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A close-up photograph of numerous small, cylindrical plastic granules in shades of blue and yellow, scattered across the page. The granules are piled together, creating a textured, industrial background.

CHEMICALS & PLASTICS INDUSTRY

IN TURKEY

FLANDERS INVESTMENT & TRADE MARKET SURVEY



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THE TURKISH CHEMICALS & PLASTICS INDUSTRY

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This report analyses the development of the chemical sector in Turkey, its current situation, strengths and weaknesses. We hope to shed some light on where and how Flemish companies can find business opportunities in one of the most important sectors in Turkey.

The Turkish chemical industry is one of the most important sectors contributing to the Turkish economy by means of its production and export. Due to provision of inputs to many subsectors and its vast range of products, the outstanding sector - associated with R&D and innovation - is anticipated to focus on high added-value production and increase its share in the global chemical sector. Like in many other sectors, a high dependency ratio on imports of raw materials, the global economy and uncertainties in the Turkish economy are adversely affecting the Turkish chemical sector's growth performance.

Approximately 300,000 people are employed in the Turkish chemical sector which has a capital oriented structure. 30% of the sector's products are directly offered to the domestic market, 70% of the products are intended as intermediate products and raw materials for other sectors. 66% of the employees and 81.7% of the entrepreneurs in the chemical sector operate in the plastics and rubber goods production. The chemical sector amounts for about 8% of the workforce in the production industry.

While approximately 22,000 enterprises, the majority of which are SMEs (Small and Medium Sized Enterprises), operate in the sector. With an 11% share of Turkey's total exports in 2016, around 2600 kinds of chemicals and preparations are produced by the chemical sector.

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1 TURKEY IN BRIEF

Capital City	Ankara
Population	79.8 million (2016)
Labour Force (Population)	30.7 million (2016, June)
Median Age	31.4 (2016)
Neighbouring Countries	Bulgaria, Greece, Syria, Iraq, Iran, Azerbaijan, Armenia, Georgia
Major Cities (Population)	Istanbul (14.8 million), Ankara (5.3 million), Izmir (4.2 million), Bursa (2.9 million), Antalya (2.3 million) (2016)
Currency	Turkish Lira-TRY
Financial Center	Istanbul
GDP	\$857.4 billion (IMF)
GDP Growth	2016: 2.9% (IMF)
GDP Per Capita	USD 10,807 (2016)
Unemployment Rate	2016: 10.8% (IMF)
Exports Value (FOB)	USD 142 billion (2016)
Imports Value (CIF)	USD 198 billion (2016)
Trade Volume	USD 341 billion (2016)
Trade Balance	USD -55,995 million (2016)
Number of Companies w/ Foreign Capital	53.2 thousand (2016)
Inflation Rate	8.53% (2016)
Major Exports Markets	Germany (9.1%); UAE (8.8%); Iraq (6.3%); UK (6.0 %)
Major Imports Sources	China (13.2%); Germany (11%); Russia (7.7%); USA (5.9%); Italy (5.2%)

Trade Agreements	<ul style="list-style-type: none"> • Customs Union Agreement with the EU, • Free Trade Agreements with Albania, Bosnia Herzegovina, Chile, Croatia, EFTA member countries (Switzerland, Norway, Iceland and Liechtenstein), Egypt, Georgia, Israel, Jordan, Macedonia, Montenegro, Morocco, Palestine, Serbia, Syria, Tunisia
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2 TURKEY CHEMICAL SECTOR OVERVIEW

The chemical sector is dependent on imports. 70% of raw materials used in the sector are imported as 30% are provided by domestic production. The main input to produce plastics is provided by the petrochemical sector (90%), which is a large scale, capital and technology oriented sector. The plastics and rubber sector is for more than 90% dependant on imports.

Because the chemical sector is a capital and technology intensive sector, labour concentration is low. Therefore, only about 300,000 people are employed. The chemical sector employs approximately 9% of the workforce in the production industry.

Due to its logistic needs, the chemical industry is mainly localized on the coastal regions of the country. Whereas most of the chemical companies producing petrol and petroleum products, detergents, soap, pharmaceutical chemicals and dyes are located in three large industrial cities, namely Istanbul, Kocaeli and Sakarya, in the Marmara Region and Izmir in the Aegean Region, the majority of fertilizer and petroleum product companies are concentrated in the Mediterranean Region. Furthermore, important production centres regarding main raw materials such as soda and bichromate are also present in the Mediterranean Region.

Approximately 2,600 chemicals and preparations are produced in the chemical sector and some of the methods and technologies used in these productions are at the same level and keeping pace with global competition. However, deficiencies of domestic production in plastics and plastic raw materials and the dependency on foreign sources for raw materials for the production of detergents, cleaning products, soap and natural rubber are significant barriers for the development of the sector.

The largest petrochemical company in Turkey is Petkim which used to be a public corporation and was privatized in year 2007. 51% of Petkim's equity was purchased by Socar-Turcas at the price of 2.04 billion USA dollars. 10% of the company still belongs to the Privatization Administration and the remaining 39% share is publicly traded on the Istanbul Stock Exchange Market. The annual capacity of Petkim's Aliağa petrochemical plant in Izmir is 3.2 million tons. LDPE, HDPE, PVC and PP products, master batches, fibres and aromatics are included in the product range of Petkim. These products are essential for construction, electricity, electronics, packaging, textiles as well as medical, dye, detergent and cosmetic sectors.

Petkim requires naphtha, which is the main ingredient for its products. Produced as raw material for many sectors, it is sourced both from the sole domestic producer Tüpraş and imported from overseas. Just like Petkim, Tüpraş which used to be a public corporation, was privatized in 2005, and is the only facility in Turkey processing raw petrol and operating oil refineries in Izmit, Izmir, Kırıkkale and Batman. The products produced by the company are; LPG, benzene, light and heavy naphtha, kerosene, light and heavy diesel oil and fuel-oil.

2.1 THE CHEMICAL SECTOR IN 2016

2016 has been a troubled year for the chemical sector just as for all other sectors. In a short summary, the growth rate decreased, export revenue went down, however imports increased. The fact that the chemical sector basically relies on SMEs (Small and Medium Sized Enterprises) caused the aforementioned problems to heavily impact these SMEs.

With an export turnover of 14 billion dollars, the chemical industry, keeping its finger on the pulse of Turkish industry, recorded a decrease of 9.49% in 2016 compared to the previous year while the quantity dropped 4.52% or 16 million 487 thousand tons. The reasons for the drop in exports turnover was the continuation of problems encountered in important markets and the decrease of export prices.

The Turkish chemical industry maintained its third position in exports after automotive and ready-to-wear industries in 2016 after all. The main export markets are Germany, Egypt, Iraq, Iran, Italy, England, Netherlands, USA, Greece and Saudi Arabia.

Subsectors that made a major contribution to the chemical industry exports in 2016 were: plastics and by-products with an export turnover of 4 billion 853 million dollars, mineral fuels, mineral oils and by-products (of 2 billion 678 million dollars) and rubber and rubber goods (1 billion 142 million dollar).

