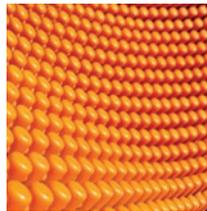




**U.S.  
COMMERCIAL  
SERVICE**

United States of America  
Department of Commerce



# PLASTICS MATERIALS AND MACHINERY EXPORT GUIDE

A Reference for U.S. Exporters in the Plastics Industry



**Prepared by:**  
U.S. Commercial Service, Commercial  
Specialists and the CS Manufacturing Team

March 2018



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## **U.S. COMMERCIAL SERVICE SUPPORT FOR U.S. EXPORTERS:**

The U.S. Commercial Service is the export-promotion agency of the United States Department of Commerce. We provide a wide range of services and programs to help U.S. companies increase their sales of goods and services to foreign markets. Our U.S. trade specialists and foreign commercial specialists will assist you in identifying trade opportunities, finding local business partners, launching your company, promoting your products and services, obtaining valuable market research reports and protecting your intellectual property rights. U.S. Commercial Service trade specialists in over 100 U.S. cities and in nearly 80 countries stand ready to help you get started in exporting or increasing your sales to foreign markets.

## **WHY U.S. EXPORTERS SHOULD WORK WITH US:**

- Our specialists will assess markets of opportunity and connect you with qualified distributors and partners.
- Through our customized programs, such as the International Partner Search or the Gold Key Service, we can connect you to potential partners.
- Our overseas specialists can provide you with market research, industry-specific or custom-tailored information on growth sectors, local competition etc.
- Our services will help you maximize your time at international trade shows, including matchmaking and pre-show promotional programs.
- We can assist you to overcome trade obstacles and provide guidance on trade financing.

To learn more about what we can do for you and how we can provide market research, information on trade events, trade leads, and guidance on how to export, please visit [www.export.gov](http://www.export.gov). Contact us today to connect with a world of opportunity.

## **ABOUT THE MARKET BRIEFS:**

This is a "Plastics Market Briefs" booklet produced by the U.S. Commercial Service. It contains insights into important markets for U.S. firms. The purpose of this booklet is to provide market intelligence to support U.S. companies in the plastics industry that are interested in entering new markets with enormous export potential. We hope this booklet will be a source of practical, hands-on information. These market briefs were written by the commercial specialists responsible for the plastics sector in their respective countries. Their contact information may be found on top of each market brief. Please feel free to contact us for further information.

**NOTE:** The information contained in this booklet is intended to be a basic market snapshot for U.S. exporters of plastics/rubber materials and machinery. It is not a comprehensive market report.

We would like to thank our sponsor, Underwriters Laboratories, and the contributing partners for making this booklet possible.



## FREE TRADE AGREEMENTS

If you are looking to export your product or service, consider export markets with which the United States has negotiated a Free Trade Agreement (FTA). FTAs have proven to be one of the most effective ways for U.S. exporters to access foreign markets, making it easier and cheaper for U.S. businesses. These agreements provide a competitive advantage versus products from other economies because they reduce tariffs and barriers to U.S. exports, protect U.S. interests, and enhance the rule of law in the FTA partner country. In 2016, the United States exported \$32.6 billion in plastic materials and products to our 20 FTA partners and \$898.3 million in machinery for plastics. FTA trade in these goods favored the United States, giving us a trade surplus of \$13.2 billion in plastic materials and products and \$131.2 million in machinery for plastics. FTA trade comprises 58.5 percent of total exports for plastic materials and products and 53.7 percent for machinery for plastics.

## U.S. FTA PARTNER COUNTRIES

As of January 1, 2014, the United States has 14 FTAs in force with 20 countries.

- Australia
- Bahrain
- Chile
- Colombia
- DR-CAFTA:  
Costa Rica, Dominican Republic,  
El Salvador, Guatemala, Honduras  
& Nicaragua
- Israel
- Jordan
- Korea
- Morocco
- NAFTA:  
Canada & Mexico
- Oman
- Panama
- Peru
- Singapore

Information on these countries is available at <http://www.export.gov>.

