



**WORLD AND TURKEY**

**PLASTICS MEDICAL MATERIALS**

**INDUSTRY REPORTS**

**2016**



## 1. MEDICAL PLASTIC MATERIAL DEFINITION

It is difficult to distinguish exactly the Customs Tariff Statistics Number of plastics ones in medical materials. Because, although many health and medical materials are produced by different materials, they also contain large quantities of plastics. The Customs Tariff Statistics Number for medical products that may be qualified as fully or partially plastic in Turkey's Customs Tariff Statistical Table are given as; 3006, 3822, 9001, 9002, 9003, 9004, 901831, 9021 and 9033.

Such materials are; Impregnated/plastered plastic plates/sheets/strips, optical glasses, used sterile syringes, prosthetic teeth, medical instruments-artificial corneas, implants-hearing aids, plastic used in surgery/dentistry includes the indispensable products of the health sector such as pill capsules, syrup bottles, prosthetic-orthopedic products, x-ray films, syringes, surgical gloves and blood bags.

## 2. WORLD MEDICAL PLASTIC MATERIALS SECTOR

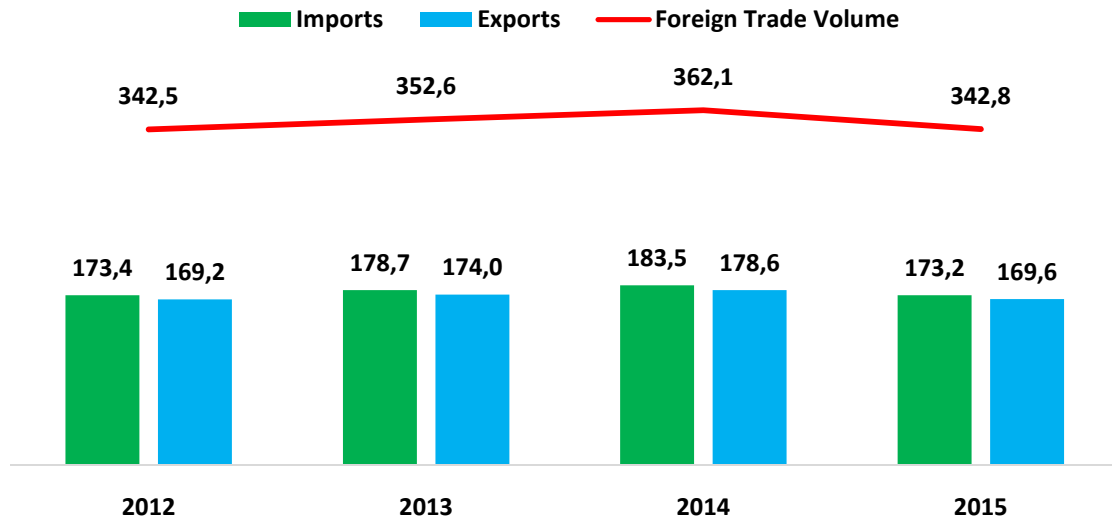
### 2.1. WORLD MEDICAL PLASTIC FOREIGN TRADE VOLUME

The use of plastics in the world's medical materials and healthcare industry is steadily increasing. The main reasons why plastics are preferred every day in this industry are; Product variety, easy sterilization, flexibility potential, low cost, lightness, durability, compatibility with other materials, transparency and environmentalist.

In 2015, world medical plastics materials foreign trade volume reached to 362.1 billion dollars.

	2012	2013	2014	2015
Imports	173,4	178,7	183,5	173,2
Exports	169,2	174,0	178,6	169,6
Foreign Trade Volume	342,5	352,6	362,1	342,8

**Table 1: World Medical Plastics Materials Foreign Trade Volume (Billion \$)**



**Graphics 1: World Medical Plastics Materials Foreign Trade Volume (Billion \$)**

Source: ITC, International Trade Center Foreign Trade Statistics

## 2.2. WORLD MEDICAL PLASTIC MATERIALS FOR FOREIGN TRADE DIRECTORS

70 % of total world medical plastic materials are exported by 10 countries. United States, China, Germany, Japan and South Korea are the five most important exporter countries.