The chemical sector realized an export turnover of 15.5 billion dollars in 2015 however a decrease of 13.28% was encountered in value in 2016.

2.2 CHEMICAL SECTOR FIRST QUARTER NUMBERS FOR 2017

The chemical industry aims to export \$ 15.5 billion in 2017...

According to the Istanbul Chemicals and Chemical Products Exporter's Association (IKMIB), sector exports broke records for the first three months of 2017. A quantity of 1.888 million tons were exported in the first three months, an increase of 36.88% compared to the same period the previous year, representing increased turnover of 29.14% or 1.543 billion dollars.

Exports to the USA increased at record levels, reaching 108,004 tons (+321.54%) or 86.648 million USD (+165.10%) in March 2017 compared to the same period in 2016, and ranking the USA second as Turkey's most important chemical customer.

In the first quarter of 2017, chemical sector exports reached 5.208 million tons (+21.66%) with a value of 4.131 billion USD (+23.83%) compared to the same period the previous year.

In the January-March period, the sector's 10 most important export countries were: United Arab Emirates, Singapore, Germany, Egypt, Iraq, Italy, Spain, USA, Iran and Greece.

Looking at the first quarter export figures for the chemical subsectors: mineral oils and by-products are ranked first with an export turnover of 1.229 billion USD; plastics and by-products are second (1.227 billion USD); with rubber and rubber goods bringing up third place (302.36 million USD).

2.3 OUTSTANDING FACTS

Whereas industrial production in the chemical sector in 2016 increased by 3.8% compared to 2015, the capacity usage ratio dropped to 73.4%.

In the insecticide and other chemical subsectors, production displayed a rise of 19.3% and 11% respectively. As production of basic chemical substances, dyes and varnishes increased by a mere 1.3% and 0.7%, the increase in production of soap and detergents, artificial and synthetic fibres were 4.7% and 4.1% respectively.

The export turnover of the sector in 2016 was 6 billion USD whereas imports amounted 24.6 billion USD, with an export to import ratio of 24.6%. When compared to 2015, it is seen that export and import have decreased by %7.4 and %5.1 respectively.

The sector's largest export markets in 2016 were: Iran, Iraq, Italy, Egypt and China. These 5 countries represent a 26.3% share of the total exports. Exports to Russia, one of the most important export markets, dropped in 2016 by 32.6% compared to 2015.

In 2016, most chemical products imported came from Germany, China, Saudi Arabia, South Korea and France.

Whereas 30% of the sector's production directly reaches end customers, 70% is used as raw materials and intermediate products by other sectors. Given this fact, the activity rate of the manufacturing industry directly influences the performance of the chemical sector. In 2017, the sector is expected to follow a parallel route to the general course of the manufacturing industry.

The sector's relative high dependency on imports of raw materials, increases its sensitivity to foreign exchange rate rises. In 2017, a possible rise of oil prices, the main raw material of the sector, is expected to adversely affect production costs.

Although a concentration on export markets is not observed, the fact that overseas sales cover a relatively high ratio within the total turnover, increases the sensitivity of the sector to the evolution of the global economic activity.

The compliance with standards and regulations, primarily environmental legislations, create important costs for the sector. It is of high importance for the sector, especially with SMEs intensely operating in it, to develop R&D activities and tend towards products with high added value.

2.4 PRODUCTION AND EXPORT DATA

2.4.1 General Evaluation of the Sector's Production

Turkey has been manufacturing chemicals for a very long time, being a producer of many basic and intermediate chemicals and petrochemicals. The Turkish chemical production includes petrochemicals, inorganic and organic chemicals, fertilizers, paints, pharmaceuticals, soaps and detergents, synthetic fibres, essential oils, cosmetics and personal care products. The majority of chemicals production is done by the private sector.

In the chemical industry, 30% of the production is directly used by the consumers whereas 70% of production serves as intermediate goods and raw materials for other sectors. The Turkish chemical industry is dependent on imports especially for raw materials and technology. However, Turkey is among one of the leading countries in the world that has boron, chrome, soda ash and trona reserves.

The chemical industry, together with the sub-industries such as plastics and rubber, employ nearly 300,000 people and has about 6,200 companies manufacturing various chemicals. A very small percentage of existing companies have more than 150 employees. Most of the companies in the chemical industry, especially private sector companies, are located in Istanbul, Izmir, Kocaeli, Sakarya, Adana, Gaziantep and Ankara.¹

After the coup attempt in July 2016, the production in the manufacturing industry regressed by 5.9% annually, causing the production index of chemicals and chemical products to drop by 10.4%.

¹ Source: Ministry of Economy, 2016 Chemical Industry in Turkey Report

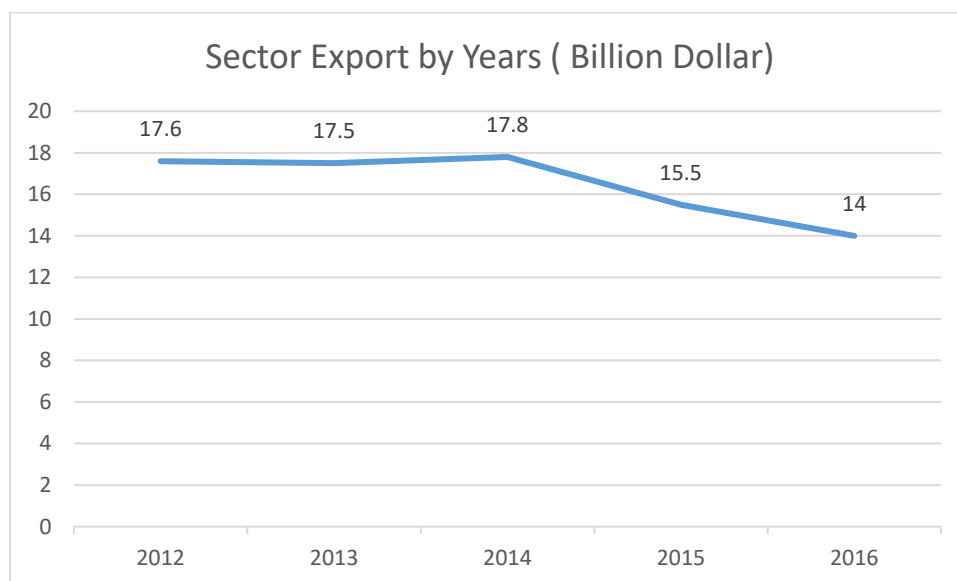
In a similar manner, an annual decrease of 3.9% and 10.5% was observed in June 2016 for basic pharmaceutical products and rubber and plastics products respectively. As for the first eight months of 2017, the manufacturing industry index increased by 5.1% compared to the same period a year earlier, the production index of chemicals and chemical products rose with 2.7%, a 0.6% rise in the production of basic pharmaceutical products and +4.4% in the production of rubber and plastics products.

