



WORLD AND TURKEY

ENGINEERING PLASTICS

FOREIGN TRADE REPORT



1. DESCRIPTION OF ENGINEERING PLASTICS

Engineering thermoplastics are a subset of plastics used in applications where high performance is often required in areas such as heat resistance, chemical resistance, impact, flame retardancy or mechanical strength. Engineering thermoplastics are referred to by this name because of their ability to have one or more areas with higher performance compared to commercial materials and to the engineering required applications to design parts used for their intended purpose.

The properties of the plastics prepared with the blends of the polymer and the additives vary in the liquid or molten state. Engineering plastics can be classified into three groups according to the performance characteristics and morphology;

General Purpose Engineering Plastics

Amorphous: Polycarbonate (PC), Polyphenyleneoxide (PPO), Polyphenylether (PPE) Thermoplastic Polyurethane (TPU), Acrylonitrile Butadiene Styrene (ABS), Polymethylmethacrylate (PMMA)

Semicrystalline or crystalline: Polyoxymethylene (POM), Polyamide (PA) Polyethyleneterephthalate (PET), Polybutylene terephthalate (PBT), Ultra high molecular weight polyethylene (UHMWPE)

High Performance Engineering Plastics

Amorphous: Polyetherimide (PEI), Polysulfon (PSU), Polyethersulfon (PES), Polyarylsulfon (PAS)

Semicrystalline or crystalline: Polyvinylidene fluoride (PVDF), Polytetrafluoroethylene (PTFE), Ethylenechlorotrifluoroethylene (ECTFE), Fluoroethylene propylene (FEP), Perfluoroalkoxy (PFA), Polyphenylenesulfide (PPS), Polyetheretherketone (PEEK)

Super Thermal Resistant Engineering Plastics

Polyamidimide (PAI), Polyimide (PI), Polybenzimidazole (PBI)



The most common engineering thermoplastics are:

- ✓ Acrylonitrile butadiene styrene (ABS)
- ✓ Liquid crystal polymers (LCP)
- ✓ Polybutylene terephthalate (PBT)
- ✓ Polymethyl methacrylate (PMMA)
- ✓ Polyamide (PA)
- ✓ Polyarylsulphone (PSU/P/PPSU)
- ✓ Polycarbonate (PC)
- ✓ Polyimide (PI)
- ✓ Polyoxymethylene (POM)
- ✓ Polyphthalamide (PPA)
- ✓ Polyphenylenesulphide (PPS)
- ✓ Polyvinylidene fluoride (PVDF)
- ✓ Thermoplastic polyester elastomer (TPE-E)
- ✓ Ultra high molecular weight polyethylene (UHMWPE)

2. MAIN APPLICATION AREAS OF ENGINEERING PLASTICS

The demand for engineering plastics of the automotive and transportation sectors is increasing due to the various thermal, mechanical properties and higher strength materials required. In addition to its mechanical strength, engineering plastics also help to reduce the overall weight of the vehicles. Bio-based engineering plastics, such as polyamides and polycarbonates, are also in great demand, helping to reduce carbon footprint. The packaging, electrical, electronics and consumer goods sectors are also becoming increasingly large markets for bio-based engineering plastics. There is a strong market growth for high performance plastics such as PEI, PEEK, PSU/PES, PCTF.

In the coming years, it is expected that the demand for engineering plastics, especially in the automotive, transportation and medical sectors, will increase to an increasing extent. Rapid urbanization, infrastructure development and increased income levels are among the key factors that are expected to increase the growth of the global engineering plastics market.

It is estimated that 36 % of the total consumption of global engineering plastics in 2016 will be met by the electricity and electronics sectors. The automotive and transportation sectors account for 32 % of total consumption.

Engineering Plastics	Main Application Areas
Acrylonitrile-Butadiene Styrene (ABS)	The bodies of electric vacuum cleaners, kitchen tools, telephones, toys, automotive industry, electric-electronic sector (especially white goods and computer/communication electronics)
Liquid Crystal Polymers (LCP)	Coatings, composites, additives, electric motor parts, use in electronic fields such as sockets, coils, buttons, connectors, chip walls and sensors (doing better than most ceramics, thermosets and other ceramics based on high temperature), high intensity LED's, surface mounting technology (SMT) components
Polybutylene Terephthalate (PBT)	Automotive: Headlights and wipers Industrial applications: Electronic stability program (ESP) control modules, gear housing, steering angle sensors, door controllers or airbag connections General applications: Joinery profile bands, fiber optic cables
Polyaryletheretherketone (PEEK)	Automobiles: Gear, gaskets and intermediate parts, which are generally used in the automotive sector Air Vehicles: Wing, engine and fuel systems Industrial pumps Valves and gaskets Fine silicone carriers Sterileable surgical materials Medical implants
Polymethyl methacrylate (PMMA)	Patio ceilings and greenhouses that can withstand extreme weather conditions such as sun, rain and snow. Indoor and outdoor lighting in the automotive industry, indicator housings, spoiler and mirror housings, light guide panels in the lighting units of LCD screens, mobile phone lenses, backlit and touch screens, illuminated signs, street lamps and industrial lamps
Polyamide (PA)	Automotive: Oil skimmers, cross gear rails, air inlet manifolds, impact-sensitive engine covers Electrical-electronics sector: Photovoltaic connectors, wireless pulse drills, control modules in washing machines, circuit breaker pins
Polyarylsulfone (PSU/P/PPSU)	Automotive industry: Headlights and internal reflectors Electrical-electronics sector: Insurance protection Water connections, pump cogs, bottles, microwave dishes, fine pit fibers used in water treatment
Polycarbonate (PC)	Automotive: Mirrors, taillights, turn signals, reversing lights, fog lights and headlamps Packing: Bottle, container and tableware, Household Goods and Consumer Goods: Electrical water heaters, refrigerators, mixers, electric shavers and hair dryers Electrical and Electronics: Mobile phone, computer, fax machines and pagers of pagers
Polyimide (PI)	Flexible cables, insulation films in coiled wires, medical tubing, PI films in coils With the help of sintering technologies such as high temperature adhesive, mechanical tension buffer, polyimide resin, insulating and passivating layer in digital semiconductor and microelectromechanical system (MEMS) chips, polyimide powder, (hot stamping, direct molding and isostatic pressing) production of shapes Fittings, nests, sockets or structural parts, polyimide fibers, hot gas filtration in coal-fired

