

# **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 **Springs and Leaves for Springs of Iron and Steel & Curtains and Blinds** and imports of **Machine -Tools for working Metal and Flexible Tubing for Base Metal** 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-7320 & 6303for export and 8462 & 8307 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 May'2023. So, trends from 2018 to 2021 have been shown when we extract the data from UN Comtrade and from 2019 to 2022 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 ofSprings and Leaves for Springs of Iron and Steel& Curtains and Blinds and imports of Machine - Tools for working Metal and Flexible Tubing for Base Metal. 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 Springs and Leaves for Springs of Iron and Steel with their shares in percentage.
- Table 2 : World's top 10 Exporters of Springs and Leaves for Springs of Iron and Steel with their shares in percentage.
- Table 3 : World's top 10 Importers of Springs and Leaves for Springs of Iron and Steelwith their shares in percentage.
- Annex- I : Top 3 sources of Springs Springs of Iron and Steel of World's top 3 Importers.
- Table 4 : India's top 10 destination of Curtains and Blinds with their shares in percentage.
- Table 5 : World's top 10 Exporters of Curtains and Blinds with their shares in percentage.
- Table 6 : World's top 10 Importers of Curtains and Blinds with their shares in percentage.
- Annex-II : Top 3 sources of Curtains and Blinds of World's top 3 Importers.
- Table 7 : India's top10 Sources of Machine - Tools for Metal with their shares in percentage.
- Table8 :World's top 10 Importers of Machine - Tools for Metal with their shares in percentage.
- Table 9 : India's top 10 Sources of Flexible Tubing for Base Metal with their shares in percentage.
- Table 10 : World's top 10 Importers of Flexible Tubing for Base Metal with their shares in percentage.

## **EXPORT**

### **Springs and Leaves for Springs of Iron and Steel**

Springs are a flexible machine elements that store mechanical energy when subjected to tensile, compressive, bending, or torsional forces. When the spring is deflected, it stores energy and, at the same time, exerts an opposing force. The relationship between the amount of deflection and the force exerted depends on the characteristics of the spring. The most common form is a cylindrical, helical spring with a constant pitch. This type of spring is a round wire spooled into a cylindrical form. It is commonly seen in vehicle suspension systems, engine valves, dampers, and so on.

A leaf spring takes the form of a slender arc-shaped length of spring steel of rectangular cross-section. In the most common configuration, the center of the arc provides location for the axle, while loops formed at either end provide for attaching to the vehicle chassis. For very heavy vehicles, a leaf spring can be made from several leaves stacked on top of each other in several layers, often with progressively shorter leaves. The longest leaf is also known as the main, master, or No. 1 leaf, with leaves numbered in descending order of length. The eyes at the end of the leaf spring are formed into the master leaf. In general, aside from the main leaf, the other leaves are tapered at each end. Sometimes auxiliary or rebound leaves are part of the main spring pack, in which case the auxiliary leaf closest to the main leaf is No. 1, the next closest is No. 2, etc. The leaves are attached to each other through the center bolt, which is at or near the mid-point along the length of the leaf spring. To ensure that leaves remain aligned laterally, several methods can be used, including notches and grooves between leaves or external clips. Spring steels were discovered to be most efficient at approximately 1% carbon content. Individual leaf thickness is specified by the Stubbs or Birmingham gauge, with typical thicknesses ranging between 0.203 to 0.375 in (5.2 to 9.5 mm) (6 to 3/8 or 00 gauge). The material and dimensions should be selected such that each leaf is capable of being hardened to have a fully martensitic structure throughout the entire section. Suitable spring steel alloys include 55Si7, 60Si7, 65Si7, 50Cr4V2, and 60Cr4V2.

Leaf spring : A leaf spring is a simple form of spring commonly used for the suspension in wheeled vehicles. Originally called a *laminated* or *carriage spring*, and sometimes referred to as a semi-elliptical spring, elliptical spring, or cart spring, it is one of the oldest forms of vehicle suspension. A leaf spring is one or more narrow, arc-shaped, thin plates which are attached to the axle and chassis in a way that allows the leaf spring to flex vertically in response to irregularities in the road surface. Lateral leaf springs are the most commonly used arrangement, running the length of the vehicle and mounted perpendicular to the wheel axle, but numerous examples of transverse leaf springs exist as well. Leaf springs can serve multiple suspension functions: location, springing, and to some extent damping as well, through interleaf friction. However, this friction is not well controlled, resulting in stiction and irregular suspension motions. For this reason, some manufacturers have used mono-leaf springs.

Leaf springs were very common on automobiles until the 1970s when automobile manufacturers shifted primarily to front-wheel drive, and more sophisticated suspension designs were developed using coil springs instead. Today leaf springs are still used in heavy commercial vehicles such as vans and trucks, SUVs, and railway carriages. For heavy vehicles, they have the advantage of spreading the load more widely over the vehicle's chassis, whereas coil springs transfer it to a single point.

These are broadly classified under **H.S. Code-7320**.

Table - 1  
**India's Top 10 destination of Springs and Leaves for Springs of Iron and Steel (H.S Code-7320)**

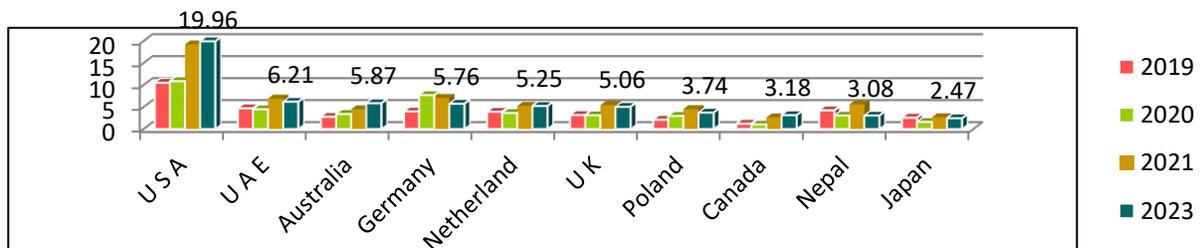
Rank	Countries	2019		2020		2021		2022	
		Value (million \$)	Share (%)						
1.	U S A	10.53	16.30	10.88	17.73	19.22	20.60	19.96	22.14
2.	U A E	4.72	7.30	4.51	7.35	6.94	7.44	6.21	6.89
3.	Australia	2.81	4.35	3.44	5.61	4.49	4.81	5.87	6.51
4.	Germany	4.00	6.19	7.71	12.56	7.07	7.58	5.76	6.39
5.	Netherland	3.93	6.09	3.67	5.97	5.23	5.61	5.25	5.83
6.	U K	3.20	4.95	3.14	5.12	5.42	5.81	5.06	5.62
7.	Poland	2.13	3.30	3.01	4.90	4.53	4.85	3.74	4.15
8.	Canada	1.24	1.92	1.03	1.68	2.65	2.84	3.18	3.52
9.	Nepal	4.26	6.59	3.08	5.02	5.58	5.98	3.08	3.42
10.	Japan	2.60	4.02	1.63	2.66	2.67	2.86	2.47	2.74
	Others	25.19	38.99	19.28	31.41	29.49	31.62	29.58	32.80
	<b>Total</b>	64.60	100	61.39	100	93.28	100	90.17	100

Source: DGCIS&S.