2.4.2 General Evaluation of the Sector's Exports

According to the data announced by Turkish Exporters Assembly (TIM), chemicals and chemical products exports in 2016 realized 14 billion dollars, a 9.5% drop compared to 2015. When 2016 is examined at a monthly base, June noted the highest export turnover with 1.33 billion dollars whereas July is the month with the lowest export turnover (964 million dollars).²

The chemical sector managed to become the sector with the third highest export turnover in 2015. That year, Turkey's total export turnover was 143.9 billion dollars with the chemical sector having an export turnover of 15.469 billion dollars. Exports which decreased in value by 13.3% compared to the previous year increased by 12.6% in quantity. This shows that export efficiency increased but the drops in derivative products decreased the export turnover in value. While the ratio of the chemical sector in Turkey's 2015 total exports was 11%, this ratio regressed to 10% in 2016.

Figure 1: Chemical Sector Export by Years (2012 - 2016)



Source: TUIK - The Turkish Statistical Institute

According to the classification of Ministry of Economy made for the Turkish Chemical sector, in the first eight months of 2017, the sector's exports reached 11.9 billion USD, an increase of 14% compared to the same period in 2016.

Whereas the ratio of chemical sector export to total exports in 2016 was 10%, for the first eight months of 2017 it is already up to 11.5%.

While Germany, Egypt, Iraq and Italy were in the top 5 countries regarding exports accomplished in 2016, United Arab Emirates, Germany, Iraq, USA and Egypt took the first 5 places in 2017.

² A&T Bank Chemical Sector Report

The plastics and by-products group is ranked first in the total exports for chemicals and by-products with a turnover of 4.9 billion dollars and with a drop of 4.9%.

Table 1: Export Product Groups of Chemical Industry

Export Product Groups of Chemical Industry		
	2016 (USD)	% Change (2015 - 2016)
Plastics and derivatives	4.853.532.237	-4,86
Fuels / mineral oils	2.678.085.255	-25,70
Rubber and derivatives	1.142.001.428	1,78
Inorganic chemicals	1.064.414.815	-8,26
Pharmaceutical substances	777.769.946	-5,59
Soaps	762.467.771	-12,59
Perfumery and cosmetics	704.610.143	0,17
Dyes, sealants, varnishes	645.563.838	-5,90
Various chemicals	502.334.494	3,51
Organic chemicals	468.788.077	-0,11
Fertilizer	186.372.243	-17,97
Adhesives, enzymes	183.650.940	3,79
Substances for cinematography and photography	11.732.544	-7,67
Explosive materials	6.820.043	-32,43
Glycerine, Herbal Products, Degraded, Oily Ingredients	451.103	-37,82
Processed asbestos	360.970	29,6
Total	13.988.955.849	-9,49

Source: ITC - Trade Map

2.5 IMPORTS

Chemical sector imports in 2016 realized 58.7 billion USD, a drop of 17% compared to the previous year. In the same time interval, mineral fuels and oil imports, which comprises around 50% of the total chemical sector imports, regressed by 28.2% due to lower oil prices. Gunpowder and explosives followed with a drop of 14.4% and inorganic chemicals dropped 12.2%.

In the first eight months of 2017, due to the rise of oil prices, mineral fuels/oil sector imports showed a rise of 34%, followed by organic chemicals +17.6% and rubber and rubber goods +15%. Imports turnover of the chemical sector in the first eight months of 2017 observed to be 46.5 billion USD an increase of 20%. Whereas the share of the chemical sector in Turkey's total imports in 2016 was 29.6%, this share already rose to 31.2% in the first eight months of 2017.

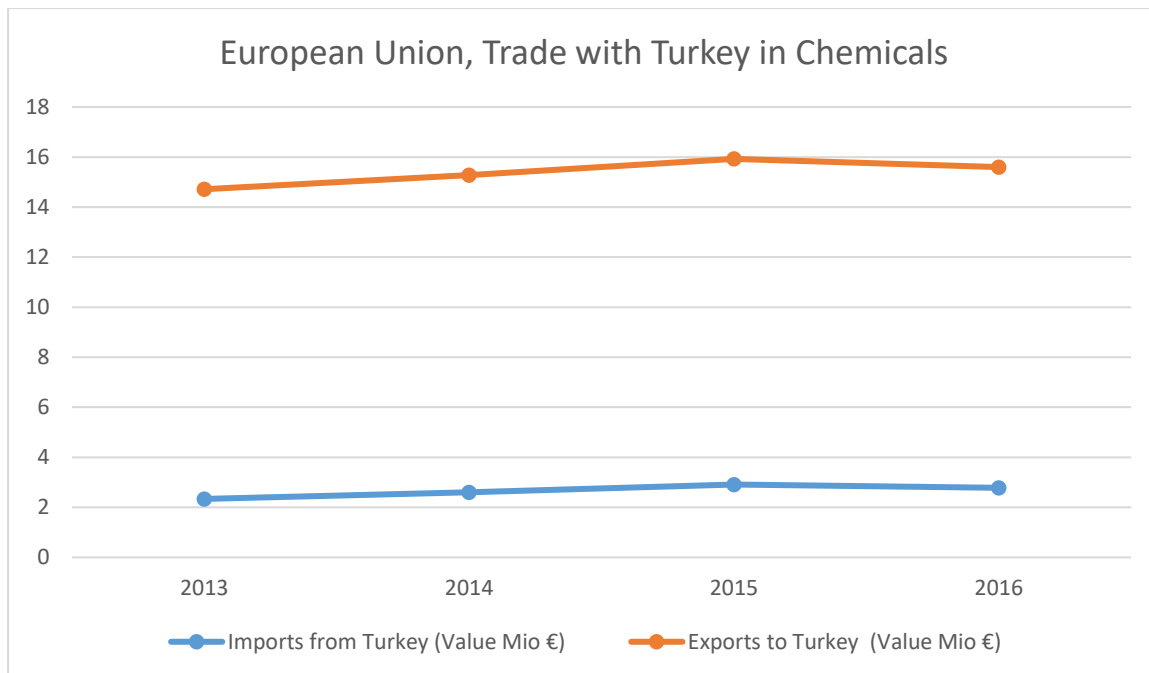
In 2017, Russia, Iran, India, Colombia and the USA were biggest suppliers of mineral fuels and oils comprising around 50% of the total chemical sector imports. Germany, Saudi Arabia, South Korea, China and Belgium were the top 5 suppliers for plastics and by-products imports with a share of around 20% of the sector's total imports.

