As global power consumption continues to grow, grids cannot handle the existing load, the number of overloads and faults increases, and construction of new power lines is much more expensive than cable replacement.

These are broadly classified under **H.S. Code-7605**.

Table – 4  
**India's Top 10 destination of Aluminium Wire (H.S Code-7605)**

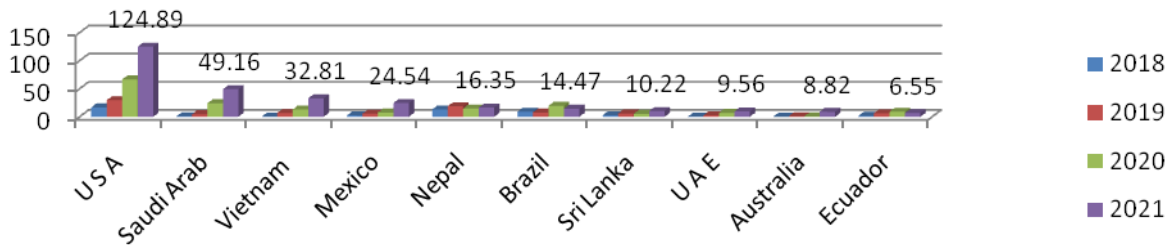
Rank	Countries	2018		2019		2020		2021	
		Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	U S A	16.69	19.56	29.52	22.78	66.74	30.69	124.89	36.79
2.	Saudi Arab	0.83	0.97	4.64	3.58	24.13	11.10	49.16	14.48
3.	Vietnam	0.27	0.31	6.78	5.23	13.09	6.02	32.81	9.67
4.	Mexico	2.52	2.95	5.40	4.17	7.65	3.52	24.54	7.23
5.	Nepal	13.07	15.31	18.74	14.46	14.82	6.81	16.35	4.82
6.	Brazil	8.91	10.44	7.65	5.90	19.50	8.97	14.47	4.26
7.	Sri Lanka	2.74	3.21	5.91	4.56	5.28	2.43	10.22	3.01
8.	U A E	0.48	0.56	2.64	2.03	6.93	3.19	9.56	2.82
9.	Australia	0.16	0.18	0.88	0.68	0.57	0.26	8.82	2.60
10.	Ecuador	1.66	1.94	6.15	4.74	9.03	4.15	6.55	1.93
	Others	38.04	44.56	41.26	31.85	49.74	22.87	42.05	12.39
	<b>Total</b>	85.37	100	129.56	100	217.46	100	339.42	100

Source: DGCI&S

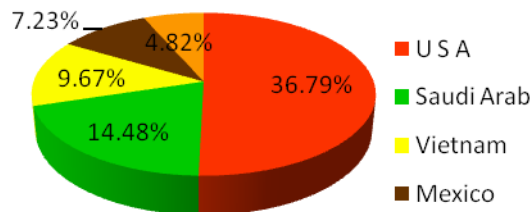
Note : India's Export including re-export

India's major destination Aluminium Wire from 2018-2021 (Values in million USD)

Data label given on the basis of 2021



India's top 5 destinations of Aluminium Wire by percentage in 2021:



In 2021 Aluminium Wire is exported to over 100 countries from India . In the year 2021, India has exported Aluminium Wire worth of US \$ .339.42 million which was more than 56% more than the year 2020. The table shows that the trends of Aluminium wire export from India was increasing over the review period. In 2021 USA was the top most destination of Indian Aluminium Wire. It has imported US \$ 124.89 million worth or 36.79% Aluminium Wire from India which was Followed by Saudi Arab and Viet Nam with the Aluminium Wire shipment value being U S \$ 49.18 Million. The top 10 countries in total shared the share of 87.61 % of the Aluminium Wire export value from India.