	power plants, waste incineration or cement production plants
Polyoxymethylene (POM)	Espresso coffee brewing machines, toys for children, gas meters, disposable applicators, medical technology, fuel storage modules, gearwheels, speaker grills
Polyphthalamide (PPA)	In electrical and automotive industries: Connections, switches, electrical isolation, engine blocks, water heating manifolds, valve bodies for showers, fuel modules, fuel shutoff valves, thermostat housings, air coolers
Polyphenylene sulfide (PPS)	PPS film formed by under-hood parts, power transmission components, pumps, fuel system components, surface mounted parts, electrical/electronic components, fan and pump parts, protective and non-stick coatings, surgical devices, electrical tools, blow molding or extrusion composite
Polyvinylidene fluoride (PVDF)	Aerospace, biotechnology, electronics (eg robot technology, sensors and electrical cable insulation), empty fibers, flat sheets, tubular membranes used in medicine and food-beverage industry
Thermoplastic polyester elastomer (TPE E)	It has a wide use in automotive and home appliances sector. In motorized sideways, nylon block copolymers provide optimal softness for the patients, in some cases as power cable sheath / inner insulation material, in some earphone cables, in sports equipment
Ultra high molecular weight polyethylene (UHMWPE)	Automotive: Headlights, wipers Industrial applications: Electronic stability program (ESP) control modules, gear housing, steering angle sensors, door controllers or airbag connections. General applications: Joinery profile bands, fiber optic cables.

Table 1: Main Applications of Engineering Plastics

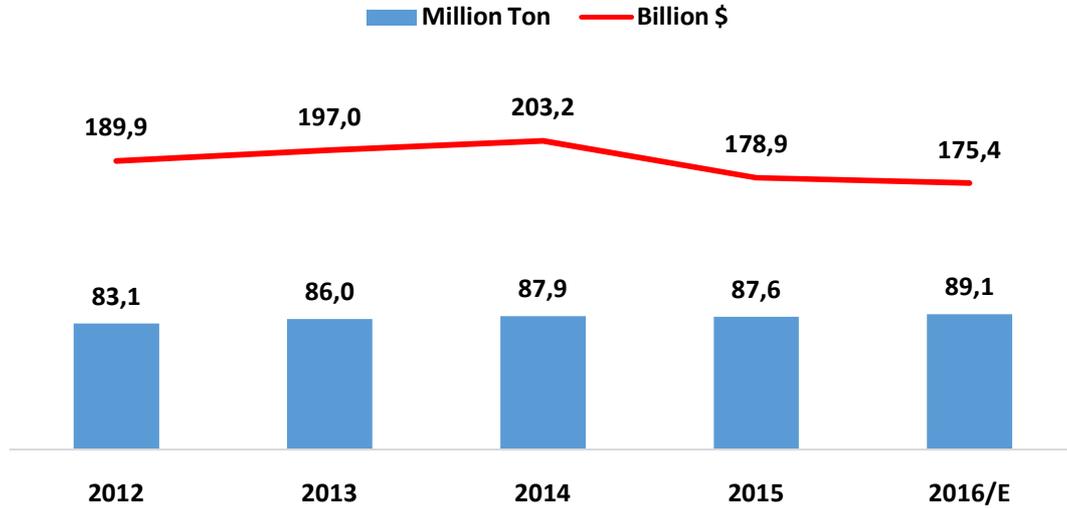
3. WORLD TOTAL FOREIGN TRADE VOLUME OF ENGINEERING PLASTICS

World total foreign trade volume of engineering plastics increased by 1.8 % per year on an average on quantity basis between 2012 and 2015 but decreased by 1.9 % on value basis and realized as 87.6 million tons and 178.9 billion dollars in 2015. Total foreign trade volume is estimated to be 89.1 million tons and 175.4 billion dollars in 2016.

	2012	2013	2014	2015	2016/T	CAGR (%)
Million Ton	83,1	86,0	87,9	87,6	89,1	1,8
Billion \$	189,9	197,0	203,2	178,9	175,4	-1,9

Table 2: World Total Foreign Trade Volume of Engineering Plastics

Source: ITC World Trade Statistics



Graphic 1: World Total Foreign Trade Volume of Engineering Plastics

Source: ITC World Trade Statistics

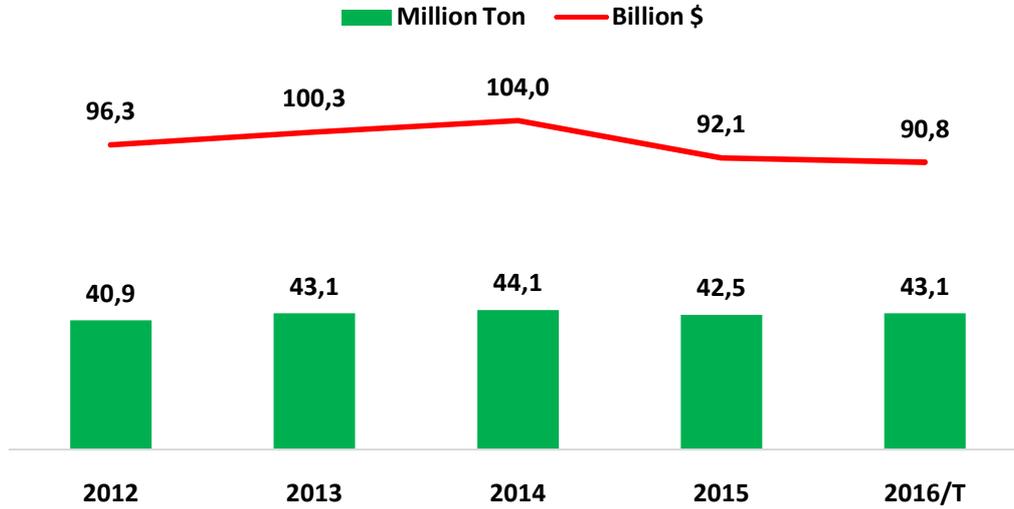
3.1. WORLD TOTAL IMPORTS OF ENGINEERING PLASTICS

The world total imports of engineering plastics declined by 1.5 % on a value basis and increased by an average of 1.3 % per annum on quantity basis between 2012 and 2015, and reached 42.5 million tons and 92.1 billion dollars in 2015, respectively. Total imports are estimated to be 43.1 million tons and \$ 90.8 billion in 2016.