Table 2: Import Product Groups of Chemical Industry

Import Product Groups of Chemical Industry (Value: US\$ 1,000)					
	2014	2015	2016	2016 (January - August)	2017 (January - August)
Fuels / mineral oils	54.889.415	37.843.294	27.169.080	17.430.602	23.354.890
Inorganic chemicals	1.593.624	1.388.743	1.219.692	827.430	891.813
Organic chemicals	5.833.426	4.715.525	4.359.682	2.947.611	3.466.661
Pharmaceutical substances	4.428.199	4.296.440	4.217.114	2.791.963	2.772.705
Fertilizer	1.470.997	1.250.919	1.275.609	883.067	907.670
Dyes, sealants, varnishes	2.122.901	1.808.606	1.738.937	1.194.587	1.302.884
Perfumery and cosmetics	1.191.615	1.101.905	1.113.776	764.141	797.777
Soaps	876.310	779.400	772.612	521.940	565.536
Albuminoid products	552.580	466.029	435.625	292.615	295.683
Explosive materials	60.323	55.052	47.137	30.808	31.851
Substances for cinematography and photography	193.671	156.804	145.579	99.090	88.487
Various chemicals	2.276.076	2.049.569	2.024.132	1.411.755	1.460.186
Plastics and derivatives	14.150.792	12.268.256	11.627.985	7.893.031	8.716.916
Rubber and derivatives	2.856.423	2.525.199	2.560.926	1.636.192	1.877.001
Total	92.496.352	70.705.741	58.707.887	38.724.832	46.530.062

Source: TUIK - The Turkish Statistical Institute

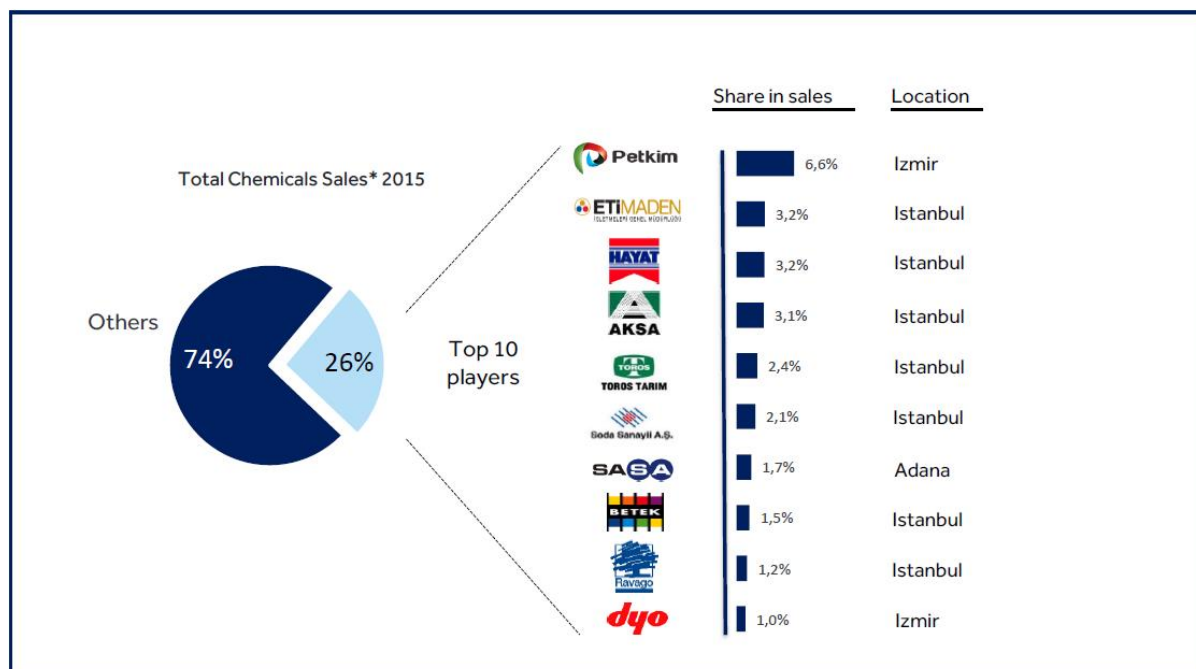
Figure 2: EU – Turkey Trade in Chemicals



Source: European Commission Directorate-General for Trade 03-05-2017 1 Units A4 / G2 European Union, Trade in goods with Turkey, p. 4. http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113456.pdf

2.6 MAJOR COMPANIES IN THE CHEMICAL SECTOR

There are around 20K companies in Turkey's chemicals sector, with both local and foreign players active in the sector.











Source: ISO 500 2015, Nace20. Pharmaceutical and Plastics & Rubber companies excluded, *production sales

The biggest player in the sector is the petrochemical group Petkim. In 2007, SOCAR, Azerbaijan's national oil company, acquired a majority stake in Petkim. The remaining 39% of shares are

listed on the Istanbul Stock Exchange. By order of magnitude, Petkim is followed by Eti Maden, Hayat, Aksa, Tarim Toros, SaSa, Betek, Ravago and Dyo. Several Western multinationals have also invested in Turkey: St-Gobain, Clariant, Sanofi, Pierre Fabre, Servier, Basf, Bayer, Solvay, Dupont ...

2.6.1 Strong international presence in Turkey



 <ul style="list-style-type: none"> Operational in Turkey for 137 years 6 manufacturing facilities & 7 offices in Turkey for chemicals, agricultural solutions, performance products, functional materials Uses Turkey as a management hub for Russia & CIS, Middle East and Africa Over 750 employees 	 <ul style="list-style-type: none"> Operational in Turkey for 30 years Manufactures products for safety, industrial, personal care, automotive, appliance & healthcare Opened a super hub and an innovation center in 2015 Uses Turkey as one of the management hubs for the region Exports 60% of its production
 <ul style="list-style-type: none"> Operational in Turkey for 30 years Award winning exporter with over 20% of production in Turkey exported to more than 10 countries USD 700 million of investment in manufacturing facilities Employment for 2,500 people Uses Turkey as a regional hub 60% of products sold in Turkey produced locally 	 <ul style="list-style-type: none"> Operational in Turkey for around 60 years HQ & innovation center in Istanbul, seed conditioning & processing plant facility in Adana, sunflower R&D center in Lüleburgaz 200 employees
 <ul style="list-style-type: none"> Operational in Turkey for around 55 years 3 factories and 8 regional sales offices Over EUR 50 million of investment in past 5 years Around 1,500 employees 	 <ul style="list-style-type: none"> Operational in Turkey for around 55 years More than 500 employees in 6 locations in Turkey 3 production facilities: starch & sweeteners in Bursa, fats & oils in Balıkesir, oleo-chemicals in Kocaeli Manages 19 countries from Turkey
 <ul style="list-style-type: none"> Operational in Turkey for over 100 years Over 5,000 employees 8 manufacturing facilities of food, home care, personal care & refreshment products New personal and homecare factory in Konya creating an investment ecosystem of EUR 350 million Uses Turkey as a key regional hub for exports to 21 countries 	 <ul style="list-style-type: none"> Operational in Turkey for over 45 years 4 factories in Turkey for STYROFOAM™ Brand Insulation, paint, polyurethane & plastic additives DowAksa JV for carbon fiber production in Yalova & DCM JV with Polisan for emulsion production in Gebze Uses Turkey as a regional export hub for Eastern Europe & Middle East Around 260 employees

Source: Agency for Support and Investment Promotion of the Republic of Turkey

3 SUB-SECTOR: PLASTIC SECTOR IN TURKEY

As of the end of June 2017, 4.7 million tons and 17.7 billion dollars' worth of plastics production was realized and if this progression continues, the production is expected to rise to 9.4 million tons with a value of 35.5 billion dollars. In this case one can expect that the total plastics production in 2017 may increase by 6.3% at quantity base and 5% at value base compared to 2016.