On the other hand, 64 % of total World imports of medical plastic materials are realized by 10 countries. China, United States, Germany, Japan and Netherlands are the five most important importer countries.

Exporter Countries	% Share	Importer Countries	% Share
USA	15,4	China	18,7
China	13,7	USA	14,7
Germany	11,6	Germany	6,9
Japan	6,6	Japan	4,4
S. Korea	6,0	Netherlands	3,7
Netherlands	4,3	UK	3,4
UK	3,4	S. Korea	3,4
Taiwan	3,3	France	3,3
Singapore	2,9	Mexico	2,8
France	2,9	Hong Kong	2,8
<b>Total 10 Countries</b>	<b>70,0</b>	<b>Total 10 Countries</b>	<b>63,9</b>
<b>Others</b>	<b>30,0</b>	<b>Others</b>	<b>36,1</b>
<b>Total</b>	<b>100,0</b>	<b>Total</b>	<b>100,0</b>

**Table 2: The Main Countries Leading the World Medical Plastics Materials Foreign Trade**

Source: ITC, International Trade Center Foreign Trade Statistics



Turkey shares only one over thousand of the world's total exports of medical plastics materials while one percent of world total medical plastic materials imports.

### 3. TURKISH MEDICAL PLASTIC MATERIALS INDUSTRY

#### 3.1. TURKISH MEDICAL PLASTIC MATERIALS PRODUCTION

In Turkey, more than 500 companies are operating in the non-pharmaceutical medical and health industry and 109 of these companies are producing medical plastics. Of the 109 firms, 71 % are in Istanbul, 10 % are in Ankara and 6 % are in Izmir.

Provinces	No of Companies	% Share
İstanbul	77	71
Ankara	11	10
İzmir	7	6
Bursa	3	3
Kocaeli	3	3
Konya	3	3
Adana	2	2
Aydın	1	1
Mersin	1	1
Samsun	1	1
<b>Total</b>	<b>109</b>	<b>100</b>

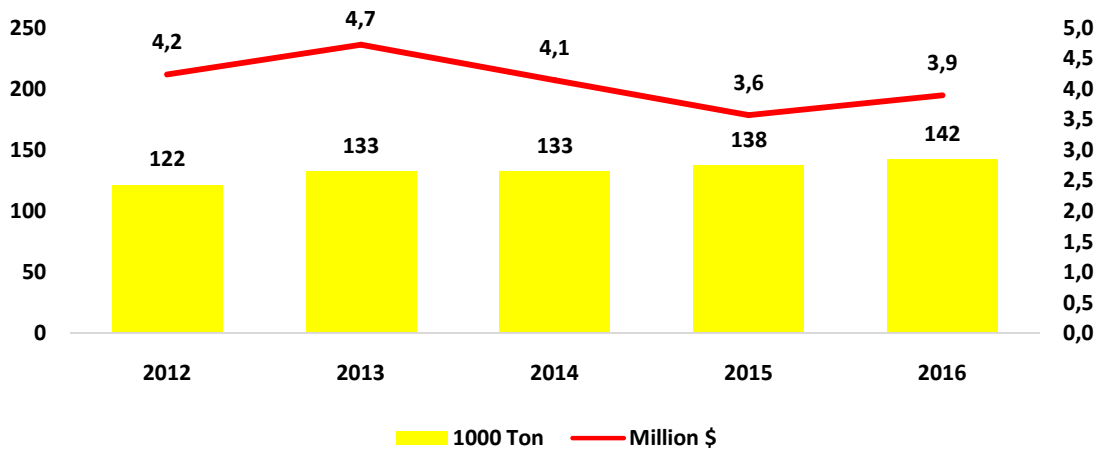
**Table 3: Medical Plastics Materials Manufacturers by Provinces in Turkey**

Source: PAGEV

The production of medical plastic materials in Turkey has increased by 4 % on average on quantity basis per year between 2012 and 2016 but decreased by 2.1 % on value basis and realized as 142 thousand tons and 3.9 billion dollars in 2016. The production of medical plastic materials accounts for about 1.5 % share of total plastic materials.