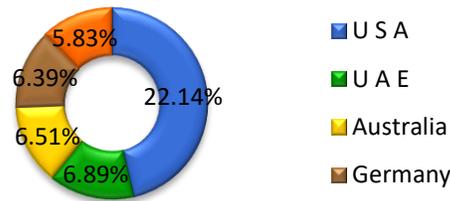
Note : India's Export including re-export

India's destinations of Springs and Leaves for Springs of Iron and Steel from 2019-2022 (in million \$)

Data label given on the basis of 2022



India's top 5 destinations of Springs and Leaves for Springs of Iron and Steel by percentage in 2022:



In the year 2022, India has exported Springs and Leaves for Springs of Iron and Steel worth of US \$ 90.17 million which has decreased by 3.33% compare to the year 2021. USA was the largest market for Springs and Leaves for Springs of Iron and Steel export from India. In 2022, USA imported US \$ 19.96 million worth Springs and Leaves for Springs of Iron and Steel from India which was accounted 22.14%. Followed by UAE and Australia with of 6.89% and 6.51% share of India's total export. The top 10 countries in total shared the share of 67.20% of the Springs and Leaves for Springs of Iron and Steel export value from India in that year.

Table-2

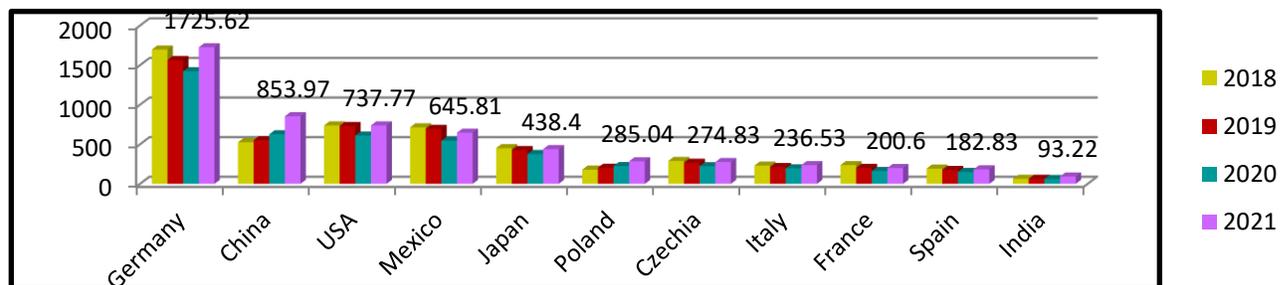
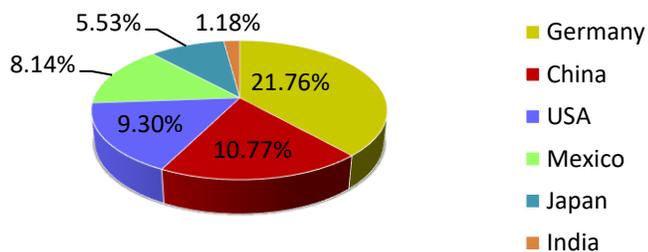
**World's Top 10 exporter of Springs and Leaves for Springs of Iron and Steel (H.S Code-7320)**

Rank	Countries	2018		2019		2020		2021	
		Value (million \$)	Share (%)	Value (million\$ )	Share (%)	Value (million\$ )	Share (%)	Value (million\$ )	Share (%)
1.	Germany	1696.72	22.76	1563.26	22.06	1422.43	22.27	1725.62	21.76
2.	China	524.95	7.04	552.01	7.79	625.76	9.80	853.97	10.77
3.	USA	738.06	9.90	730.81	10.31	609.93	9.55	737.77	9.30
4.	Mexico	713.42	9.57	694.70	9.80	544.70	8.53	645.81	8.14
5.	Japan	451.35	6.05	425.94	6.01	376.10	5.89	438.40	5.53
6.	Poland	179.56	2.41	203.56	2.87	224.32	3.51	285.04	3.59
7.	Czechia	289.72	3.89	266.10	3.76	222.91	3.49	274.83	3.47
8.	Italy	230.53	3.09	212.64	3.00	195.29	3.06	236.53	2.98
9.	France	236.58	3.17	200.79	2.83	161.67	2.53	200.60	2.53
10.	Spain	192.43	2.58	175.57	2.48	150.38	2.35	182.83	2.31
<b>22.</b>	<b>India</b>	<b>63.47</b>	<b>0.85</b>	<b>64.59</b>	<b>0.91</b>	<b>61.36</b>	<b>0.96</b>	<b>93.22</b>	<b>1.18</b>
	Others	2137.92	28.68	1995.61	28.16	1793.04	28.07	2256.71	28.45
	<b>Total</b>	<b>7454.70</b>	<b>100</b>	<b>7085.59</b>	<b>100</b>	<b>6387.89</b>	<b>100</b>	<b>7931.34</b>	<b>100</b>

Source: UN Comtrade

**World's Leading Exporters of Springs of Iron and Steel from 2018 to 2021 (Values in million USD)**

Data label given on the basis of 2021

**Country wise world's top 5 exporter of Springs of Iron and Steel by percentage in 2021 :**

The total export value in the world for Springs and Leaves for Springs of Iron and Steel was US \$ 7.93 Billion in 2021. The largest exporter of Springs and Leaves for Springs of Iron and Steel in the world was Germany, exported US \$ 1.72 Billion in 2021, accounted 21.76% share of world export. The 2<sup>nd</sup> and 3<sup>rd</sup> exported of the commodity group were China and USA in that year with 10.77% and 9.30% share of world export in 2021. **India** hold the 22<sup>nd</sup> rank in the world, exported US \$ 93.22 Million worth value of Springs and Leaves for Springs of Iron and Steel which was 1.18% share of world export in 2021.