	2012	2013	2014	2015	2016/T	CAGR (%)
Million Ton	40,9	43,1	44,1	42,5	43,1	1,3
Billion \$	96,3	100,3	104,0	92,1	90,8	-1,5

Table 3: World Total Imports of Engineering Plastics

Source: ITC World Trade Statistics



Graphic 2: World Total Foreign Trade Volume of Engineering Plastics

Source: ITC World Trade Statistics

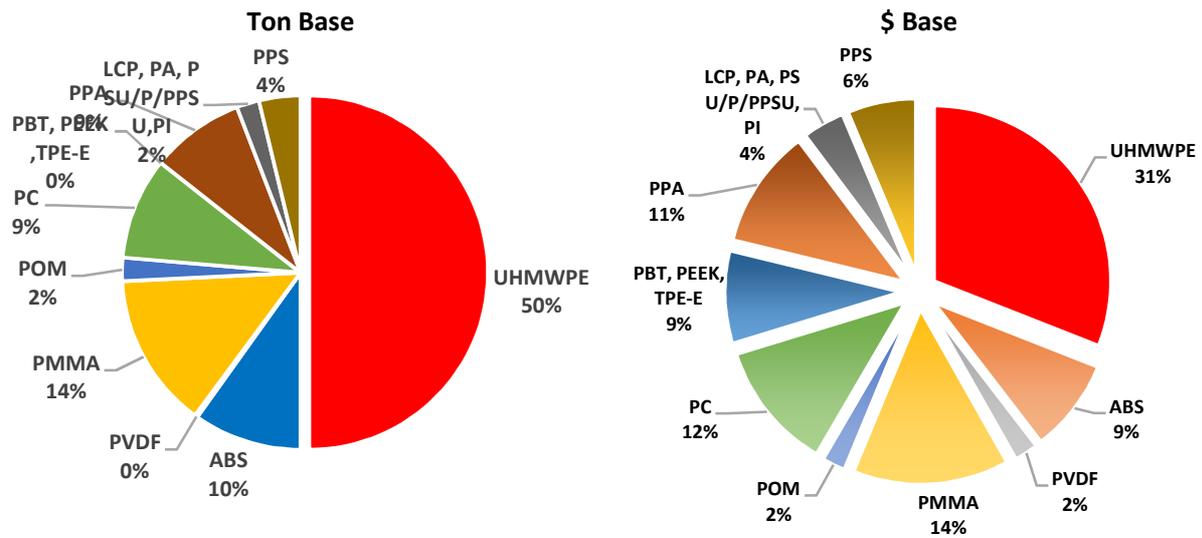
In 2015, UHMWPE in world engineering plastics imports amounted to 19.8 million tons and received preliminary orders in total imports. PMMA imported 5.7 million tonnes followed by ABS with 4.2 million tonnes in quantity basis while, PMMA ranked second with \$ 13.2 billion and PC with third with \$ 11.6 billion on value basis.

	Million Ton		Billion \$	
	2012	2015	2012	2015
Ultra-high-molecular-weight polyethylene (UHMWPE)	18,7	19,8	28,2	28,6
Acrylonitrile-Butadiene-Styrene (ABS)	4,1	4,2	9,7	8,0
Polyvinylidene fluoride (PVDF)	0,1	0,1	2,1	2,0
Polymethyl methacrylate (PMMA)	5,3	5,7	13,7	13,2
Polyoxymethylene (POM)	0,8	0,9	2,1	2,0
Polycarbonate (PC)	3,9	3,8	11,7	11,0
Polybutylene Terephthalate (PBT) Polyaryletheretherketone (PEEK), Thermoplastic polyester elastomer (TPE-E)	2,2	2,8	7,8	7,9
Polyphthalamide (PPA)	3,4	3,6	12,0	10,1
Liquid Crystal Polymers (LCP), Polyamide (PA), Polyarylsulfone (PSU/P/PPSU), Polyimide (PI)	0,7	0,8	3,3	3,6
Polyphenylene sulfide (PPS)	1,5	1,6	5,6	5,8
TOTAL	40,9	43,1	96,3	92,1

Table 4: World Total Imports of Engineering Plastics by Types

Source: ITC World Trade Statistics

The largest share of engineering plastics in the world total imports is UHMWPE with 50 %, PMMA with 14 % and ABS with 10 % respectively on quantity basis while on a value basis UHMWPE is 31 %, PMMA is 14 % and PC 12 % is 11 % in PPA.