Table - 5

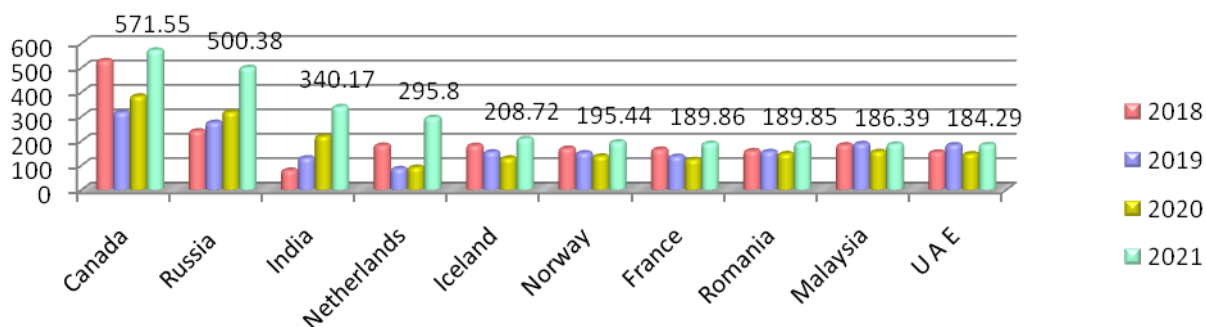
**World's Top 10 exporter of Aluminium Wire (H.S Code-7605)**

Rank	Countries	2018		2019		2020		2021	
		Value ( million \$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)	Value (million\$)	Share (%)
1.	Canada	528.48	12.22	316.79	8.76	383.20	11.20	571.55	13.22
2.	Russia	240.49	5.56	275.23	7.61	317.76	9.29	500.38	11.57
3.	<b>India</b>	<b>79.49</b>	<b>1.84</b>	<b>130.16</b>	<b>3.60</b>	<b>218.74</b>	<b>6.39</b>	<b>340.17</b>	<b>7.87</b>
4.	Netherlands	181.91	4.21	85.91	2.37	91.44	2.67	295.80	6.84
5.	Iceland	181.09	4.19	154.43	4.27	129.24	3.78	208.72	4.83
6.	Norway	169.24	3.91	151.01	4.17	137.47	4.02	195.44	4.52
7.	France	165.32	3.82	136.42	3.77	123.30	3.60	189.86	4.39
8.	Romania	159.38	3.69	156.02	4.31	147.51	4.31	189.85	4.39
9.	Malaysia	183.12	4.24	188.39	5.21	155.97	4.56	186.39	4.31
10.	U A E	153.88	3.56	183.91	5.08	146.98	4.30	184.29	4.26
	Others	2280.72	52.76	1839.52	50.85	1569.42	45.88	1462.14	33.81
	<b>Total</b>	4323.12	100	3617.78	100	3421.04	100	4324.59	100

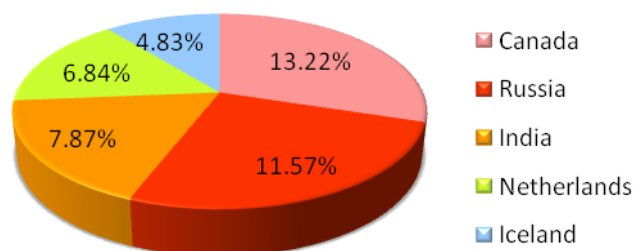
Source: UN Comtrade

Top world exporters of Aluminium Wire from 2018 to 2021 (Values in million USD)

Data label given on the basis of 2021



Export trends in world's leading Aluminium Wire exporters by percentage in 2020:



Global export of Aluminium Wire was totaled US \$ 4.32 Billion in 2021. In that year the total export value increased at an rate of 26.31 % from 2020. The trend pattern indicated increasing trends up to the year 2020. Canada represented the major exporter of Aluminium Wire in the world, exported 13.22% share of world export in 2021. Russia and **India** constitutes the 2<sup>nd</sup> and 3<sup>rd</sup> largest exporter of the Commodity group in the same year with 11.57% and 7.87% share of world export respectively. The top 10 countries together export more than 66% share of world export of Aluminium Wire in 2021.