Table-3

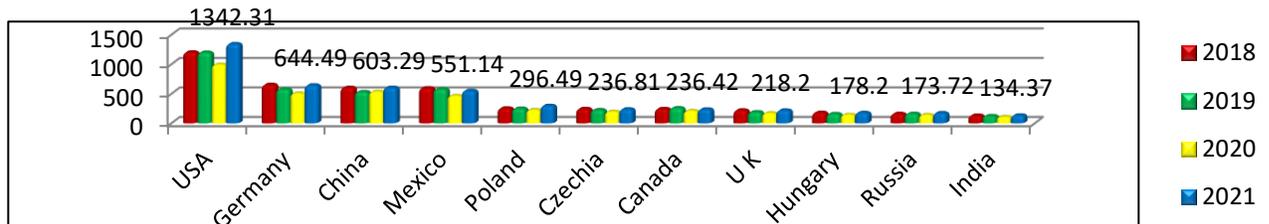
**World's top 10 Importers of Springs and Leaves for Springs of Iron and Steel (H.S Code-7320)**

Rank	Countries	2018		2019		2020		2021	
		Value ( million \$)	Share (%)	Value ( million\$ )	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)
1.	USA	1201.87	16.21	1197.23	16.97	992.63	15.93	1342.31	17.24
2.	Germany	653.47	8.82	575.20	8.15	505.07	8.10	644.49	8.28
3.	China	602.66	8.13	530.09	7.51	533.00	8.55	603.29	7.75
4.	Mexico	595.13	8.03	577.25	8.18	463.67	7.44	551.14	7.08
5.	Poland	254.18	3.43	249.64	3.54	225.01	3.61	296.49	3.81
6.	Czechia	244.80	3.30	225.27	3.19	194.34	3.12	236.81	3.04
7.	Canada	244.48	3.30	256.90	3.64	208.44	3.34	236.42	3.04
8.	U K	220.29	2.97	189.39	2.68	170.14	2.73	218.20	2.80
9.	Hungary	180.36	2.43	158.53	2.25	142.57	2.29	178.20	2.29
10.	Russia	161.74	2.18	163.15	2.31	139.87	2.24	173.72	2.23
<b>17.</b>	<b>India</b>	<b>130.74</b>	<b>1.76</b>	<b>123.68</b>	<b>1.75</b>	<b>105.86</b>	<b>1.70</b>	<b>134.37</b>	<b>1.73</b>
	Others	2923.36	39.44	2809.98	39.82	2552.11	40.95	3171.07	40.73
	<b>Total</b>	<b>7413.09</b>	<b>100</b>	<b>7056.32</b>	<b>100</b>	<b>6232.71</b>	<b>100</b>	<b>7786.51</b>	<b>100</b>

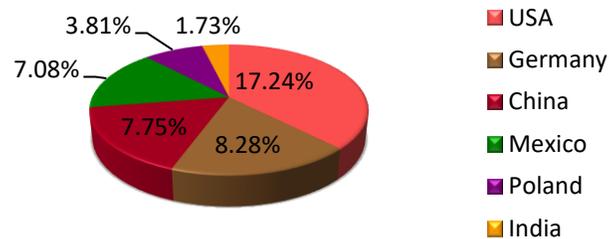
Source : UN Comtrade

Leading Springs etc... of Iron and Steel 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 Springs of Iron and Steel by percentage in 2021

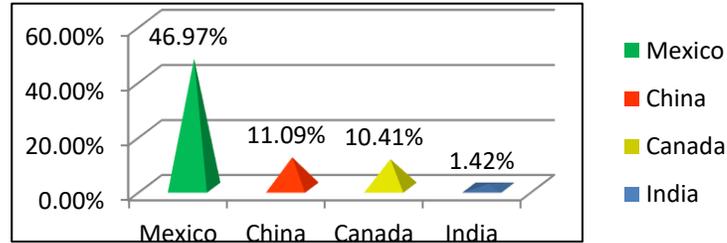


Among the top importing countries, USA imported the highest dollar worth of Springs and leaves for springs of Iron and Steel in 2021 valued at US \$ 1.34 Billion which was more than the previous year import into USA. In second place was Germany, imported around US \$ 644.39 million worth of Springs and leaves for springs of Iron and Steel in that year, which was followed by China. In the same year India imported US \$ 134.37 million from the world which was US \$ 28.51 million more over the export in 2021.

## Annexure-1

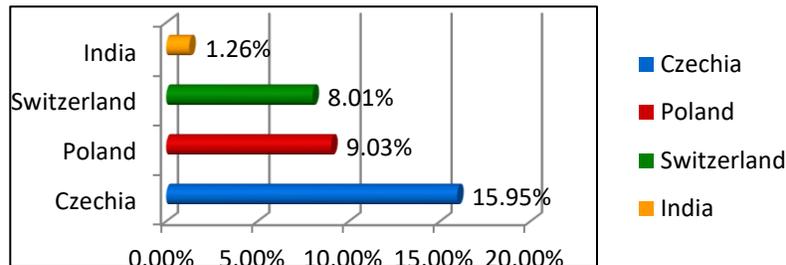
**Sources of world's top 3 importers of Springs etc.. of Iron and Steel (H.S Code-7320)**

i) Top 3 Sources of Spring etc... of Iron and Steel to USA in 2021 by percentage:



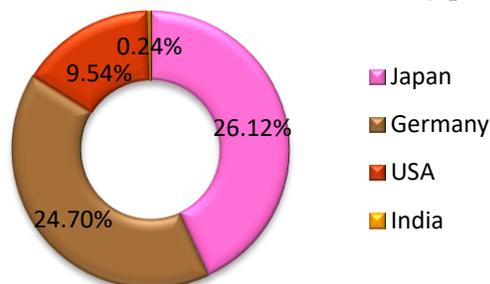
USA imports most of its requirements of Springs and leaves for springs of Iron and Steel from Mexico with 46.97 % share of USA's total import in 2021. Followed by China (11.09%) and Canada (10.41%). **India** exports 1.42% share of USA's total import in the same year. **Source : UN Comtrade)**

ii) Top 3 Sources of Spring etc... of Iron and Steel to Germany in 2021 by percentage:



15.95% share of Springs and leaves for springs of Iron and Steel Imports of Germany comes from Czechia in 2021, followed by Poland (9.03%) and Switzerland (8.01%). In the same year India's contribution was only 1.26% share of Springs and leaves for springs of Iron and Steel to Germany. **.Source : UN Comtrade)**

iii) Top 3 Sources of Spring etc... of Iron and Steel to China in 2021 by percentage:



China's 3 major source countries of Springs and leaves for springs of Iron and Steel in 2021 were Japan (26.12%), Germany (24.70%) and USA (9.54%) in 2021. India has exported only 0.24% share of China's total import of the commodity group in 2021. **(Source: UN Comtrade).**

## **Curtains and Blinds**

A **curtain** is a piece of cloth or other material intended to block or obscure light, air drafts, or (in the case of a shower curtain), water. A curtain is also the movable screen or drape in a theatre that separates the stage from the auditorium or that serves as a backdrop/background.