Graphic 3: World Total Imports of Engineering Plastics by Types

Source: ITC World Trade Statistics

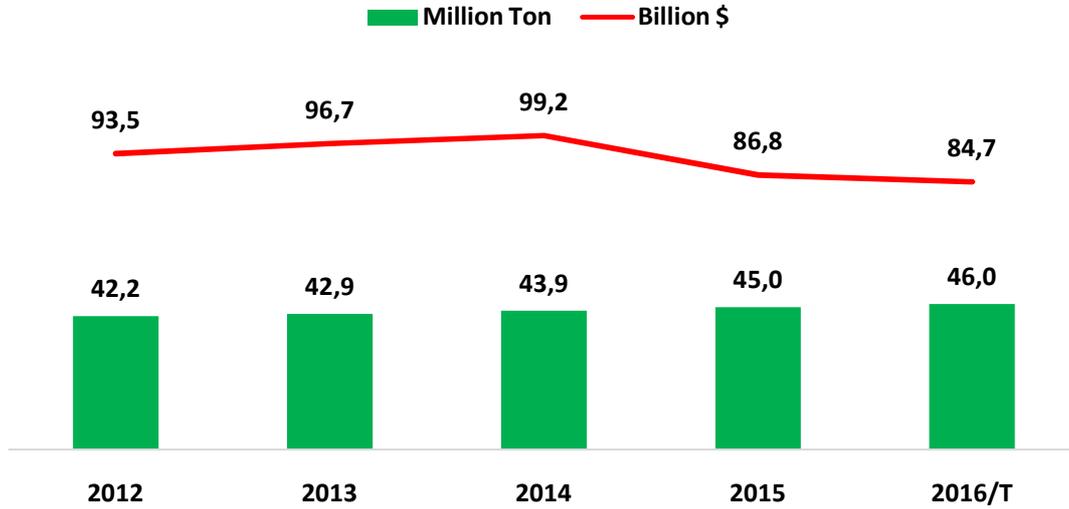
3.2. WORLD TOTAL EXPORT OF ENGINEERING PLASTICS

The world total exports of engineering plastics declined annually by 2.4 % on value and increased by 2.2 % on value basis between 2012 and 2015 and realized as 45 million tons and 86.8 billion dollars in 2015. Total exports are estimated at 46 million tons and \$ 84.7 billion in 2016.

	2012	2013	2014	2015	2016/T	CAGR (%)
Million Ton	42,2	42,9	43,9	45,0	46,0	2,2
Billion \$	93,5	96,7	99,2	86,8	84,7	-2,4

Table 5: World Total Exports of Engineering Plastics

Source: ITC World Trade Statistics



Graphic 4: World Total Exports of Engineering Plastics

Source: ITC World Trade Statistics

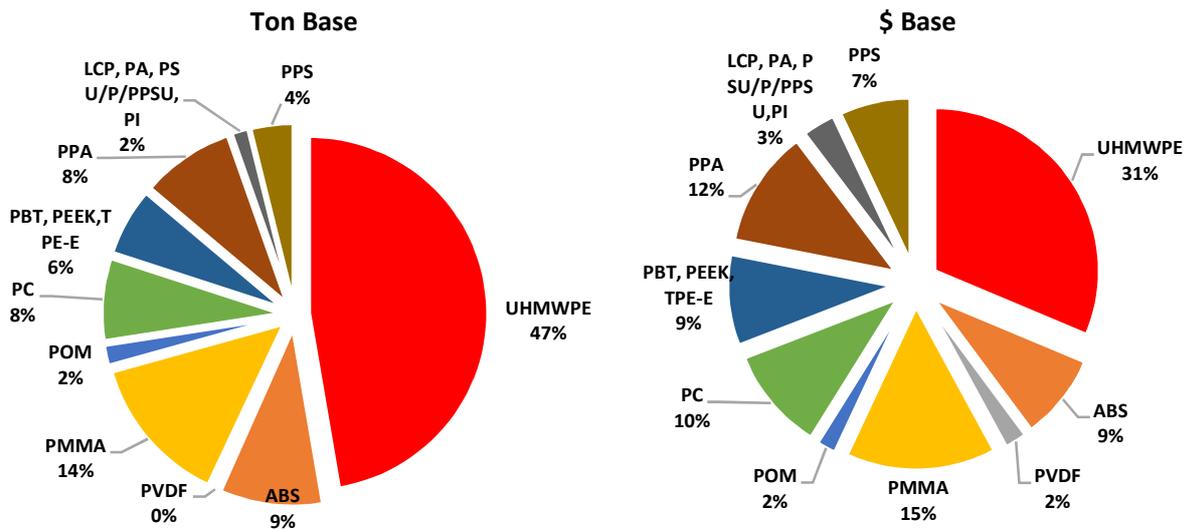
In 2015, UHMWPE topped the first order in list of total exports with 20.1 million tons in world engineering plastics exports. PMMA exports came in second place with 5.9 million tons and ABS with third place with 4.1 million tons. PMMA ranked second with \$ 12.8 billion and PPA third with \$ 10.1 billion.

	Million Ton		Billion \$	
	2012	2015	2012	2015
Ultra-high-molecular-weight polyethylene (UHMWPE)	20,3	20,1	28,8	27,2
Acrylonitrile-Butadiene-Styrene (ABS)	4,1	4,1	9,4	7,4
Polyvinylidene fluoride (PVDF)	0,1	0,1	1,8	1,9
Polymethyl methacrylate (PMMA)	5,5	5,9	13,5	12,8
Polyoxymethylene (POM)	0,7	0,8	1,5	1,7
Polycarbonate (PC)	3,4	3,4	9,7	8,9
Polybutylene Terephthalate (PBT) Polyaryletheretherketone (PEEK), Thermoplastic polyester elastomer (TPE-E)	2,6	2,7	8,5	7,9
Polyphthalamide (PPA)	3,5	3,7	11,8	10,1
Liquid Crystal Polymers (LCP), Polyamide (PA), Polyarylsulfone (PSU/P/PPSU), Polyimide (PI)	0,6	0,6	2,6	2,8
Polyphenylene sulfide (PPS)	1,5	1,6	5,9	6,1
TOTAL	42,2	42,9	93,5	86,8

Table 6: World Total Exports of Engineering Plastics by Types

Source: ITC World Trade Statistics

On quantity basis, the largest share of engineering plastics in the world total exports is UHMWPE with 47 %, PMMA with 14 % and PC and PPA with 8 %. On a value basis, UHMWPE received 31 %, PMMA 15 %, PPA 12 % and PC 10 %.