Table - 6

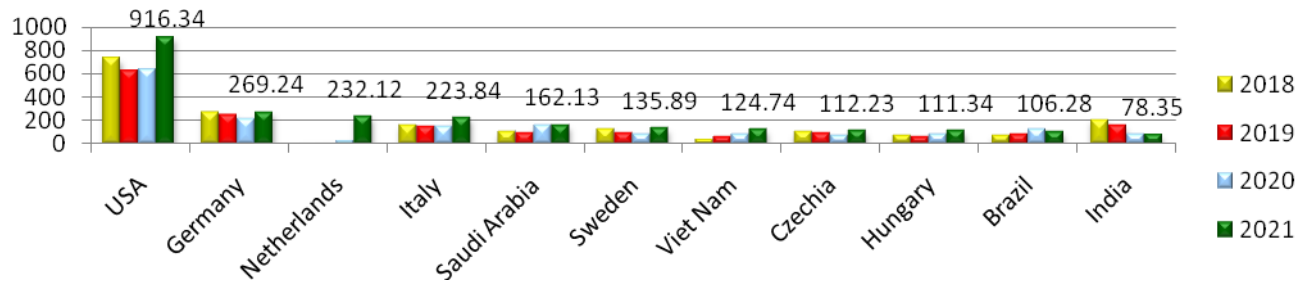
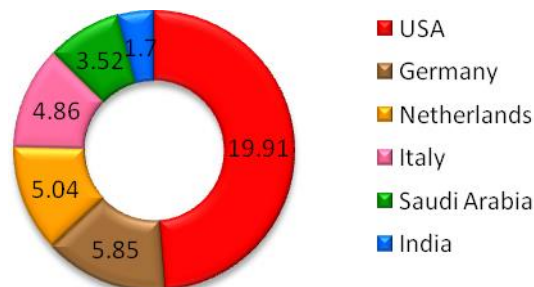
**World's top 10 Importers of Aluminium Wire (H.S Code-7605)**

Rank	Countries	2018		2019		2020		2021	
		Value ( million \$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)
1.	USA	729.91	19.33	619.78	18.21	638.23	19.20	916.34	19.91
2.	Germany	274.70	7.27	244.85	7.20	216.53	6.52	269.24	5.85
3.	Netherlands	11.81	0.31	19.83	0.58	23.83	0.72	232.12	5.04
4.	Italy	161.09	4.27	149.07	4.38	144.52	4.35	223.84	4.86
5.	Saudi Arabia	100.84	2.67	98.06	2.88	157.97	4.75	162.13	3.52
6.	Sweden	131.36	3.48	94.24	2.77	82.84	2.49	135.89	2.95
7.	Viet Nam	34.33	0.91	57.45	1.69	85.11	2.56	124.74	2.71
8.	Czechia	101.20	2.68	92.58	2.72	76.22	2.29	112.23	2.44
9.	Hungary	73.46	1.95	59.58	1.75	80.88	2.43	111.34	2.42
10.	Brazil	69.06	1.83	79.31	2.33	126.19	3.80	106.28	2.31
18.	<b>India</b>	<b>209.65</b>	<b>5.55</b>	<b>157.87</b>	<b>4.64</b>	<b>84.88</b>	<b>2.55</b>	<b>78.35</b>	<b>1.70</b>
	Others	1878.53	49.75	1730.25	50.85	1606.12	48.33	2130.29	46.28
	<b>Total</b>	<b>3775.93</b>	<b>100</b>	<b>3402.87</b>	<b>100</b>	<b>3323.32</b>	<b>100</b>	<b>4602.79</b>	<b>100</b>

Source :UNComtrade

**Top world importers of Aluminium Wire from 2018 to 2021 (Values in million USD)**

Data label given on the basis of 2021

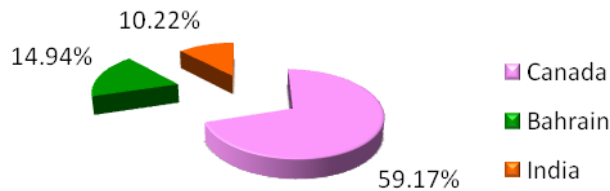
**Country wise leading global Importer of Aluminium Wire by percentage in 2021**

USA imported around US \$ 913.34 Million worth of Aluminium Wire in 2021, making it the leading importer of Aluminium Wire worldwide that year. Germany followed in the second place, importing around US \$ 269.24 Million worth of the commodity. It was followed by Netherlands, imported around US \$ 232.12 Million of Aluminium Wire in the same year. **India's** share was 1.74% share of world import and making it the 18<sup>th</sup> largest importer world wide in that year. Over the period under review, shows that the trends of import of Aluminium Wire to India is decreasing continuously.