Curtains are often hung on the inside of a building's windows to block the passage of light. For instance, at night to aid sleeping, or to stop light from escaping outside the building (stopping people outside from being able to see inside, often for privacy reasons). In this application, they are also known as "draperies". Curtains hung over a doorway are known as portières. Curtains come in a variety of shapes, materials, sizes, colours, and patterns. They often have their own sections within department stores, while some shops are completely dedicated to selling curtains.

Curtains vary according to cleanability, ultraviolet light deterioration, oil and dust retention, noise absorption, fire resistance, and life span. Curtains may be operated by hand, with cords, by press-button pads or remote-controlled computers. They are held out of the way of the window by means of curtain tie-backs. Measuring curtain sizes needed for each window varies greatly according to the type of curtain needed, window size, and type and weight of curtain.

Curtains are a form of window decor and complete the overall appearance of the interior of the house. Curtains help control the ambiance and flow of natural light into the room. The effect of drapery or curtains is best seen in daylight, and with proper indoor light positioning, can look attractive even at night.

From evidence found in excavation sites at Olynthus, Pompeii and Herculaneum, portieres, a curtain hung over a doorway, appear to have been used as room dividers in classic antiquity. Mosaics from the 2nd to 6th century show curtains suspended from rods spanning arches.

Curtains are manufactured from a variety of thick fabrics, each with a differing degree of light absorption and heat insulating qualities. For maximum temperature control, the curtain gap to the window should be small, with minimum convection drafts below or above the curtain. Various architectural structures around the curtain can minimize these air drafts, but usually they are just used for decoration and make rooms feel more cozy. A sheer or net curtain is one that is made from translucent fabric, such as a loosely woven polyester voile, silk or nylon made marquisette, and cotton lace, etc. Sheer curtains allow a majority of light to be transmitted through the fabric, with the fabric weave providing a basic level of UV protection while retaining maximum visibility outward through the curtain. Sheer curtains are sometimes referred to as "privacy curtains" in reference to their screening abilities; during the day most sheer fabrics will allow people inside the home to see the outside view while preventing people outside the home from seeing directly into the home. Due to the loose weave in sheer fabrics, these types of curtains offer very little in the way of heat insulation.

A **Blind** is a type of window covering. There are many different kinds of window blinds which use a variety of control systems. A typical window blind is made up of several long horizontal or vertical slats of various types of hard material, including wood, plastic or metal which are held together by cords that run through the blind slats. Vertical blinds run along a track system which can tilt open and closed and move side-to-side. Window blinds can be manoeuvred with either a manual or remote control by rotating them from an open position, with slats spaced out, to a closed position where slats overlap and block out most of the light. There are also several types of window coverings, called shades, that use a single piece of soft material instead of slats.

The window blinds can also be used to describe window coverings more broadly. In this context window blinds include almost every type of window covering, whether it is a hard or soft material; i.e. shutters, roller shades, cellular shades (also called honeycomb shades), wood blinds, Roman shades, standard vertical, and horizontal blinds (also called Venetians). In the United Kingdom, awnings are sometimes called blinds or shades.

These are broadly classified under H.S. Code-**6303**

Table - 4

**India's Top 10 destination of Curtains and Blinds (H.S Code-6303)**

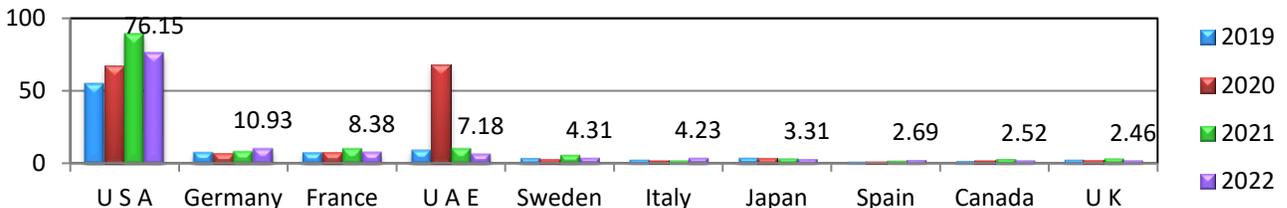
Rank	Countries	2019		2020		2021		2022	
		Value (million \$)	Share (%)						
1.	U S A	54.72	46.28	66.92	36.95	88.97	54.12	76.15	52.86
2.	Germany	8.35	7.06	6.88	3.80	8.81	5.36	10.93	7.59
3.	France	7.95	6.72	7.57	4.18	10.86	6.61	8.38	5.82
4.	U A E	9.69	8.19	68.17	37.64	10.97	6.68	7.18	4.98
5.	Sweden	3.98	3.37	3.13	1.73	6.36	3.87	4.31	3.00
6.	Italy	2.96	2.50	1.89	1.05	2.60	1.58	4.23	2.93
7.	Japan	4.38	3.71	3.79	2.09	3.85	2.34	3.31	2.30
8.	Spain	1.75	1.48	1.48	0.82	2.36	1.44	2.69	1.87
9.	Canada	1.99	1.68	2.02	1.12	3.42	2.08	2.52	1.75
10.	U K	2.96	2.51	2.45	1.36	3.88	2.36	2.46	1.71
	Others	19.52	16.51	16.80	9.27	22.31	13.57	21.89	15.20
	<b>Total</b>	118.24	100	181.11	100	164.39	100	144.06	100

Source: DGCI&S.