Graphic 5: World Total Exports of Engineering Plastics by Types

Source: ITC World Trade Statistics

3.3. WORLD ENGINEERING PLASTICS AVERAGE FOREIGN TRADE PRICES

The average import prices for engineering plastics in the world fell from \$ 2.4/kg to \$ 2.1/kg between 2012 and 2016. In the same period, the average export prices decreased from \$ 2.2/kg to \$ 1.8/kg.



Graphic 6: World Engineering Plastics Average Foreign Trade Prices (\$/kg)

Source: ITC World Trade Statistics



3.4. EXPECTATIONS FOR WORLD ENGINEERING PLASTICS CONSUMPTION

In the coming years, consumption of global engineering plastics is expected to show the highest growth in Asia-Pacific (excluding Japan) along with population, income levels and rapid urbanization. Engineering plastics are finding a very large consumer market for the production of automobiles, consumer electronics products, electronic products, medical devices, industrial and machinery in the Asia-Pacific region. The Asia-Pacific region is expected to record an growth rate of 6.8 % between 2016 and 2026 in terms of volume. Asia-Pacific is expected to gain significant market share due to high demand from India and China, especially in the automotive, electrical and electronics industries.

The North American market is expected to increase by 7.3 % until 2026 due to increased consumption of engineering plastics in the region's automotive and transportation industries. In terms of quantity, it is estimated that the market share of Western Europe and Japan will decrease considerably in the period of 2016-2026 due to mature markets for engineering plastics.

4. FOREIGN TRADE OF TURKISH ENGINEERING PLASTICS

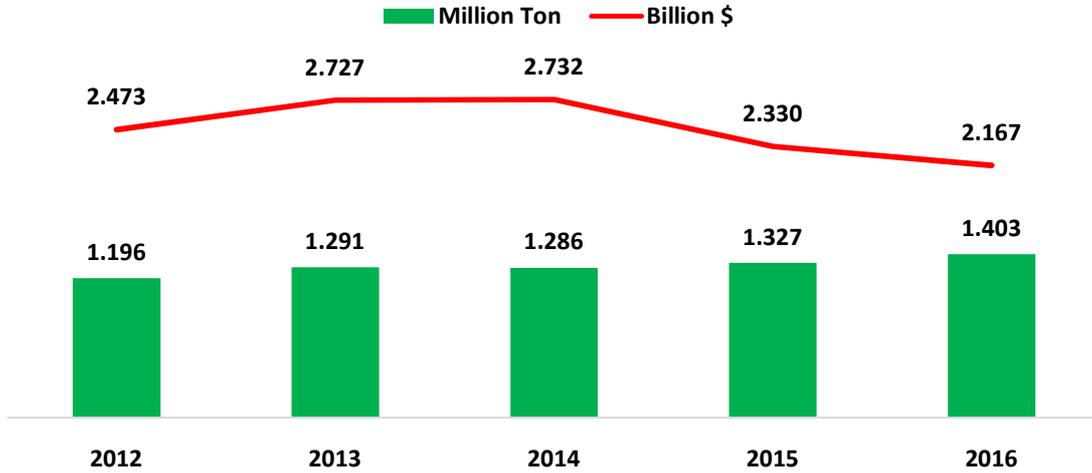
4.1. TOTAL IMPORTS OF TURKISH ENGINEERING PLASTICS

Total imports of engineering plastics in Turkey increased by 4.1 on an annual average on quantity basis while declined by 3.3 % between 2012 and 2016, and amounted to 1.4 million tons and 2.17 billion dollars in 2016, respectively.

	2012	2013	2014	2015	2016	CAGR (%)
1000 Ton	1.196	1.291	1.286	1.327	1.403	4,1
Million \$	2.473	2.727	2.732	2.330	2.167	-3,3

Table 7: Engineering Plastics Imports in Turkey

Source: TURKSTAT and ITC World Trade Statistics



Graphic 7: Engineering Plastics Imports in Turkey

Source: TURKSTAT and ITC World Trade Statistics

UHMWPE imports realized as 787 thousand tons in 2016 and ranked in the front in total imports of engineering plastics in Turkey. PMMA imports ranked second with 195 thousand tons and ABS with third with 114 thousand tons.

UHMWPE ranked first with 977 million dollars in value and PMMA followed with 273 million dollars and PPA with 193 million dollars taking second and third place in total engineering plastics imports.

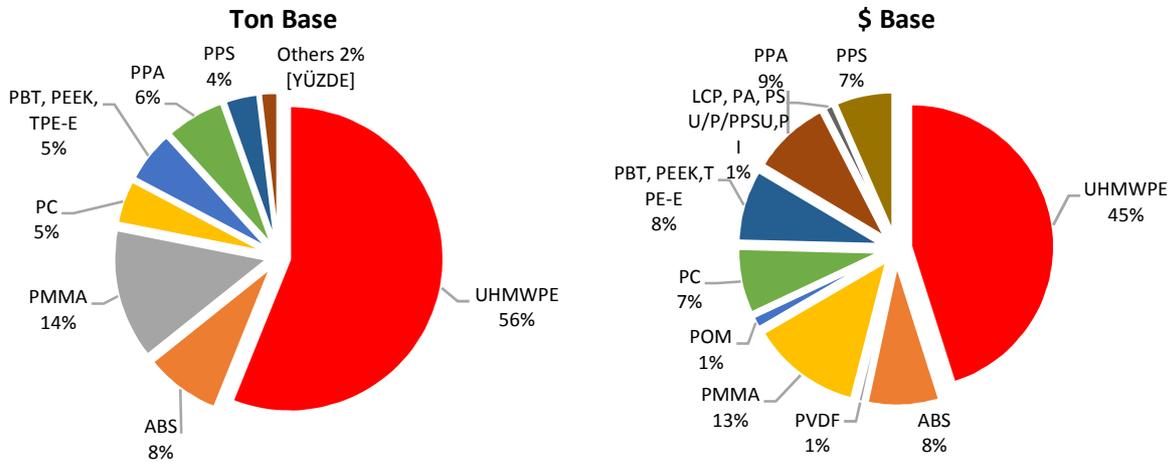
	1000 Ton		Million\$	
	2012	2016	2012	2016
Ultra-high-molecular-weight polyethylene (UHMWPE)	711,4	786,6	1.119,5	977,0
Acrylonitrile-Butadiene-Styrene (ABS)	86,9	114,1	207,4	177,5
Polyvinylidene fluoride (PVDF)	0,4	0,7	9,0	13,7
Polymethyl methacrylate (PMMA)	150,4	195,4	349,6	272,7
Polyoxymethylene (POM)	14,0	19,3	29,2	30,5
Polycarbonate (PC)	49,5	65,5	147,8	161,3
Polybutylene Terephthalate (PBT) Polyaryletheretherketone (PEEK), Thermoplastic polyester elastomer (TPE-E)	59,0	77,2	191,5	177,3
Polyphthalamide (PPA)	69,8	88,2	226,0	192,5
Liquid Crystal Polymers (LCP), Polyamide (PA), Polyarylsulfone (PSU/P/PPSU), Polyimide (PI)	4,9	6,3	22,0	21,1