Annexure-II

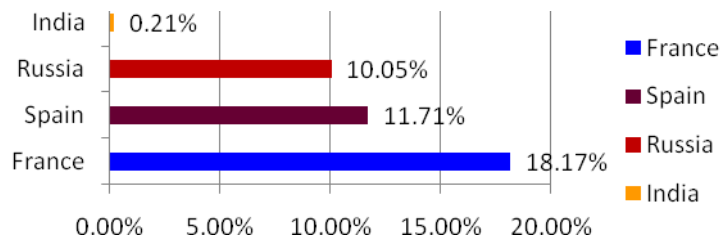
**Sources of world's top three importers of Aluminium Wire (H.S Code-7605)**

(i) Top 3 Sources of Aluminium Wire to USA in 2021 by percentage:



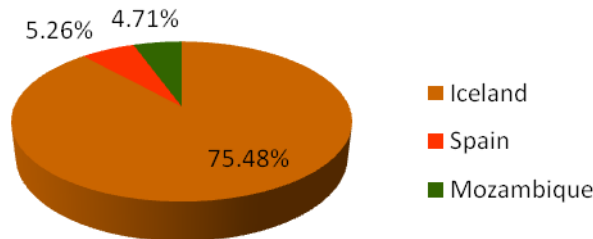
In the year 2021 USA, imports largest worth value of Aluminium Wire, 59.17% share imported from Canada, which was distantly followed by Bahrain (14.94 %) and India (10.22%). (Source: UN Comtrade)

(ii) Top 3 Sources of Aluminium to Germany in 2021 by percentage:



France was the number one source of Aluminium Wire to Germany with imports of 18.17%, 11.71% from Spain and 10.05% share from Russia in 2021. In the same year **India** has exported 0.21% share of Aluminium Wire to Germany. (Source: UN Comtrade)

(iii) Top 3 Sources of Aluminium to Netherlands in 2021 by percentage:



Iceland was the largest source country of Aluminium Wire to Netherlands in 2021 & it imports, more than 3/4<sup>th</sup> share of its import, followed by Spain (5.26%) and Mozambique (4.71%) . In that year there was no trade from India (Source : UN Comtrade)

## IMPORT

### Carboxylamide : Amide Function compound

An **amide**, also known as an **organic amide** or a **carboxamide**, is a compound with the general formula  $RC(=O)NR'R''$ , where R, R', and R'' represent organic groups or hydrogen atoms. The amide group is called a peptide bond when it is part of the main chain of a protein, and an isopeptide bond when it occurs in a side chain, such as in the amino acids asparagine and glutamine. It can be viewed as a derivative of a carboxylic acid ( $RC(=O)OH$ ) with the hydroxyl group ( $-OH$ ) replaced by an amine group ( $-NR'R''$ ); or, equivalently, an acyl (alkanoyl) group ( $R-C(=O)-$ ) joined to an amine group. Common examples of amides are acetamide ( $H_3C-CONH_2$ ), benzamide ( $C_6H_5-CONH_2$ ), and dimethylformamide ( $HCON(-CH_3)_2$ ).

Amides are qualified as **primary**, **secondary**, and **tertiary** according to whether the amine subgroup has the form  $-NH_2$ ,  $-NHR$ , or  $-NRR'$ , where R and R' are groups other than hydrogen.<sup>[not verified in body]</sup> The core  $-C(=O)N<$  of amides is called the **amide group** (specifically, **carboxamide group**).

Amides are pervasive in nature and technology. Proteins and important plastics like Nylons, Aramid, Twaron, and Kevlar are polymers whose units are connected by amide groups (polyamides); these linkages are easily formed, confer structural rigidity, and resist hydrolysis. Amides include many other important biological compounds, as well as many drugs like paracetamol, penicillin and LSD. Low-molecular-weight amides, such as dimethylformamide, are common solvents.

In the usual nomenclature, one adds the term "amide" to the stem of the parent acid's name. For instance, the amide derived from acetic acid is named acetamide ( $CH_3CONH_2$ ). IUPAC recommends ethanamide, but this and related formal names are rarely encountered. When the amide is derived from a primary or secondary amine, the substituents on nitrogen are indicated first in the name. Thus, the amide formed from dimethylamine and acetic acid is *N,N*-dimethylacetamide ( $CH_3CONMe_2$ , where  $Me = CH_3$ ). Usually even this name is simplified to dimethylacetamide. Cyclic amides are called lactams; they are necessarily secondary or tertiary amides.