The average capacity usage in the plastics sector in June 2017 was 75.8% which was 3.2% behind the average capacity usage of general manufacturing industry (79%).

As of the end of June 2017, plastic packaging materials, with a production volume of 1.885 million tons, set the pace within the total plastics production of 4.7 million tons, followed by plastic construction materials with a volume of 1.37 million tons.

During 2012-2016 periods, an annual average of 821 million dollars' worth of machinery and equipment investments were made. Presses and other machineries comprised 37% of the total investment, injection machinery 23%, extrusion machinery 19%, thermoform machinery 4%, bulging machinery 2%, accessories and parts 15%.

Machinery and equipment investment in the plastics sector realized 441 million dollars at the end of June 2017. If this rate continues, it is estimated to reach 883 million dollars by the end of 2017, with an increase of 0.3% compared to 2016.

At the end of June 2017, 37% of these total investments were presses and other machinery, 19% injection machinery, 15% extrusion machinery, 22% accessories and parts. Thermoform and bulging machinery held a share of 3% and 4% in the total investment value respectively.

3.1 PLASTIC SECTOR EXPORTS

As of the end of June 2017, 798 thousand tons of plastic products with a value of 2.86 billion dollars were exported. At the same rate, plastic product exports are estimated to reach 1.6 million tons with a value of 4.17 billion dollars. An increase of 3% at quantity base and 1.6% at value base compared to 2016.

At the end of June 2017, the product groups with the biggest export share both in quantity (46%) and value (42%) were product groups with customs tariff number of 3920 (other sheets made of plastics, leaves, pellicles and lams) and 3923 (plastic products for the packaging of goods handling, plugs, lids, capsules).

Turkey exports plastic products to approximately 150 countries. At the end of June 2017, 10 countries had a share of 47% in quantity and 45% in value of the total exports of plastic products. Iraq, Germany, England, Israel and France were the foreign markets who received most of the exports.

Table 3: Chemical Sector Export by Countries

2016					2017/6				
Country	1000 Ton	Million \$	Ton - %	\$ -%	Country	1000 Ton	Million \$	Ton - %	\$ -%
Iraq	199	373	12,8	9,1	Iraq	107	196	13	9
Germany	87	299	5,6	7,3	Germany	42	151	5	7
England	78	197	5,1	4,8	England	37	97	5	5
France	52	168	3,4	4,1	Israel	44	97	5	5
Israel	74	167	4,8	4,1	France	26	81	3	4
Romania	54	142	3,5	3,4	Bulgaria	22	78	3	4
Italy	52	136	3,4	3,3	Italy	27	70	3	3
Iran	43	132	2,7	3,2	Romania	25	66	3	3
Bulgaria	44	126	2,8	3,1	Algeria	24	57	3	3
Georgia	46	103	3	2,5	Spain	20	52	2	3
10 Country	729	1.842	47	44,8	10 Country	375	945	47	45
Others	821	2,267	53	55,2	Others	424	1.141	53	55
TOTAL	1.551	4.109	100	100	TOTAL	798	2.086	100	100

Source: TUIK - The Turkish Statistical Institute

3.2 PLASTIC SECTOR IMPORTS

At the end of June 2017, 300 thousand tons or 1.474 billion dollars of plastic products were imported. At this rate, estimates are that by the end of 2017, 600 thousand tons (2.949 billion dollars) will be reached, an increase of 1.8% in quantity and 0.7% in value compared to 2016.

Over the first 6 months of 2017, the product groups with customs tariff number of 3920 (other sheets made of plastics, leaves, pellicles and lams) had a 44% quantity and 32% value share in the total plastics imports.

Each year, Turkey imports plastic products from over 100 countries. At the end of June 2017, 10 countries represented 70% (quantity) and 73% (value) of the total plastics imports. Since 2014, China is the biggest supplier of plastic products. Late June 2017, China's share was 24% (quantity) and 18% (value), retaining its first place for volume and sharing the first place together with Germany when looking at the value of imports. Besides these two countries, Italy, South Korea and France retain their position amongst the countries which supply plastics tot Turkey.

Table 4: Chemical Import by Countries

2016					2017/6				
Country	1000 Ton	Million \$	Ton - %	\$ - %	Country	1000 Ton	Million \$	Ton - %	\$ - %
China	157	602	26,6	20,6	China	71	268	24	18
Germany	94	547	15,9	18,7	Germany	47	263	16	18
Italy	52	252	8,7	8,6	Italy	28	133	9	9
South Korea	35	212	5,9	7,2	South Korea	18	107	6	7
France	28	185	4,8	6,3	France	15	95	5	6
USA	13	128	2,2	4,4	USA	6	61	2	4
England	12	96	2,1	3,3	England	7	51	2	3
Belgium	15	70	2,5	2,4	Japan	3	36	1	2
Japan	5	66	0,9	2,2	Spain	7	34	2	2
Spain	11	60	1,9	2	Belgium	7	34	2	2
10 Country	422	2.219	71,6	75,8	10 Country	209	1.082	70	73
Others	168	710	28,4	24,2	Others	91	393	30	27
TOTAL	589	2.928	100	100	TOTAL	300	1.474	100	100

Source: TUIK - The Turkish Statistical Institute

3.3 EXPECTATIONS

Considering the first 6 months of 2017, estimates are:

- Production volume to increase by 6.3% (production value +5%), import volume +1.8% (value +0.7%), export volume +3% (value +1.6%), domestic consumption volume +6.6% (value +5.1%) and foreign trade surplus in volume +3.7% (in value +3.6%),
- Looking at the volume the export share of the total production is expected to remain at 17% and the import share within domestic production to remain at 7%.
If we look at the value, the share of exports within production is expected to stay at the same level at 12% and the share of imports within domestic production to stay at the same level (9%).
- Export to import ratio by turnover to increase from 263% up to 266% (for volumes) and to increase up to 141% from 140% (looking at the value).³

3.4 PLASTIC RAW MATERIALS IN TURKEY

For the first 6 months of 2017, the total production of plastic raw materials is estimated to be around 507 thousand tons.

AYPE constituted 31% of the total plastic raw materials produced in Turkey by the end of May 2017, whereas YYPE is 9%, PVC 15%, PP 12%, PS 10% and PET 23%.

At the end of June 2017, plastic raw materials imports amounted to 3.498 million tons with a value of 4.9 billion dollars. If this trend continues, plastic raw material imports at the end of 2017 are estimated at 6.99 million tons and 9.82 billion dollars with an increase of 7.3% (volume) and 12.9% (value) compared to 2016.

Late June 2017 polyethylene and polypropylene had the largest share in imports of plastic raw materials, both volumes 56% as in value 52% with a share of 56%.