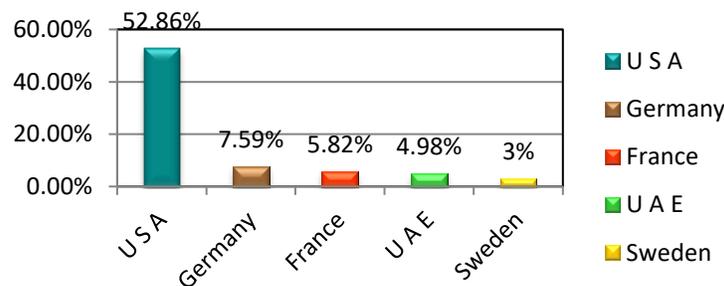
Note : India's Export including re-export

India's major Destinations of Curtains and Blinds from 2019-2022(Values in million USD)

Data label given on the basis of 2022



India's top 5 major destinations of Curtains and Blinds by percentage in 2022:



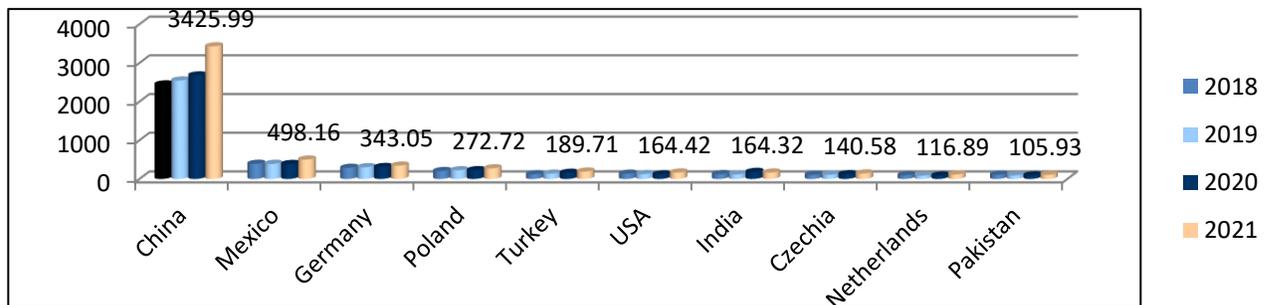
The combined value of total export of Curtains and Blinds from India was US \$ 144.06 million during the year 2022. Export of the commodity group 6303 from India decreased by 12.37% in value terms compared to 2021. India's Blinds Curtains export value to USA is around US \$ 76.15 million, which holds the top position with the share of 52.86 % of the total export of India. With the value of around US \$ 10.93 million, Germany takes runner up position in the importers of Blinds and Curtains from India which was followed by France with the share of 5.82%.

Table - 5  
**World's Top 10 exporters of Curtains and Blinds (H.S Code-6303)**

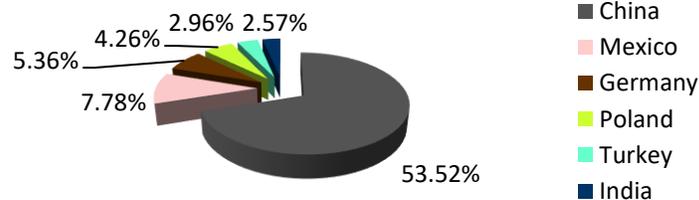
Rank	Countries	2018		2019		2020		2021	
		Value (million\$ )	Share (%)						
1.	China	2440.52	49.99	2542.42	50.47	2674.32	51.03	3425.99	53.52
2.	Mexico	389.29	7.97	388.61	7.71	384.84	7.34	498.16	7.78
3.	Germany	285.85	5.85	302.41	6.00	306.68	5.85	343.05	5.36
4.	Poland	202.69	4.15	223.58	4.44	225.88	4.31	272.72	4.26
5.	Turkey	119.73	2.45	135.82	2.70	158.14	3.02	189.71	2.96
6.	USA	134.42	2.75	124.21	2.47	119.36	2.28	164.42	2.57
7.	<b>India</b>	<b>123.55</b>	<b>2.53</b>	<b>118.32</b>	<b>2.35</b>	<b>181.37</b>	<b>3.46</b>	<b>164.32</b>	<b>2.57</b>
8.	Czechia	104.48	2.14	107.92	2.14	122.80	2.34	140.58	2.20
9.	Netherlands	94.42	1.93	83.97	1.67	88.51	1.69	116.89	1.83
10.	Pakistan	106.76	2.19	92.23	1.83	92.50	1.76	105.93	1.65
	Others	880.59	18.04	918.12	18.23	886.58	16.92	979.81	15.31
	<b>Total</b>	<b>4882.29</b>	<b>100</b>	<b>5037.60</b>	<b>100</b>	<b>5240.97</b>	<b>100</b>	<b>6401.57</b>	<b>100</b>

Source: UN Comtrade

Top world exporters of Curtains and Blinds from 2018 to 2021 (Values in million USD)  
 Data label given on the basis of 2021



Export trends in world's leading Curtains and Blinds exporters by percentage in 2021:



In 2021, the amount of Curtains and Blinds export world wide stood at US \$ 6.40 billion, remaining relatively increased against the previous year's figure. Overall, curtains exports continue to indicate a relatively growing trend pattern. The growth pace was the most rapid in 2021, when exports increased by more than 22% from the previous year level. In value terms, the China constitutes the largest exporter of curtains and blinds worldwide, making up 53.52% of global exports. The second and third position in the ranking was occupied by Mexico and Germany, with the share of 7.78% and 5.36% of global exports in 2021. **India** constitutes the 7<sup>th</sup> largest exporter of the commodity group making up 2.57% share.

Table - 6

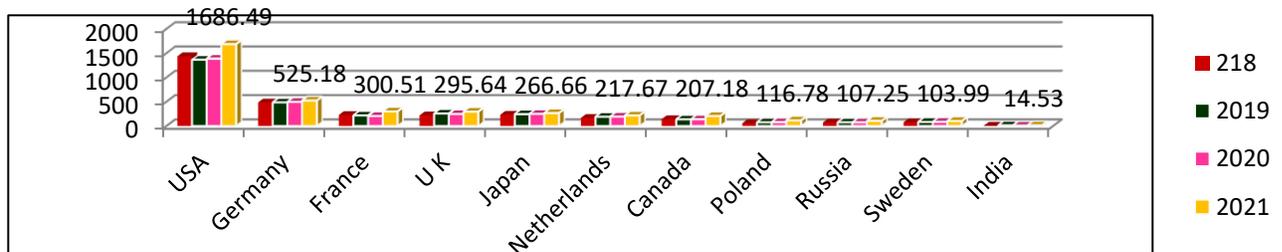
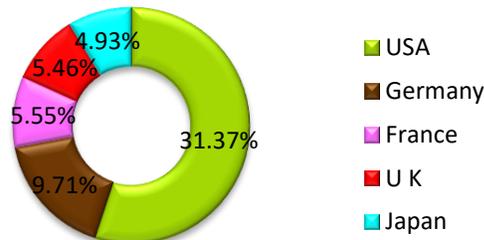
**World's Top 10 Importers of Curtains and Blinds (H.S Code-6303)**