Amides undergo many chemical reactions, although they are less reactive than esters. Amides hydrolyse in hot alkali as well as in strong acidic conditions. Acidic conditions yield the carboxylic acid and the ammonium ion while basic hydrolysis yield the carboxylate ion and ammonia. The protonation of the initially generated amine under acidic conditions and the deprotonation of the initially generated carboxylic acid under basic conditions render these processes non-catalytic and irreversible. Amides are also versatile precursors to many other functional groups. Electrophiles react with the carbonyl oxygen. This step often precedes hydrolysis, which is catalyzed by both Brønsted acids and Lewis acids. Enzymes, e.g. peptidases and artificial catalysts, are known to accelerate the hydrolysis reactions.

Amides are prevalent throughout the natural and engineered world. Most biological macromolecules consist of peptides linked together through amide bonds; some man-made polymers adopt the same strategy.

These are broadly classified under **H. S. Code 2924**.

Table - 7

**India's Top 10 Sources of Carboxylamide: Amide function compounds (HS Code :2924)**

Rank	Countries	2018		2019		2020		2021	
		Value ( million \$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)
1.	China	189.66	79.03	178.75	77.46	153.85	71.85	207.59	69.18
2.	Italy	12.43	5.18	13.98	6.06	11.28	5.27	15.92	5.31
3.	Korea Rp	2.91	1.21	1.66	0.72	2.15	1.01	14.84	4.95
4.	U S A	3.16	1.32	2.00	0.87	3.75	1.75	9.95	3.32
5.	Japan	6.08	2.53	6.94	3.01	5.98	2.79	6.65	2.22
6.	Germany	4.67	1.95	4.17	1.81	3.62	1.69	6.46	2.15
7.	Hong Kong	0.71	0.30	1.64	0.71	5.59	2.61	5.77	1.92
8.	Turkey	1.58	0.66	2.32	1.00	2.09	0.98	5.36	1.78
9.	Belgium	3.19	1.33	1.69	0.73	1.89	0.88	4.96	1.65
10.	Switzerland	2.30	0.96	1.03	0.45	1.11	0.52	2.83	0.94
	Others	13.30	5.54	16.57	7.18	22.80	10.65	19.76	6.59
	<b>Total</b>	239.99	100	230.77	100	214.12	100	300.09	100

Source: **DGCI&S**

Note : India's Import including re-import

Imports of Carboxylamide : Amide Function Compound to India increased to US \$ 300.09 Million in 2021 from US \$ 214.12 Million in 2020. Over the period under review, global Carboxylamide : Amide Function Compound in primary form imports attained its maximum worth value of US \$ 300.09 Million in 2021. In 2021 India imported the highest dollar worth of Carboxylamide : Amide Function Compound from China with valued at US \$ 207.59 Million. In Second and Third source countries were Italy and Korea Rp , from where India imported around US \$ 15.92 Million and US \$ 14.84 Million worth of Carboxylamide : Amide Function Compound respectively. In the same year. The top 10 countries shared 93.41% of the Carboxylamide : Amide Function Compound import to India.

Table - 8

**World Top 10 Importer of Carboxylamide: Amide function compounds forms (HS Code 2924)**

Rank	Countries	2018		2019		2020		2021	
		Value ( million \$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)
1.	USA	1096.01	14.00	1040.99	13.12	1132.50	14.92	1320.39	14.31
2.	China	910.83	11.63	1058.24	13.33	871.18	11.48	1144.82	12.41
3.	Germany	1235.76	15.78	1120.92	14.12	951.10	12.53	1081.53	11.72
4.	Ireland	444.74	5.68	451.04	5.68	413.70	5.45	549.81	5.96
5.	France	374.35	4.78	370.53	4.67	331.99	4.37	535.90	5.81
6.	Japan	308.40	3.94	303.75	3.83	275.63	3.63	366.38	3.97
7.	Rep of Korea	288.63	3.69	264.62	3.33	247.05	3.25	342.09	3.71
8.	Brazil	260.16	3.32	281.24	3.54	276.82	3.65	319.15	3.46
<b>9.</b>	<b>India</b>	<b>239.31</b>	<b>3.06</b>	<b>230.52</b>	<b>2.90</b>	<b>214.89</b>	<b>2.83</b>	<b>300.26</b>	<b>3.25</b>
10.	Switzerland	285.69	3.65	291.38	3.67	172.67	2.27	262.32	2.84
	Others	2387.43	30.49	2523.63	31.80	2702.56	35.61	3004.65	32.56
	<b>Total</b>	<b>7831.31</b>	<b>100</b>	<b>7936.86</b>	<b>100</b>	<b>7590.08</b>	<b>100</b>	<b>9227.30</b>	<b>100</b>