For the supply of raw materials, Turkey is still highly dependent on imports, which amount 87% of the total supply.

Turkey imports plastic raw materials from over 100 countries. In the first 6 months of 2017, 10 countries represented 62% of the imported volumes and 64% of the imported value. Of these 10 countries Saudi Arabia, Germany and South Korea supplied 32%

At the end of June 2017, Turkey exported 409 thousand tons of plastic raw materials with a value of 541 million dollars. At the same rate, total exports for 2017 are expected to reach 818 thousand tons (1.82 billion dollars), increasing the volume 9.9% and the value 17.8% compared to 2016.

Turkey supplies plastic raw materials to more than 100 countries. For the first semester of 2017, 10 countries had a 49% share (in both volume and value) in the Turkish exports of these raw materials, with Italy, Germany, Iran, Egypt and Russian Federation being the top importers.⁴

³ A&T Bank

⁴ PAGEV Turkish Plastic Industry Foundation, Turkey Plastic Sector Monitoring Report / <https://www.pagev.org/upload/files/Hammadde%20Yeni%20Tebli%C4%9F%20Bilg.%203/T%C3%BCrkiye%20Plastik%20Sekt%C3%B6r%20C4%B0zleme%20Raporu%202017%20-%206%20Ay1%C4%B1k.pdf>

3.5 PRINCIPAL COMPANIES IN THE PLASTICS SECTOR

The 2016 list of "Turkey's 500 Largest Industrial Corporations" published by the Istanbul Chamber of Industry, highlighted once again that the Turkish plastics sector retains its importance. According to the evaluations made by the Plastics Industrialists Association (PAGDER) regarding the data given in the list, net sales of 14 plastics enterprises - regarding their products - included in the 500 listed corporations dropped by 5.4%.

The president of the Plastics Industrialists Association (PAGDER), Reha Gür, evaluating "Turkey's 500 Largest Industrial Corporations" list in respect of the plastics sector, said "Regardless of the fact that according to NACE code, 14 plastics companies are included in the list, when companies with plastics production classified in different NACE categories are considered, 37 industrial corporations operating in plastics sector are placed in ISO 500 list".









Table 5: Main Plastic Sector Companies in Turkey

Plastic Sector Companies in the Istanbul Chamber of Industry; Turkey's Top 500 Industrial Enterprises List (2016)			
1	Köksan Pet ve Plastik	8	Elif Plastik
2	Koroza Ambalaj	9	Vatan Plastik
3	Ege Profil	10	George Fischer Hakan Plastik
4	Naksan Plastik	11	Form Sünger
5	Adopen Plastik	12	Kalde Klima
6	Süper Film Ambalaj	13	Sepaş Plastik
7	Polibak Plastik	14	Süperlit Boru

4 SELECTED SECTOR RELATED FAIRS IN TURKEY

Date	Name	Main Products	Venue	Organizer Info
22-24 March 2018	Paintistanbul & Turkcoat	Paint, Paint Raw Materials, Construction Chemicals, Adhesives and Raw Materials, Laboratory and Production Equipments	Istanbul Expo Center	Artkim Fuarçılık Tel: +90 212 324 00 00 Fax: +90 212 324 37 57 http://www.turkcoat-paintistanbul.com www.artkim.com.tr sales@artkim.com.tr
25-27 October 2018	Interdye & Textile Printing Eurasia	Dyestuff, Pigments, Textile Chemicals, Digital Textile Printing, Dyeing and Printing Technologies	Istanbul Expo Center	Artkim Fuarçılık Tel: +90 212 324 00 00 Fax: +90 212 324 37 57 http://www.interdyeprinting.com/ www.artkim.com.tr sales@artkim.com.tr
8-10 November 2018	Turkchem Chem Show Eurasia	Chemicals, Commodity Chemicals, Petrochemicals and Chemical Intermediates	Istanbul Expo Center	Artkim Fuarçılık Tel: +90 212 324 00 00 Fax: +90 212 324 37 57 http://www.chemshoweurasia.com www.artkim.com.tr sales@artkim.com.tr
5 - 8 December 2018	Plast Eurasia Istanbul	Packaging, Plastics and Rubber Processing	TUYAP Istanbul	Tüyap Fuarçılık Tel: +90 212 867 11 00 Fax: +90 212 886 67 37 http://plasteurasia.com/ http://tuyap.com.tr

5 SECTOR ESTABLISHMENTS & INSTITUTIONS

Name	Logo	Web Page	What They Do
PAGEV - Turkish Plastics Industry Foundation		http://www.pagev.org.tr/	PAGEV follows the latest developments in plastics production techniques throughout the world. Its main aim is help the sector conform to world standards and to contribute to the development of local plastics production.
BOSAD - The Association of Paint Industry		http://en.bosad.org/	BOSAD mission is to contribute to the development of the Turkish paint and coatings industry, to increase national paint consumption, to provide consumers with modern and eco-friendly products, and to contribute to the EU integration process on a sectorial basis.
Association for Fertilizer Producers and Importers		http://www.guid.org.tr/	GUID raises awareness of problems within fertilizer production as well as covering issues regarding import and export by organizing seminars and fairs in Turkey. Moreover, it ensures proper adaptation of the sector to the regulations published by EU and local regulations.
The Association of Cosmetics and Cleaning Products Industrialists		http://www.ktsd.org.tr/	KTSD's mission is to support the development of the cosmetics and cleaning products industry in Turkey as well as to ensure consumers' access to healthy, reliable and high-quality products by raising overall awareness.
Turkish Plastics Industrialists' Federation		http://www.plasfed.org.tr/	PLASFED's mission is to inform the industry about subjects that include regulations, taxes, technology, employment, personnel, health and safety. It oversees plastics production so it is sustainable and eco-friendly as well as creating public awareness for this process.
Turkish Chemical Manufacturers Association		http://www.tksd.org.tr/	TKSD holds discussions and negotiations with government authorities and the representatives of the Turkish chemical industry both nationally and internationally.
Turkish Chemical Society		http://www.turchemsoc.org/	TKD has been in operation since 1919. The society has many objectives including supporting cooperation between foreign and Turkish institutions and providing up-to-date information on every subject within chemicals industry.
TMMOB Chamber of Chemical Engineers		http://www.kmo.org.tr/	The Chamber consists of 12 representatives in various cities in Turkey and aims to protect natural resources, create growth in agricultural production, protect the rights of consumer and contribute to the development of chemical engineering.

6 NEW TURKISH REGULATION ON REGISTRATION, EVALUATION, AUTHORISATION AND RESTRICTION OF CHEMICAL SUBSTANCES

TurkREACH (KKDIK) is the Turkish Ministry of Environmental and Urbanisation (MoEU) Regulation on chemicals and their safe use, which was published on June 23rd, 2017. It deals with the registration, evaluation, authorisation and restriction of chemical substances.