Rank	Countries	2018		2019		2020		2021	
		Value (million \$)	Share (%)	Value (million\$ )	Share (%)	Value (million\$ )	Share (%)	Value (million\$ )	Share (%)
1.	USA	1436.39	31.97	1365.50	30.31	1386.65	31.37	1686.49	31.17
2.	Germany	485.46	10.81	486.14	10.79	496.80	11.24	525.18	9.71
3.	France	226.98	5.05	218.28	4.84	206.82	4.68	300.51	5.55
4.	U K	219.01	4.87	257.69	5.72	247.91	5.61	295.64	5.46
5.	Japan	231.53	5.15	244.89	5.44	250.29	5.66	266.66	4.93
6.	Netherlands	167.69	3.73	191.33	4.25	195.30	4.42	217.67	4.02
7.	Canada	141.17	3.14	137.49	3.05	139.91	3.17	207.18	3.83
8.	Poland	56.92	1.27	76.81	1.70	80.39	1.82	116.78	2.16
9.	Russia	72.35	1.61	76.03	1.69	77.21	1.75	107.25	1.98
10.	Sweden	77.43	1.72	84.22	1.87	86.73	1.96	103.99	1.92
<b>40.</b>	<b>India</b>	<b>5.49</b>	<b>0.12</b>	<b>13.79</b>	<b>0.31</b>	<b>9.44</b>	<b>0.21</b>	<b>14.53</b>	<b>0.27</b>
	Others	1372.25	30.54	1353.33	30.04	1242.59	28.11	1568.15	28.99
	<b>Total</b>	4492.67	100	4505.50	100	4420.04	100	5410.03	100

Source :UN Comtrade

**Top world importers of Curtains and Blinds from 2018 to 2021 (Values in million USD)**

Data label given on the basis of 2021

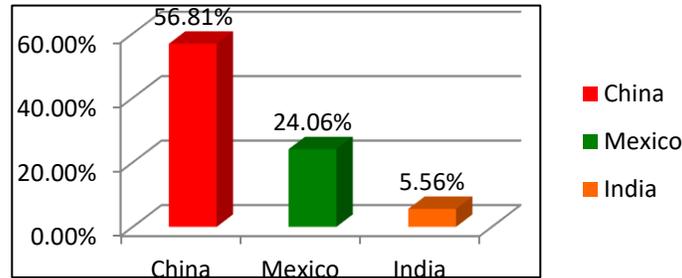
**Country wise leading global Importer of Curtains and Blinds by percentage in 2021**

In the year 2021 the worth value of the global import of Curtains and Blinds was US \$ 5.41 Billion. The total import value increased at 22.40% over the year 2020. The U.S. A (US \$ 1.68 B) constitutes the largest market for imported curtains and blinds worldwide, making up 31.17% of global imports. The second position in the ranking was occupied by Germany (US \$ 525.18 M), with the share of 9.71% of global imports. It was followed by the France, with the share of 5.55%. In the same year **India** has imported US \$ 14.53 million worth of Curtains and Blinds for the world.

## Annexure-II

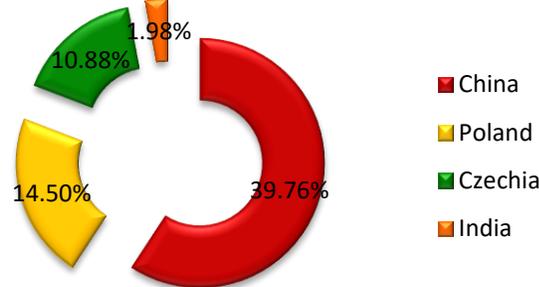
**Sources of world's top three importers of Curtains and Blinds (H.S Code-6303)**

Top 3 Sources of Curtains and Blinds to USA in 2021 by percentage:



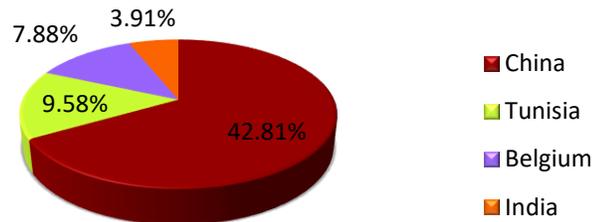
China dominates the Curtains and Blinds market of USA, USA imported 56.81% share of the commodity group from China in 2021, followed by Mexico (24.66%) and India (5.56%). (Source: UN Comtrade)

Top 3 Sources of Curtains and Blinds to Germany in 2021 by percentage:



In 2021 China is the top source country of Curtains and Blinds to Germany. Germany imports 39.76% Curtains and Blinds from China, Poland holds the 2<sup>nd</sup> in ranking as source of Curtains and Blinds with 14.50% share, which was followed by Czechis with 10.88%. In the same year India has exported 1.98% share of Germany's total import of Curtains and Blinds. (Source: UN Comtrade)

i) Top 3 Sources of Curtains and Blinds to France in 2021 by percentage:



With 42.81% share of France's total import of Curtains and Blinds, China became the largest source of it to France in 2021. Tunisia (9.58%) and Belgium (7.88%) were other major sources of Curtains and Blinds to France in that year. India's share was 3.91% share of France's total import in 2021. (Source : UN Comtrade)

## IMPORT

### Machine-Tools for working Metal

A **machine tool** is a machine for handling or machining metal or other rigid materials, usually by cutting, boring, grinding, shearing, or other forms of deformations. Machine tools employ some sort of tool that does the cutting or shaping. All machine tools have some means of constraining the work piece and provide a guided movement of the parts of the machine. Thus, the relative movement between the workpiece and the cutting tool is controlled or constrained by the machine to at least some extent, rather than being entirely "offhand" or "freehand". It is a power-driven metal cutting machine which assists in managing the needed relative motion between cutting tool and the job that changes the size and shape of the job material.

The precise definition of the term *machine tool* varies among users, as discussed below. While all machine tools are "machines that help people to make things", not all factory machines are machine tools. Today machine tools are typically powered other than by the human muscle, used to make manufactured parts in various ways that include cutting or certain other kinds of deformation.