	2012	2013	2014	2015	2016	CAGR ( % )
1000 Ton	122	133	133	138	142	4,0
Million \$	4,2	4,7	4,1	3,6	3,9	-2,1

**Table 4: Total Plastics Medical Materials Production in Turkey**



Graphics 2: Total Plastics Medical Materials Production in Turkey

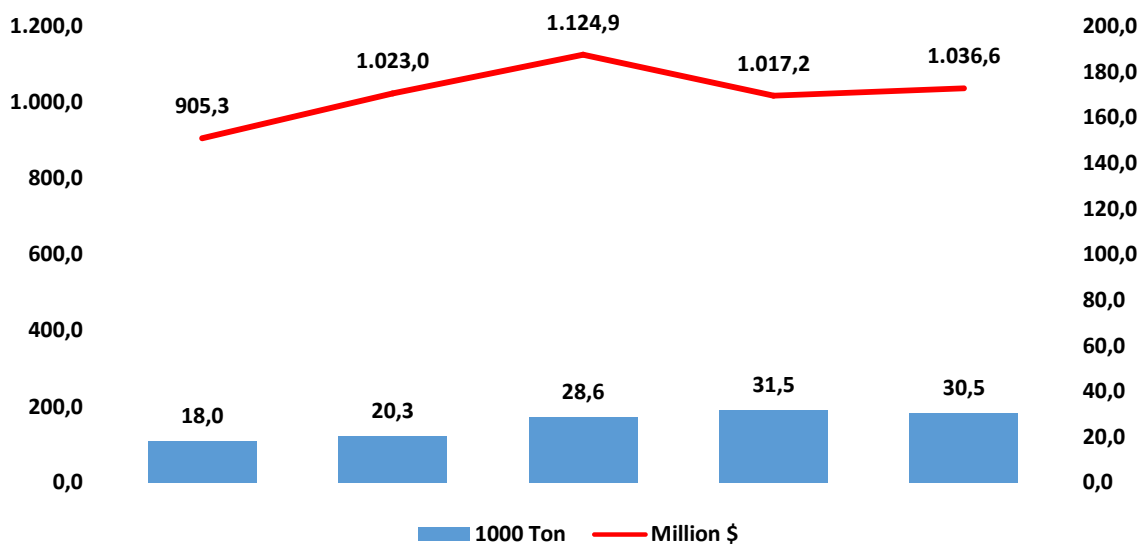
### 3.2. MEDICAL PLASTIC MATERIALS IMPORTS OF TURKEY

During 2012-2016 period, Turkey’s imports of medical plastics materials increased with a compound rate of 14,1 % on quantity basis and 3.1 % on value basis and reached to 30,5 thousand tons and 1 billion 36 million dollars in 2016.

	2012	2013	2014	2015	2016	CAGR ( % )
1000 Ton	18,0	20,3	28,6	31,5	30,5	14,1
Million\$	905,3	1.023,0	1.124,9	1.017,2	1.036,6	3,4