Polyphenylene sulfide (PPS)	49,9	49,7	169,4	141,3
Total	1.196,3	1.402,9	2.473,4	2.166,8

Table 8: Total Engineering Plastics Imports by Types in Turkey

Source: TURKSTAT and ITC World Trade Statistics

The biggest share of total engineering plastics imports in Turkey belongs to UHMWPE with 56 %, PMMA with 14 %, ABS with 8 % and PPA with 6 %. On the value basis, UHMWPE has a share of 45 %, PMMA 13 %, ABS, PBT, PEEK, TPE-E 8 %, PC 7 %.



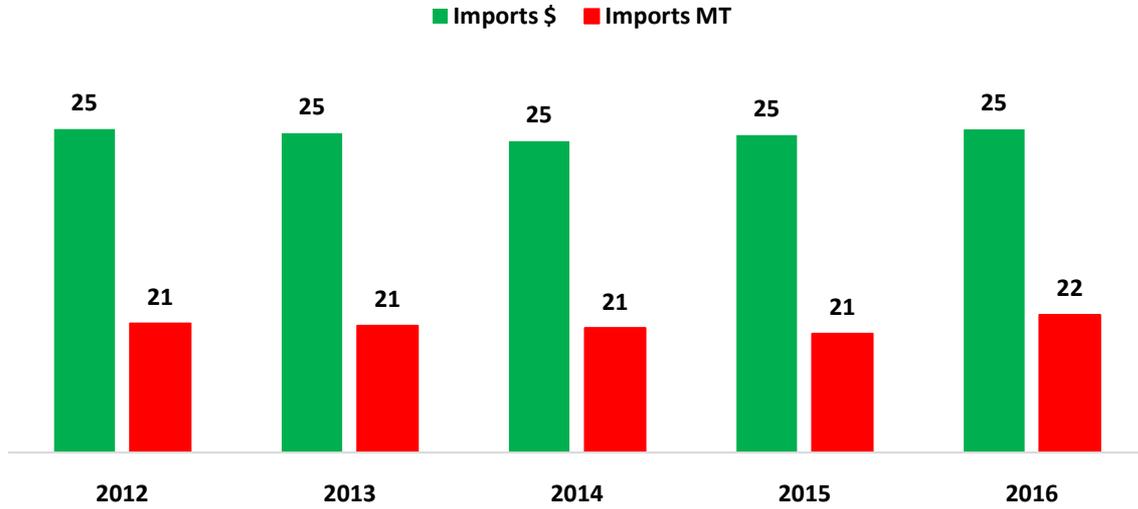
Graphic 8: Engineering Plastics Imports by Types in Turkey

Source: TURKSTAT ve ITC World Trade Statistics

4.2. SHARE OF ENGINEERING PLASTICS IN TOTAL PLASTICS RAW MATERIALS IMPORTS IN TURKEY

Engineering plastics imports shared 21 % of total raw material imports over the last 5 years and it's share realized as 22 % in 2016 on quantity basis.

On the other hand, the share of engineering plastics imports in total raw material imports has been 25 % in value over the last 5 years.



Graphic 9: Share of Engineering Plastics in Total Plastics Raw Materials Imports in Turkey (%)

Source: TURKSTAT ve ITC World Trade Statistics

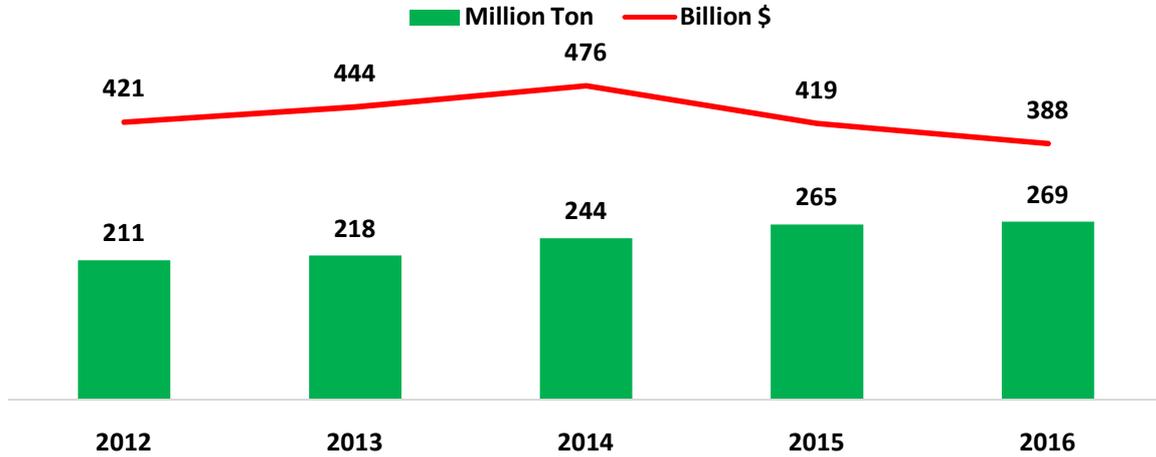
4.3. ENGINEERING PLASTICS EXPORTS IN TURKEY

Total exports of engineering plastics in Turkey increased annually by 6.3 % on a quantity basis while declined by 2.0 % on value basis between 2012 and 2016 period and realized as 269 thousand tons and 388 million dollars in 2016.