Forerunners of machine tools included bow drills and potter's wheels, which had existed in ancient Egypt prior to 2500 BC, and lathes, known to have existed in multiple regions of Europe since at least 1000 to 500 BC. But it was not until the later Middle Ages and the Age of Enlightenment that the modern concept of a machine tool—a class of machines used as tools in the making of metal parts, and incorporating machine-guided toolpath—began to evolve. Clockmakers of the Middle Ages and renaissance men such as Leonardo da Vinci helped expand humans' technological milieu toward the preconditions for industrial machine tools. During the 18th and 19th centuries, and even in many cases in the 20th, the builders of machine tools tended to be the same people who would then use them to produce the end products (manufactured goods). However, from these roots also evolved an industry of machine tool builders as we define them today, meaning people who specialize in building machine tools for sale to others.

Machine tools can be powered from a variety of sources. Human and animal power were used in the past, as was water power; however, following the development of high-pressure steam engines in the mid 19th century, factories increasingly used steam power. Factories also used hydraulic and pneumatic power. Many small workshops continued to use water, human and animal power until electrification after 1900. Machine tools can be operated manually, or under automatic control. Early machines used flywheels to stabilize their motion and had complex systems of gears and levers to control the machine and the piece being worked on. Soon after World War II, the numerical control (NC) machine was developed. NC machines used a series of numbers punched on paper tape or punched cards to control their motion. In the 1960s, computers were added to give even more flexibility to the process. Such machines became known as computerized numerical control (CNC) machines. NC and CNC machines could precisely repeat sequences over and over, and could produce much more complex pieces than even the most skilled tool operators.

The worldwide market for machine tools was approximately \$81 billion in production in 2014 according to a survey by market research firm Gardner Research. The largest producer of machine tools was China with \$23.8 billion of production followed by Germany and Japan at neck and neck with \$12.9 billion and \$12.88 billion respectively. South Korea and Italy rounded out the top 5 producers with revenue of \$5.6 billion and \$5 billion respectively.

These are broadly classified under **H. S. Code 8462**.

Table - 7

**India's Top 10 Sources of Machine-Tools for working metal (HS Code : 8462)**

Rank	Countries	2019		2020		2021		2022	
		Value ( million \$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)
1.	China	160.17	27.86	102.41	30.50	155.54	38.59	181.68	44.02
2.	Japan	131.11	22.81	31.91	9.50	40.51	10.05	46.07	11.16
3.	Korea RP	52.89	9.20	47.79	14.23	27.07	6.72	37.40	9.06
4.	Italy	32.36	5.63	35.99	10.72	34.16	8.48	29.94	7.25
5.	Germany	43.05	7.49	22.22	6.62	15.41	3.82	25.06	6.07
6.	Taiwan	37.80	6.58	15.62	4.65	17.00	4.22	16.70	4.05
7.	U S A	15.12	2.63	7.70	2.29	22.32	5.54	15.20	3.68
8.	Turkey	10.19	1.77	6.99	2.08	8.94	2.22	9.25	2.24
9.	Malaysia	6.99	1.22	2.87	0.86	4.68	1.16	8.67	2.10
10.	Belgium	10.47	1.82	11.97	3.57	4.95	1.23	7.57	1.83
	Others	74.72	13.00	50.28	14.98	72.48	17.98	35.19	8.53
	<b>Total</b>	574.88	100	335.75	100	403.05	100	412.74	100

Source: DGCI&amp;S

Note : India's Import including re-import

There was a total of 78 countries India imports Machine Tools for metal working from in 2022. The value of Machine Tools for working metal import in 2022 stood at US \$ 412.74 Million and US \$ 574.88 Million in 2019, which shows a negative growth of 28.21% from the from the year 2019. But, it was positive growth of more than 2.40% from the year 2021. During the year 2022 India imported the highest worth of the commodity group from China with valued at US \$ 181.68 Million or 44.02% share of India's total import. In that year In second and third place were Japan and Korea RP, from which India imported around US \$ 46.07 Million and US \$ 37.40 million respectively. The top 10 countries shared 91.47% of the Machine Tools for working metal import to India in 2022.

Table – 8

**World Top 10 Importer of Machine-Tools for working metal (HS Code : 8462)**

Rank	Countries	2018		2019		2020		2021	
		Value ( million \$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$ )	Share (%)
1.	USA	1245.72	12.24	1165.84	11.88	1068.33	13.49	1122.91	12.57
2.	China	1333.64	13.10	1270.61	12.94	923.57	11.66	1031.77	11.55
3.	Mexico	747.10	7.34	688.36	7.01	469.68	5.93	494.75	5.54
4.	Germany	491.56	4.83	458.66	4.67	358.00	4.52	444.12	4.97
<b>5.</b>	<b>India</b>	<b>592.63</b>	<b>5.82</b>	<b>575.58</b>	<b>5.86</b>	<b>334.57</b>	<b>4.23</b>	<b>386.96</b>	<b>4.33</b>
6.	Russia	287.99	2.83	244.47	2.49	269.41	3.40	341.60	3.82
7.	Canada	275.47	2.71	222.06	2.26	237.67	3.00	295.22	3.31
8.	Viet Nam	356.73	3.50	393.98	4.01	282.99	3.57	293.57	3.29
9.	Thailand	331.48	3.26	280.55	2.86	275.25	3.48	246.85	2.76
10.	Turkey	189.40	1.86	189.22	1.93	201.78	2.55	244.37	2.74
	Others	4329.01	42.52	4326.34	44.08	3497.03	44.16	4030.12	45.12
	<b>Total</b>	<b>10180.70</b>	<b>100</b>	<b>9815.67</b>	<b>100</b>	<b>7918.27</b>	<b>100</b>	<b>8932.24</b>	<b>100</b>

Source :UNComtrade

In 2021 the worth of global import of Machine-Tools for working metal stood at US \$ 8.93 Billion which was less down up to US \$ 1.25 Billion compare to that than 2018 but, positive growth by almost 12.80% from the year 2020. The [imports](#) of the three major importers of Machine- tools for working metal , namely USA, China and Mexico, represented almost 30% of total imports in 2021. In value terms, USA (US \$ 1.12 B), China (US \$ 1.03 B ) and Mexico (US \$ 494.75 M) constituted the countries with the highest levels of imports in 2021, together accounting for nearly 30% share of global imports of Machine- tools for working metal **India** experienced the highest growth rate of the value of imports, among the main importing countries and ranked in 5<sup>th</sup> position in the world with 4.33% share of Machine- tools for working metal in 2021.