Table 5: Turkey’s Total Imports of Medical Plastics Materials

Source: ITC, International Trade Center Foreign Trade Statistics, TurkStat



Graphics 3: Turkey’s Total Imports of Medical Plastics Materials

Source: ITC, International Trade Center Foreign Trade Statistics, TurkStat

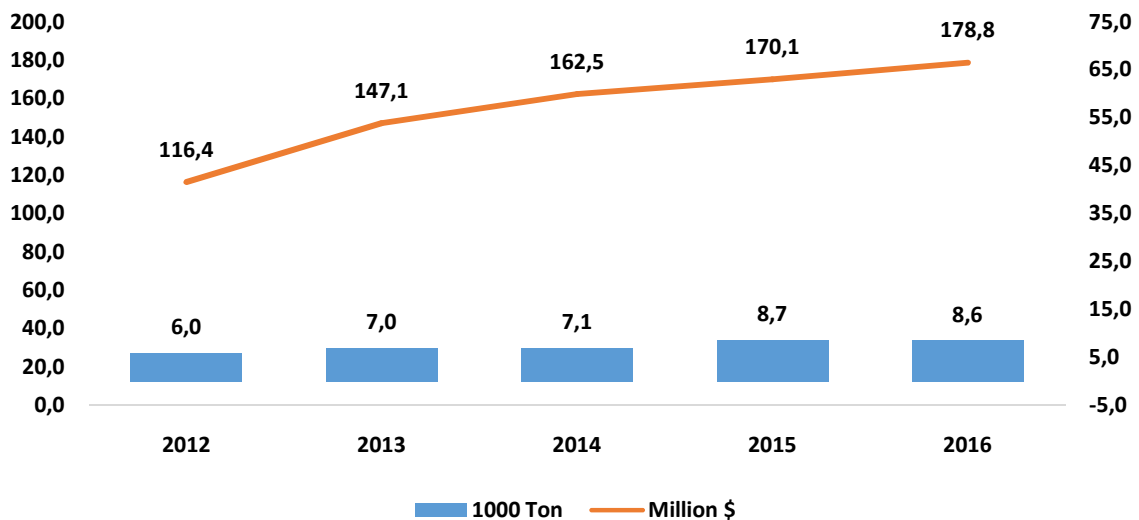
### 3.3. MEDICAL PLASTIC MATERIALS EXPORTS OF TURKEY

During the 2012-2016 period, Turkey's medical plastics exports increased by compound average growth rate of 9.6 % on quantity and 11.3% on a value basis, reaching to 8,600 tons and 178,8 million dollars in 2016 respectively.

	2012	2013	2014	2015	2016	CAGR ( % )
<b>1000 Ton</b>	6,0	7,0	7,1	8,7	8,6	9,6
<b>Million\$</b>	116,4	147,1	162,5	170,1	178,8	11,3