	2012	2013	2014	2015	2016	CAGR (%)
1000 Ton	211	218	244	265	269	6,3
Million \$	421	444	476	419	388	-2,0

Table 9: Engineering Plastics Exports in Turkey

Source: TURKSTAT and ITC World Trade Statistics



Graphic 10: Engineering Plastics Exports in Turkey

Source: TURKSTAT and ITC World Trade Statistics

On quantity basis, PMMA exports realized as 174 thousand tons and took the front row in total exports of engineering plastics in 2016. On the other hand, total exports of PBT, PEEK and TPE-E ranked second with 43 thousand tons and UHMWPE ranked the third with 13.4 thousand tons.

On a value basis, PMMA was the first with \$ 185.1 million, followed by PBT, PEEK and TPE-E with a total of \$ 104.5 million and PBS ranked the third with \$ 50.7 million.

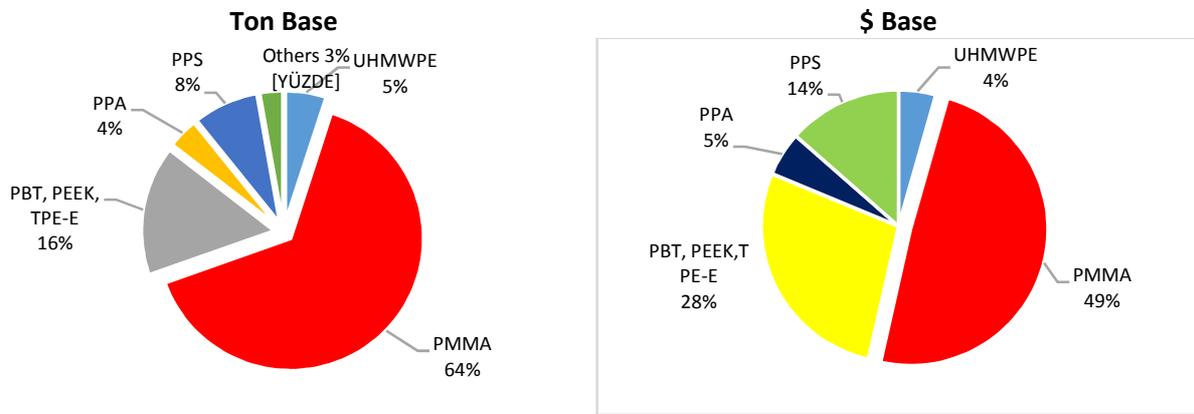
	1000 Ton		Million \$	
	2012	2016	2012	2016
Ultra-high-molecular-weight polyethylene (UHMWPE)	23,3	13,4	37,3	16,4
Acrylonitrile-Butadiene-Styrene (ABS)	1,9	1,5	3,5	2,6
Polyvinylidene fluoride (PVDF)	0,0	0,0	0,3	0,2
Polymethyl methacrylate (PMMA)	129,2	174,0	194,4	185,1
Polyoxymethylene (POM)	0,2	0,2	0,5	0,4
Polycarbonate (PC)	0,7	1,9	3,0	4,1
Polybutylene Terephthalate (PBT)				
Polyaryletheretherketone (PEEK), Thermoplastic polyester elastomer (TPE-E)	36,2	43,0	120,7	104,5
Polyphthalamide (PPA)	6,7	10,0	20,8	19,7
Liquid Crystal Polymers (LCP), Polyamide (PA), Polyarylsulfone (PSU/P/PPSU), Polyimide (PI)	0,7	3,9	1,4	4,2
Polyphenylene sulfide (PPS)	12,3	21,5	39,1	50,7
Total	211,3	269,5	420,8	388,0

Table 10: Engineering Plastics Exports by Types in Turkey

Source: TURKSTAT and ITC World Trade Statistics

In terms of quantity, the largest share of Turkey's total engineering plastics exports belongs to PMMA with 64 %. Total exports of PBT, PEEK, TPE-E ranked the second share with 16 %.

In terms of value, PMMA ranked the first with a share of 49 % and total of PBT, PEEK, TPE-E followed by 28 % and PPS with 14 %.



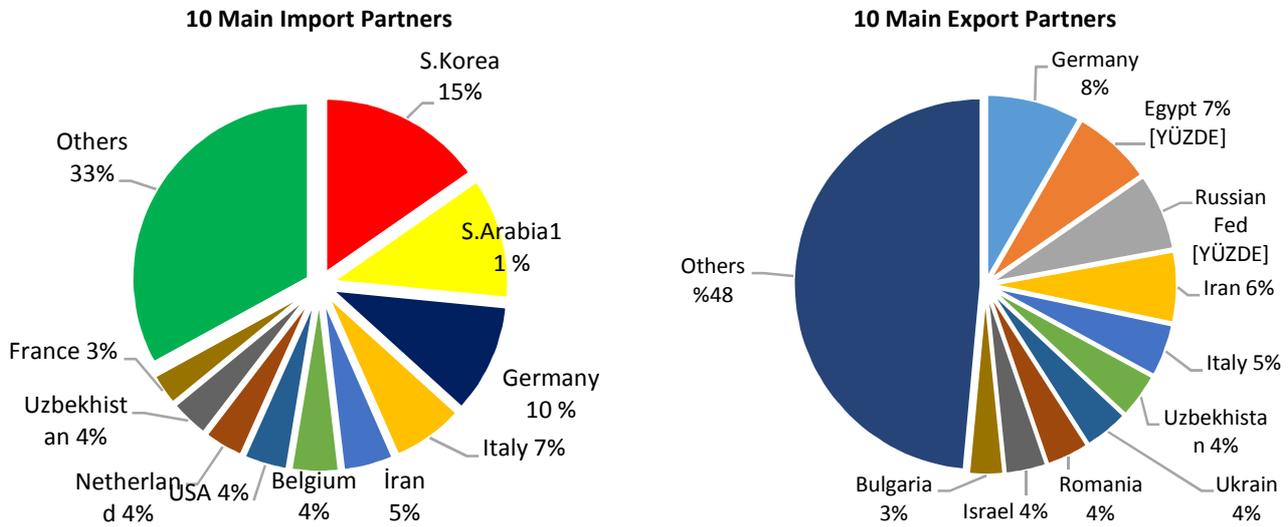
Graphic 11: Engineering Plastics Exports by Types in Turkey