TurkREACH KKDIK addresses the use and production of chemical substances, and their potential impacts on both the environment and human health. TurkREACH KKDIK will be the most comprehensive and stringent Turkish chemical legislation to date. Although some parts of the legislation have come into force like [TR-CICL](#), due to the vast amount of chemicals used in Turkey it will not be fully implemented until the end of the decade.

TurkREACH KKDIK requires all companies producing chemical substances in Turkey or importing them in quantities over one ton per year to register these substances with the Turkish Ministry of Environmental and Urbanisation (MoEU).

The regulation foresees three registration phases and phase dates will be announced by publishing the final regulation.

This registration is only one aspect of the regulation, evaluation and authorisation/restriction being the complementary ones.

You can [download](#) the English version of TurkREACH KKDIK Regulation or continue to view it [online](#).

Registration

TurkREACH KKDIK requires manufacturers and importers of chemical substances (larger than or equal to 1 ton/year) to obtain information on the physicochemical, health and environmental properties of their substances and use it to determine how these substances can be used safely. Each manufacturer and importer must submit a registration dossier documenting the data and assessments to MoEU.

[Read more about TurkREACH KKDIK & Registration](#)

Evaluation

MoEU will perform an evaluation of the dossier to assess the testing proposals made by the registrant or to check that the registration dossiers complies with the requirements. MoEU will also co-ordinate substance evaluation, which will be conducted by the Member States to investigate in depth the chemicals concerned.

[Read more about TurkREACH KKDIK & Evaluation](#)

Authorisation

Authorisation is required for the prioritised substances of very high concern (SVHC). Companies applying for authorisation will have to demonstrate that risks associated with uses of these substances are adequately controlled or that the socio-economic benefits from their use outweighs the risks.

Applicants will also have to investigate the possibility of substituting these substances with safer alternatives or technologies, and prepare substitution plans, if appropriate.

[Read more about TurkREACH KKDIK & Authorisation](#)

Restriction

Turkish MoEU can impose restrictions and prohibit or set conditions for the manufacture, who wants to place on the market or use of certain dangerous substances or group of substances when unacceptable risks to humans or the environment have been identified⁵

[Read more about TurkREACH KKDİK & Restriction](#)



About "Risk-Based Trade Control System (TAREKS)"

"Risk-Based Trade Control System (TAREKS)" has been launched at the end of 2010 by the Ministry of Economy to carry out safety and quality checks on export and import goods electronically and on risk basis. Designed to be reached from the web using eSignature, the new control system mainly targets to increase the efficiency of the trade policy, to provide safe and quality products to consumers and firms, rationalize the resource allocation vis-à-vis the control of "risky" products and traders and reduce the waiting periods at the customs.

⁵ Source: TURKREACH- The New Turkish Reach Regulation Adopted to EU Reach

The System encompasses goods of vital importance to consumers like personal protective equipment, toys, batteries and accumulators, construction products, radio and telecommunications terminal equipment, medical devices, machines, lifts, pressure equipment, electrical and electronic equipment, some industrial inputs, raw materials, shoes etc. which are subject to product safety inspections. It also includes agricultural products inspected by the Ministry for commercial quality.

Safety and Quality Control System On Import & Export

1) Safety controls on import:

The Import control system under the Regime on Technical Regulations and Standardization for Foreign Trade in Turkey has been subject to modifications since 2004 with the aim of harmonization of the European Union (EU) technical legislation.

In this regard, the "Decree of Council of Ministers on the Regime on Technical Regulations and Standardization for Foreign Trade" and the legislation published based on the mentioned decree was reviewed in order to enable the relevant EU legislation to be implemented in Turkey at the import stage. Related Communiqués are listed below:

- Communication of Product Safety and Inspection No. (2017/1)

In accordance with the Communication on Product Safety and Inspection No. 2017/1 (Official Gazette, d. 30/12/2016 and no. 29934), industrial products within the scope of some Turkish Standards, which are at the same time mandated in the domestic market, are subject to inspection by the Turkish Standards Institution (TSE). The inspections are carried out in respect of minimum health, safety and protection of environment, providing adequate information to the consumers.

- Communication of Product Safety and Inspection No. (2017/2)

According to this communication, the importation of agricultural products classified in chapters 1-24 originated in or exported from Japan are subject to a conformity certificate issued by the Turkish Atomic Energy Authority upon the control for radioactivity.

- Communication of Product Safety and Inspection No. (2017/3)

This communication includes waste whose import is controlled (Annex I) or prohibited (Annex II) in accordance with the European Waste Catalogue and the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal.

According to this communication, import of waste whose certificate of analysis, certificate of radiation, proforma invoice etc. are submitted to the Ministry of the Environment and Urbanization previously, are subject to physical control and sample analysis carried out by the ministry in question. Following the conformity assessment procedure, the conformity document which is required to be submitted to the customs authorities during import stage, is issued by the Ministry.

- Communication of Product Safety and Inspection No. (2017/4)

According to this communication, the import of drugs and psychotropic substances which can be imported only through the permission of Ministry of Health according to relevant international agreements are subject to the control of the ministry.

- Communication of Product Safety and Inspection No. (2017/5)

Communication on inspection of import of products that are subject to permission from the Ministry of Food, Agriculture and Livestock (Product Safety and Inspection: No: 2017/5), (Official Gazette, d. 30/12/2016 and no. 29934)"

The purpose of this communiqué is to regulate the principles and procedures with regard to the conformity inspection regarding the human health and safety, animal and plant existence in import of the products lay down in appendices. Certificate of conformity is arranged for all products in all appendices by the Ministry of Food, Agriculture and Livestock. Physical controls and sample analyses are also carried out by the ministry.

➤ Communication of Product Safety and Inspection No. (2017/6)

Annex I of this communiqué comprises the hazardous chemicals whose import is prohibited. For the importation of chemical products having the National Tariff Line of 2903.71.00.00.00, which are listed in the annex I of this communication, the importer shall receive the control certificate issued by the Ministry of the Environment and Urbanization. The documents that are required to get the control certificate are stated in the communication, such as proforma invoice, certificate of analyses, the label of the product etc. The control certificate should be submitted to the customs authorities during the import stage.

➤ Communication of Product Safety and Inspection No. (2017/7)

For the importation of some solid fuels, which are listed at the annex I of this communication, the importer shall receive the conformity document issued subsequent to physical control and sample analysis carried out by the Ministry of the Environment and Urbanization. The documents that are required to get the conformity document are defined in the communication, such as proforma invoice, certificate of analyses etc. The importer shall submit the conformity document to the customs authorities during the import stage.

➤ Communication of Product Safety and Inspection No. (2017/8)

In accordance with the Communication of Product Safety and Inspection No. 2017/8 (Official Gazette, d.30/12/2016 and no. 29934), import controls for Radio and Telecommunication Terminal Equipment, are implemented as of 1/5/2006 coherent with the EU legislation.