**Table 6: Turkey's Medical Plastics Exports**

Source: ITC, International Trade Center Foreign Trade Statistics, TurkStat



**Graphics 4: Turkey's Medical Plastics Exports**

Source: ITC, International Trade Center Foreign Trade Statistics, TurkStat

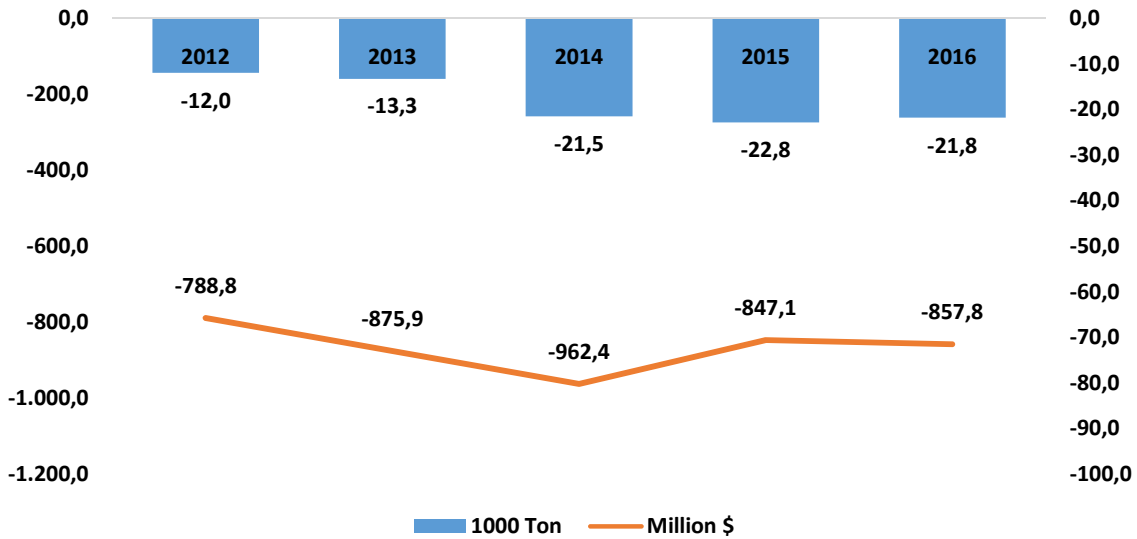
### 3.4. MEDICAL PLASTICS MATERIALS FOREIGN TRADE DEFICIT IN TURKEY

Turkey is a country that always gives deficit in foreign trade of medical plastics materials. In 2016, the foreign trade deficit realized as 22 thousand and 800 tons and 847.1milliondollars.

	2012	2013	2014	2015	2016
<b>1000 Ton</b>	-12,0	-13,3	-21,5	-22,8	-21,8
<b>Million\$</b>	-788,8	-875,9	-962,4	-847,1	-857,8

**Table 7: Foreign Trade Deficit of Turkey's Medical Plastics Materials**

Source: ITC, International Trade Center Foreign Trade Statistics, TurkStat



**Graphics 5: Foreign Trade Deficit of Turkey's Medical Plastics Materials**

Source: ITC, International Trade Center Foreign Trade Statistics, TurkStat

### 3.5. MAJOR COUNTRIES IN MEDICAL PLASTIC MATERIALS FOREIGN TRADE OF TURKEY

Turkey exports 45 % of total medical plastic materials exports to 10 countries. Germany, Azerbaijan, China, France and Italy constitute the 5 most important export markets.

Turkey imports 75 % of total medical plastic materials from 10 countries. Germany, USA, China, Italy and Japan are the 5 most important import partners.

Export Markets	% Share	Import Partners	% Share
Germany	9,1	Germany	18,2
Azerbaijan	7,0	USA	14,9
China	6,5	China	12,9
France	4,5	Italy	5,6
Italy	4,1	Japan	5,3
USA	3,1	France	5,0
UK	2,9	S. Korea	4,8
Netherlands	2,8	UK	3,4
Jordan	2,8	Sweetzerland	2,7
Iran	2,6	Ireland	2,2
<b>Total 10 Countries</b>	<b>45,4</b>	<b>Total 10 Countries</b>	<b>75,1</b>
<b>Others</b>	<b>54,6</b>	<b>Others</b>	<b>24,9</b>
<b>Total</b>	<b>100,0</b>	<b>Total</b>	<b>100,0</b>

**Table 8: Main Plastics Medical Materials Import and Export Partners of Turkey**

Source: ITC, International Trade Center Foreign Trade Statistics, TurkStat

### 3.6. MEDICAL PLASTICS MATERIALS FOREIGN TRADE PRICES IN TURKEY

Average unit export and import prices indicate that the added value of medical plastics materials is very high.

Between 2012 and 2016, Turkey's import prices of medical plastics materials have decreased by an average of 9.3 % per annum, while export prices have increased by an average of 1.6 % per annum during the same period.

In 2016, the average import price of medical plastics materials in Turkey is 34 \$/kg and the export price is 20.7 \$/kg. The export price is 39 % below the import price.

	2012	2013	2014	2015	2016	CAGR ( % )
<b>Import Price</b>	50,3	50,3	39,4	32,3	34,0	-9,3
<b>Export Price</b>	19,5	20,9	23,0	19,7	20,7	1,6

**Table 9: Medical Plastics Materials Foreign Trade Prices in Turkey (\$/Kg)**

Source: ITC, International Trade Center Foreign Trade Statistics, TurkStat



**Graphics 6: Medical Plastics Materials Foreign Trade Prices in Turkey (\$/kg)**

Source: ITC, International Trade Center Foreign Trade Statistics, TurkStat

### 3.7. SUPPLY AND DEMAND EQUILIBRIUM IN TURKISH MEDICAL PLASTIC MATERIAL INDUSTRY

In the medical plastics materials industry of Turkey, total production realised as 142.4 thousand tons and 3.9 billion dollars in 2016, 30.5 thousand tons and 1 billion 36 million dollars were imported, and 9.6 thousand tons and 178.8 million dollars were exported in the same year. On the other hand, domestic market sales realized as 164.2 thousand tons and 4.8 billion dollars per year.