Source: TURKSTAT ve ITC World Trade Statistics

4.4. MAJOR IMPORT AND EXPORT PARTNERS OF TURKEY FOR ENGINEERING PLASTICS TRADE

The top 10 countries in which Turkey imports engineering plastics in 2016 are South Korea, S. Arabia, Germany, Italy, Iran, Belgium, USA, Netherlands, Uzbekistan and France. In 2016, imports from these countries accounted for 67 % of total imports. The total share of the other countries realized as 33 %.

The top 10 countries in which Turkey exported engineering plastics in 2016; Germany, Egypt, Russian Federation, Iran, Italy, Uzbekistan, Ukraine, Romania, Bulgaria and Israel. Exports to these countries in 2016 accounted for 52 % of total exports. The total share of the other countries realized as 48 %.

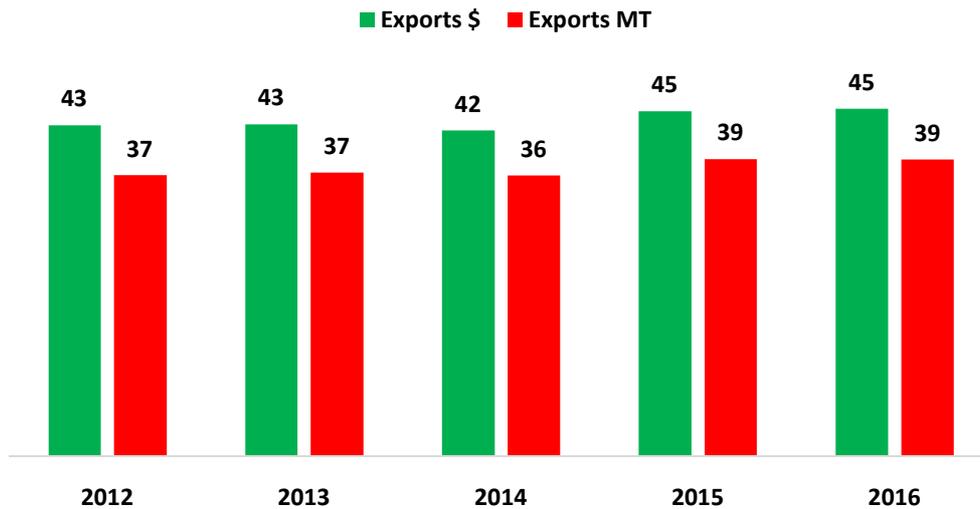


Graphic 12: Main Import and Export Partners of Turkey in Engineering Plastics Trade

Source: TURKSTAT and ITC World Trade Statistics

4.5. SHARE OF ENGINEERING PLASTICS EXPORTS IN TOTAL PLASTICS RAW MATERIALS EXPORTS IN TURKEY

Engineering plastics exports shared between 37 – 39 % in Turkey's total plastic raw material exports in the last 5 years on quantity basis while the share realized as 42 - 45 % on value basis.



Graphic 13: Share of Engineering Plastics in Total Plastics Raw Materials Exports in Turkey (%)

Source: TURKSTAT and ITC World Trade Statistics

4.6. ENGINEERING PLASTICS AVERAGE FOREIGN TRADE PRICES IN TURKEY

Turkey's average import prices for engineering plastics fell from \$ 2.1/kg in 2012 to \$ 1.5/kg in 2016. The average import prices of Turkey's all plastic raw materials in 2016 were \$ 1.3/kg.

In this period, the average export prices decreased from 2 \$/kg to 1.4 \$/kg. The average export prices of Turkey's all plastic raw materials in 2016 were \$ 1.2/kg.



Graphic 14: Engineering Plastics Average Foreign Trade Prices in Turkey (\$/kg)

Source: TURKSTAT and ITC World Trade Statistics

The highest import price in 2016 was \$ 18.6/kg and the highest export price was \$ 14.3/kg for PVDF.

	Import Prices		Export Prices	
	2012	2016	2012	2016
Ultra-high-molecular-weight polyethylene (UHMWPE)	1,6	1,2	1,6	1,2
Acrylonitrile-Butadiene-Styrene (ABS)	2,4	1,6	1,8	1,8
Polyvinylidene fluoride (PVDF)	21,9	18,6	18,0	14,3
Polymethyl methacrylate (PMMA)	2,3	1,4	1,5	1,1
Polyoxymethylene (POM)	2,1	1,6	2,0	1,8
Polycarbonate (PC)	3,0	2,5	4,0	2,1
Polybutylene Terephthalate (PBT) Polyaryletheretherketone (PEEK), Thermoplastic polyester elastomer (TPE-E)	3,2	2,3	3,3	2,4
Polyphthalamide (PPA)	3,2	2,2	3,1	2,0



Liquid Crystal Polymers (LCP), Polyamide (PA), Polyarylsulfone (PSU/P/PPSU), Polyimide (PI)	4,5	3,4	2,0	1,1
Polyphenylene sulfide (PPS)	3,4	2,8	3,2	2,4
Average	2,1	1,5	2,0	1,4

Table 11: Engineering Plastics Average Foreign Trade Prices in Turkey by Types (\$/kg)

Source: TURKSTAT and ITC World Trade Statistics