## **Flexible Tubing of Base Metal**

A flexible hose is a type of piping used to connect two distant points to transport or transfer fluid. In Oil & Gas applications hoses are used when there is a considerable relative movements. A variety of fluids and fluidized solids can easily be transferred through flexible hoses to other locations. These are most commonly known as hosepipe. Along with loading and unloading services in processing plants, these are widely used by homeowners as garden hose. Normal Flexible hoses are made of non-metals like soft plastic material or synthetic rubber. However, flexible hoses of chemical industries that are designed to absorb pipe movements are made of metallic materials.

A metal hose, commonly known as a hosepipe, is made from four basic components. Individually, these parts may appear very simple. But, when combined in a flexible metal hose assembly, they become an optimal solution for varied industries and applications

### **Types of Flexible Metal Hoses**

Flexible meta hose are manufactured in two basic styles, including corrugated stainless steel hose and interlock hose.

#### **1. Corrugated Hoses**

A regular hose cannot sustain the longitudinal pressure stress and tends to squirm under internal pressure. Thus, to resist the longitudinal pressure stress and prevent it from squirming, corrugated hoses are often constructed with braid wrappings around the outer surface. A corrugated hose is constructed with a long length bellow, and the braid protects the corrugation from scratch and wear. This type of hose is suitable for handling any type of gases and liquid that are compatible with the material of the hose.

Learn more about corrugated hose and its applications here.

#### **2. Interlock Hoses**

The construction of an interlock hose involves links that are kept tight with the packaging material. Clearances are provided between these links to make them capable enough to accommodate some axial movement that gradually closes as the hose is bent.

When the clearances are completely closed, the hose becomes stiff, restricting any further bending. This sudden stiffness is a warning to the handler, preventing the interlocked hose from being over-bent and causing potential damage.

Flexible metallic hoses have a wide range of applications. Some of them include:

- As a garden hose to water plants or to convey water to a sprinkler.
- As a hose to water crops in agriculture for drip irrigation.
- To carry air from a surface compressor or air tank. As a fuel hose to carry fuel safely.
- To convey water to a fire site for fire-fighting service.
- In chemistry & medicine, flexible hoses are utilised to move around liquid chemicals or gases.
- Flexible metal hoses can be used for Heat Tracing.
- In the oil industries, liquids under high pressures are moved using these types of hoses.
- Other applications include auto heater tubing, wiring conduit, moderate suction lines, automotive exhaust, dust collecting ducting, ventilating ducting, air blower ducting, refrigeration tubing armour, etc.

These are broadly classified under **H. S. Code 8307**.

Table - 9

**India's Top 10 Source Countries of Flexible Tubing of Base Metal (HS Code : 8307)**

Rank	Countries	2019		2020		2021		2022	
		Value ( million \$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)	Value ( million\$)	Share (%)
1.	France	0.64	1.15	0.63	2.19	0.79	1.27	48.55	40.80
2.	China	10.99	19.86	10.49	36.58	18.25	29.29	22.43	18.85
3.	Malaysia	1.03	1.86	0.01	0.03	0.00	0.00	20.64	17.35
4.	Germany	3.31	5.99	3.30	11.52	4.99	8.00	5.84	4.91
5.	Korea RP	7.29	13.17	4.46	15.56	5.86	9.40	5.14	4.32
6.	Vietnam	0.88	1.60	0.74	2.59	1.27	2.04	5.06	4.25
7.	U S A	3.85	6.96	3.74	13.04	3.50	5.61	4.19	3.52
8.	U K	23.22	41.99	0.72	2.51	21.15	33.94	1.51	1.27
9.	Singapore	1.50	2.71	1.25	4.34	0.96	1.54	0.89	0.75
10.	Japan	0.69	1.26	1.27	4.44	0.87	1.40	0.88	0.74
	Others	1.91	3.45	2.07	7.20	4.68	7.51	3.86	3.25
	<b>Total</b>	55.31	100	28.67	100	62.31	100	118.99	100

Source: DGCI&S

Note : India's Import including Re-import

The dollar value of Flexible Tubing Of Base Metal import in 2022 stood at US \$ 118.99 Million, which shows a growth of almost two times from the previous year's import value which was US \$ 62.31 Million in 2021. Among the top importing countries, India imported the highest dollar worth of Flexible Tubing Of Base Metal from France with shipments in 2022 valued at US \$ 48.55 Million. In second place was China, from which India imported around US \$ 22.43 Million worth of Flexible Tubing Of Base Metal which was followed by Malaysia. The top 10 countries shared 96.75% of the Flexible Tubing Of Base Metal import to India.

Table - 10

**World Top 10 Importer of Flexible Tubing of Base Metal (HS Code : 8307)**

Rank	Countries	2018		2019		2020		2021	
		Value (million \$)	Share (%)						
1.	Brazil	151.16	6.66	518.69	19.67	761.81	28.83	342.37	11.76
2.	USA	212.43	9.36	221.59	8.40	203.04	7.68	294.23	10.11
3.	Germany	167.57	7.38	147.86	5.61	144.82	5.48	164.62	5.66
4.	France	106.83	4.71	124.05	4.70	111.54	4.22	133.89	4.60
5.	Mozambique	3.97	0.17	0.35	0.01	0.47	0.02	126.34	4.34
6.	China	84.48	3.72	95.12	3.61	103.04	3.90	120.36	4.14
7.	Australia	55.08	2.43	26.64	1.01	29.30	1.11	91.56	3.15
8.	Japan	74.71	3.29	82.24	3.12	72.65	2.75	85.78	2.95
9.	Spain	69.57	3.07	94.77	3.59	81.06	3.07	84.50	2.90
10.	Canada	74.63	3.29	74.55	2.83	67.70	2.56	81.01	2.78
14.	<b>India</b>	<b>44.55</b>	<b>1.96</b>	<b>55.63</b>	<b>2.11</b>	<b>28.62</b>	<b>1.08</b>	<b>62.09</b>	<b>2.13</b>
	Others	1224.74	53.96	1196.05	45.35	1038.42	39.30	1323.84	45.48
	<b>Total</b>	2269.74	100	2637.53	100	2642.48	100	2910.58	100

Source :UNComtrade

The imports of the three major importers of Flexible Tubing Of Base Metal, namely Brazil, USA and Germany, represented more than 28% of total world imports in 2021. In value terms, Brazil (US \$ 342.37 M), USA (US \$ 294.23 M) and Germany (US \$ 164.62 M) constituted the countries with the highest levels of imports in 2021. **India** experienced the highest growth rate of the value of imports, among the main importing countries and ranked in 14<sup>th</sup> position in the world with 2.13% share of Flexible Tubing Of Base Metal in 2021.