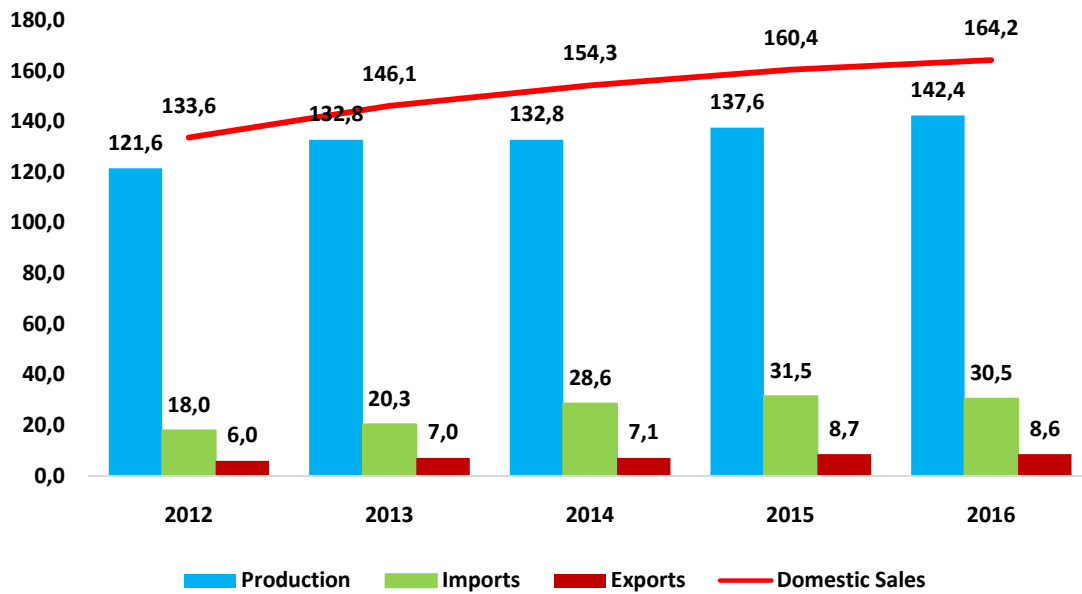


In the medical plastics materials industry of Turkey, 6 % of the production is exported in quantity and 5 % in value basis, while 19 % on quantity and 22 % on value basis of domestic sales are met by imports.

	1000 Ton			Million\$		
	2012	2016	CAGR (%)	2012	2016	CAGR (%)
Production	121,6	142,4	4,0	4.240,5	3.899,1	-2,1
Imports	18,0	30,5	14,1	905,3	1.036,6	3,4
Exports	6,0	8,6	9,6	116,4	178,8	11,3
Domestic Sales	133,6	164,2	5,3	5.029,4	4.756,8	-1,4
Exports/Production (%)	5	6		3	5	
Imports/ Domestic Sales (%)	13	19		18	22	

**Table 10: Supply and Demand Equilibrium in Turkey's Plastics Medical Materials Industry**

Source: ITC, International Trade Center Foreign Trade Statistics, TurkStat



**Graphics 7: Supply and Demand Equilibrium in Turkey's Plastics Medical Materials Industry (1000 Ton)**

Source: ITC, International Trade Center Foreign Trade Statistics, TurkStat

#### 4. CONCLUSION

In the global medical plastics industry, it is necessary for Turkey to developing value-added products and to present them to the international markets with a competitive pricing policy in order to get a bigger share.

The increasing expectations of the world's and Turkey's population reveal the potential importance of the health care industry. The health care industry, which is least affected by adverse developments in the economy, and the plastics medical materials used in this



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sector, have a high potential for growth in Turkey, and the increasing need in this industry is met by a great amount of imports.