Source :UNComtrade

In 2021 Global import of Carboxylamide : Amide Function Compound totaled were US \$ 9.22 Billion, which was increased by 21.49% from the year of 2021. Global import of the Commodity group peaked of US \$ 9.22 Billion in 2021. In value terms, USA constitutes the largest market for imported Carboxylamide : Amide Function Compound worldwide with worth value of US \$ 1.32 Billion, making up 14.31% of global imports. The second position in the ranking was occupied by China (US \$ 1.14 B), with the share of 12.41% of global imports. It was followed by the Germany with the share of 11.72%. In the same year **India** constitutes the 9<sup>th</sup> position in ranking with 3.25% share of world import.

## Photographic Camera, Flashlight etc..

A camera is an optical instrument that captures images. Most cameras can capture 2D images, while some more advanced models can capture 3D images. At a basic level, most cameras consist of a sealed box (the camera body), with a small hole (the aperture) that allows light to pass through and capture an image on a light-sensitive surface (usually a digital sensor or photographic film). Cameras have various mechanisms to control how light falls onto the light-sensitive surface, including lenses that focus the light and a shutter that determines the amount of time the photosensitive surface is exposed to the light.

The still image camera is a key instrument in the art of photography. Captured images may be reproduced later through processes such as digital imaging or photographic printing. Similar artistic fields in the moving-image camera domain include film, videography, and cinematography.

The word *camera* comes from *camera obscura*, which is Latin for "dark chamber" and refers to the original device used to project a 2D image onto a flat surface. The modern photographic camera evolved from the camera obscura. The first permanent photograph was made in 1825 by Joseph Nicéphore Niépce.

Most cameras capture light from the visible spectrum, while specialized cameras capture other portions of the electromagnetic spectrum, such as infrared.

All cameras use the same basic design: light enters an enclosed box through a converging or convex lens and an image is recorded on a light-sensitive medium. A shutter mechanism controls the length of time that light enters the camera.

Most cameras also have a viewfinder, which shows the scene to be recorded, along with means to adjust various combinations of focus, aperture and shutter speed.

The lens of a camera captures light from the subject and focuses it on the sensor. The design and manufacturing of the lens are critical to photo quality. A technological revolution in camera design during the 19th century modernized optical glass manufacturing and lens design. This contributed to the modern manufacturing processes of a wide range of optical instruments such as reading glasses and microscopes. Pioneering companies include Zeiss and Leitz.

Camera lenses are made in a wide range of focal lengths, such as extreme wide angle, standard, and medium telephoto. Lenses either have a fixed focal length (prime lens) or a variable focal length (zoom lens). Each lens is best suited to certain types of photography. Extreme wide angles might be preferred for architecture due to their ability to capture a wide view of buildings. Standard lenses commonly have a wide aperture, and because of this, they are often used for street and documentary photography. The telephoto lens is useful in sports and wildlife but is more susceptible to camera shake, which might cause motion blur.

A flash provides a short burst of bright light during exposure and is a commonly used artificial light source in photography. Most modern flash systems use a battery-powered high-voltage discharge through a gas-filled tube to generate bright light for a very short time (1/1,000 of a second or less). Many flash units measure the light reflected from the flash to help determine the appropriate duration of the flash. When the flash is attached directly to the camera—typically in a slot at the top of the camera (the flash shoe or hot shoe) or through a cable—activating the shutter on the camera triggers the flash, and the camera's internal light meter can help determine the duration of the flash. Additional flash equipment can include a light diffuser, mount and stand, reflector, soft box, trigger and cord.

In 2000, Sharp introduced the world's first digital camera phone, the J-SH04 J-Phone, in Japan. By the mid-2000s, higher-end cell phones had an integrated digital camera, and by the beginning of the 2010s, almost all smartphones had an integrated digital camera.

These are broadly classified under **H. S. Code 9006**.