➤ Communication of Product Safety and Inspection No. (2017/9)

Communication on Product Safety and Inspection No. 2017/9, machinery, low voltage equipment, electromagnetic compatibility, pressure equipment, simple pressure vessels, transportable pressure equipment, appliances burning fuels, lifts and hot-water boilers are subject to product safety controls based on mainly document checks and physical controls by the Turkish Standards Institution (TSE) at import stage. The inspections are carried out with respect of essential requirements which are laid down in the technical regulations regarding these products.]

➤ Communication of Product Safety and Inspection No. (2017/10)

In accordance with the Communiqué of Product Safety and Inspection No. 2017/10 (Official Gazette, d. 30/12/2016 and no. 29934), import controls of toys are implemented as of 12/12/2005, coherent with the EU legislation.]

➤ Communication of Product Safety and Inspection No. (2017/11)

With the Communication of Product Safety and Inspection of No. 2017/11 (Official Gazette, d.30/12/2016 and no. 29934), the safety controls for imports of the personal protective equipment are implemented coherent with the EU legislation.]

➤ Communication of Product Safety and Inspection No. (2017/12)

"Communiqué on Import of Certain Consumer Products Subject to Control by the Ministry of Customs and Trade" aims to regulate the principles and procedures with regard to the conformity inspection regarding the human health and safety, environmental and consumer protection in import of the baby care products like nipple, baby bottle, etc. and some stationery products taking place in the annex I of this communiqué.

➤ Communication of Product Safety and Inspection No. (2017/14)

Communication on Product Safety and Inspection No. 2017/14, which regulates import controls of construction products cement, iron and steel construction products etc. The communication was published in the Official Gazette dated 30/12/2016 and no 29934. The communication is in force as of 1/3/2007.

- Communication of Product Safety and Inspection No. (2017/15)

The Communication of Product Safety and Inspection No. 2017/15 (Official Gazette, d.30/12/2016 and no. 29934), was published to regulate import controls of batteries and accumulators.

- Communication of Product Safety and Inspection No. (2017/16)

Communiqué on Product Safety and Inspection No. 2017/16, which regulates import controls of medical devices such as in vitro, active implantable medical devices etc. The communiqué was published in the Official Gazette dated 30/12/2016 and no 29934.

- Communication of Product Safety and Inspection No. (2017/17)

According to this Communication, the importation of forestry material listed in annex I, importers should obtain a control certificate issued by the Ministry of the Forestry and hydraulic works in coordination with the Ministry of Food, Agriculture and Livestock.

The importer should submit the control certificate to the custom authorities during the import stage.

- Communication of Product Safety and Inspection No. (2017/18)

The Communication of Product Safety and Inspection No. 2017/18 (Official Gazette, d.30/12/2016 and no. 29934), was published to regulate import controls of shoes regarding their phthalate content.

- Communication of Product Safety and Inspection No. (2017/19)

Communication on Import Inspection of Tobacco, Tobacco Products, Alcohol and Alcoholic Beverages (Product Safety and Inspection: 2017/19), (Official Gazette, d. 30/12/2016 and no. 29934)”

The purpose of this communication is to regulate the principles and procedures with regard to the conformity certification regarding market security and health, documentation, notification and inspection of the products, which are tobacco, tobacco products, alcohol and alcoholic beverages in importation thereof.

- Communiqué of Product Safety and Inspection No. (2017/20)

According to this communication, importation of certain goods such as pharmaceutical products, medicines, some chemicals, etc., is subject to the control of Ministry of Health.

For the importation of these goods, the importer shall submit some documents such as the proforma invoice or invoice, the health certificate and certificate of analysis etc. to the Ministry of Health before the import stage. The importer should submit the Control Certificate to the custom authorities during the import stage.]

- Communication of Product Safety and Inspection No. (2017/23)

For the importation of scrap metals listed in the annex I of this communication, the importer shall receive a “metal scrap importer document” issued by the Ministry of the Environment and Urbanization. The “Metal scrap importer document” is merely given to those firms who are licensed by the Ministry and have scrap melting facilities. According to the communication, import of the metal scraps should be done only in border customs authorities which have installed a radiation detection system.

On the other side, annex II of this communication comprises the dangerous scraps whose import is prohibited.

- Communication of Product Safety and Inspection No. (2012/25)

Communication on Export and Import Inspections of Cotton (Product Safety and Inspection: 2012/25) (Official Gazette, d. 08/06/2012 and no. 28317)”

This communication lays down principles and procedures relating to export, import and internal market controls of cotton.]

- Communication of Product Safety and Inspection No. (2012/27)

Communication on Standardization of Cotton (Product Safety and Inspection: 2012/27) (Official Gazette, d. 14/08/2012 and no. 28384)”

This communication lays down principles and procedures relating to the infrastructure conditions of factories that are subject to classification and control of cotton, determination of cotton class and types, packaging, marking, sampling and analysis for control processes.

2) Quality controls on export:

- Communication of Product Safety and Inspection No. (2017/21)

Communication on Commercial Quality Inspection on Export and Import for Certain Agricultural Products (Product Safety and Inspection: 2017/21)(Official Gazette, d. 30/12/2016 and no. 29934)”

Certain agricultural products are in the scope of products which are mandatory to be up to specific standards with respect to quality compliance with the commercial quality on exportation. This communication lays down principles and procedures relating to risk based inspections of these products with respect to quality compliance with the commercial quality standards at export stage.

- Communication of Product Safety and Inspection No. (2017/22)

Communication on the Classification of the Firms with the Purpose of Risk Based Commercial Quality Controls of Exports (Product Safety and Inspection: 2017/22) (Official Gazette, d.30/12/2016 and no. 29934)”

This communication lays down the principles and procedures regarding the classification of firms exporting products subject to commercial quality inspections on exports, specifications on which the classification is to be based, the rights and obligations of the firms for which the classes are determined, to determine how and how often the products on export subject to commercial quality inspection shall be subject to commercial quality inspection.⁶

6

https://www.economy.gov.tr/portal/faces/oracle/webcenter/portalapp/pages/content/htmlViewer.jspx;jsessionid=4Slri1WXAi7JkoUbCvKa3l234vCrFGWYP_jSI3sS0VDRYo7V48zZ!-326016645?contentId=UCM%23dDocName%3AEK-172703&parentPage=urun&_adf.ctrl-state=ytvs6c9y4_1&_afLoop=11802223115182559&_afWindowMode=0&_afWindowId=null#!%40%40%3F_afWindowId%3Dnull%26_afLoop%3D11802223115182559%26contentId%3DUJCM%2523dDocName%253AEK-172703%26parentPage%3Durun%26_afWindowMode%3D0%26_adf.ctrl-state%3Dytvs6c9y4_5

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The information in this publication is provided for background information that should enable you to get a picture of the subject treated in this document. It is collected with the greatest care based on all data and documentation available at the moment of publication. Thus this publication was never intended to be the perfect and correct answer to your specific situation. Consequently it can never be considered a legal, financial or other specialized advice. Flanders Investment & Trade (FIT) accepts no liability for any errors, omissions or incompleteness, and no warranty is given or responsibility accepted as to the standing of any individual, firm, company or other organization mentioned.

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