Table - 9

**India's Top 10 Source Countries of Photographic Camera, Flashlight etc.. (HS Code : 9006)**

Rank	Countries	2018		2019		2020		2021	
		Value ( million \$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)
1.	China	8.37	36.69	8.71	12.22	10.49	47.72	20.08	58.21
2.	Hong Kong	2.31	10.11	5.63	7.89	2.53	11.49	3.96	11.48
3.	U S A	2.93	12.84	3.54	4.97	1.56	7.11	2.85	8.26
4.	Germany	2.06	9.03	1.57	2.20	1.34	6.12	1.60	4.63
5.	Philippines	0.01	0.05	0.65	0.92	0.00	0.00	1.46	4.23
6.	Thailand	1.28	5.62	0.95	1.33	2.60	11.83	1.23	3.56
7.	Japan	1.68	7.36	2.91	4.08	1.18	5.35	0.74	2.14
8.	Singapore	1.74	7.64	1.29	1.81	0.64	2.89	0.65	1.90
9.	Sweden	0.16	0.71	0.13	0.19	0.26	1.17	0.40	1.16
10.	Netherland	0.08	0.33	0.21	0.30	0.16	0.73	0.23	0.67
	Others	2.19	9.60	45.68	64.10	1.23	5.59	1.30	3.76
	<b>Total</b>	22.81	100	71.27	100	21.98	100	34.49	100

Source: DGCI&S

Note : India's Import including Re-import

There are 48 countries India imports Photographic Camera, Flashlight etc., from. The dollar value of Photographic Camera, Flashlight etc. import in 2021 stood at US \$ 34.49 Million and US \$ 21.98 Million in 2020. Which shows a growth of almost 36.28% from 2020. In 2021 India imported the highest dollar worth of Photographic Camera, Flashlight etc. from China with valued at US \$ 20.08 Million. In Second and Third major sources were Hong Kong and USA, from where India imported around US \$ 3.96 Million and US \$ 2.85 Million worth of Photographic Camera, Flashlight etc. respectively. In the same year The top 10 countries shared 96.24% of the import to India.



Table - 10

**World Top 10 Importer of Photographic Camera, Flush Light etc. (HS Code : 9006)**

Rank	Countries	2017		2018		2019		2020	
		Value (million\$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)
1.	China	91.04	3.50	235.12	9.56	307.36	12.52	541.50	18.15
2.	USA	464.17	17.83	400.08	16.27	371.63	15.14	502.35	16.84
3.	Viet Nam	383.86	14.75	341.76	13.90	508.87	20.73	351.55	11.78
4.	Hong Kong	166.92	6.41	168.10	6.84	175.93	7.17	269.60	9.04
5.	Germany	89.07	3.42	102.77	4.18	98.89	4.03	127.66	4.28
6.	Netherlands	81.58	3.13	68.93	2.80	72.45	2.95	80.65	2.70
7.	U K	121.49	4.67	88.46	3.60	76.02	3.10	69.38	2.33
8.	Rep. of Korea	35.37	1.36	38.90	1.58	36.00	1.47	64.38	2.16
9.	Singapore	99.63	3.83	71.23	2.90	43.53	1.77	62.06	2.08
10.	France	76.62	2.94	73.75	3.00	52.78	2.15	61.33	2.06
<b>20.</b>	<b>India</b>	<b>22.82</b>	<b>0.88</b>	<b>70.69</b>	<b>2.88</b>	<b>22.00</b>	<b>0.90</b>	<b>34.50</b>	<b>1.16</b>
	Others	970.51	37.28	798.66	32.49	688.80	28.07	818.40	27.43
	<b>Total</b>	2603.10	100	2458.45	100	2454.25	100	2983.36	100

Source :UNComtrade

Global imports of Photographic Camera, Flashlight etc.. amounted to US \$ 2.92 Billion in 2021, approximately increasing by 21.56% from the previous year level. Over the period under review, global Photographic Camera, Flashlight etc.. imports attained its maximum worth value of US \$ 2.98 Billion in 2021. In 2021 China (US \$ 541.50 M) constitutes the largest market for imported Photographic Camera, Flashlight etc.. worldwide, making up 18.15 % of global imports. The second position in the ranking was occupied by USA ( US \$ 502.35 M), with the share of 16.84% of global imports. It was followed by the Viet Nam, with the share of 11.78%. In the same year **India** has imported US \$ 34.50 Million of Photographic Camera, Flashlight etc.. from world and occupied 20<sup>th</sup> position in ranking in the world import of Photographic Camera, Flashlight etc.. with 1.16% share of world import.