## FTA TARIFF TOOL

To determine if your product qualifies for preferential tariff treatment under any of these FTAs, the International Trade Administration (ITA) has developed the FTA Tariff Tool. The FTA Tariff Tool provides a searchable database for the relevant tariff/rule of origin requirements for any product (agricultural or industrial). In addition, it generates market access reports/charts across industrial sectors or product groups and creates a snapshot of current tariff and trade trends under the different U.S. FTAs. The Tool can be accessed from <http://www.export.gov/FTA/FTATariffTool/>. The website also contains an instructional video, quick start guide, and user's manual.



## U.S. Commercial Service Contact Information

**CAPITAL** Buenos Aires  
**POPULATION** 44 million  
**GDP** US\$ 585 billion (est. 2016)  
**CURRENCY** Argentine Peso (ARS)  
**LANGUAGE** Spanish

**NAME** Liliana Paz  
**POSITION** Senior Commercial Specialist  
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## SUMMARY

Argentina remains a key market for U.S. exports to Latin America, with a more open import environment since late 2015. Argentina's plastics sector is one of the most important sectors to the economy, representing 1.5 percent of the GDP in 2016. U.S. exports to Argentina in the raw materials segment represented US\$ 341 million in 2016, second only to Brazil. However, in the equipment/molds subsectors, U.S. exports lagged behind European and Asian competitors, due to the strong promotion and incentives granted by companies from these countries. U.S. exporters are encouraged to explore opportunities in higher-end technology segments.

## MARKET ENTRY

The Mercosur common external tariff (CET) applies to imports from countries outside the MERCOSUR area (Argentina, Brazil, Uruguay, and Paraguay) and duties average 14 percent for plastics and articles thereof (Chapter 39).

U.S. companies exporting to Argentina typically market their products and services through Argentine agents, representatives and distributors. The U.S. Commercial Service can help identify a potential distributor through one of our matchmaking services. An important component of the marketing mix is promotion. Companies are encouraged to attend or exhibit at local trade shows as well as visit trade shows in the U.S. attended by Argentine buyers.

## CURRENT DEMAND

Plastic consumption per capita quadrupled from 11 kg in 1990 to almost 44 kg in 2016. The local industry transformed 1.42 million tons of raw materials in 2016, increasing production by 4 percent. This was mainly due to the recent investments of large international players in expanding capacity of their manufacturing facilities.

Imports of raw materials reached US\$1.26 billion and imports of processing machinery and equipment, parts, molds and matrixes amounted to US\$1.21 billion in 2016.

The U.S. is the second largest exporter of plastic raw materials to Argentina with 26 percent of the import market after Brazil, and is the third largest exporter of semi-finished and finished plastic products, after China and Brazil, with a 7 percent import-market share. Imports of machinery and equipment, particularly in injection, extrusion, blow-molding, thermoforming and presses were mainly imported from Europe and Asia, with the U.S. increasing its market share to 3.4 percent in 2016 (vis-a-vis 2 percent in 2013).

Injection is the most important plastic transforming activity in Argentina. Plants transforming plastic through injection operate in industries such as packaging, which represents almost 50 percent of the activity, followed by construction, electronics, automotive, agribusiness, household and furniture and others.

Approximately 90 percent of injection molding equipment is imported. U.S. machinery tends to require higher economies of scale than its competitors. The best potential Argentine clients are those that require high productivity and that produce high-technology products for international clients or for the local high-technology market. They may be a small number of companies, but it is a profitable niche that deserves consideration.

## MAIN COMPETITORS

As of 2016, there were approximately 2,800 manufacturing plants, primarily concentrated in the province of Buenos Aires, employing 54,500 workers. Most firms are small or medium-sized, with only 5 percent employing more than 50 workers. International companies such as DowDuPont and BASF, are large players in the Argentine plastics market,

Local machinery is generally positioned in a different and less-demanding segment (low cost and performance). U.S. injection molding machinery usually competes with similar products from Italy and Germany in terms of quality and price. European companies also enjoy a longtime presence and are active in offering promotion and training workshops. However, Chinese sales have been growing significantly in recent years and have become market leaders in overall equipment imports.

## MARKET ISSUES AND OBSTACLES

Although many of the most onerous import restrictions have been removed since December 2015, importers must still request Non-Automatic Import Licenses (NAILs) on over 1,000 items, mainly in the consumer-goods sectors. It is also important to protect intellectual property and engage qualified local professionals and lawyers in contract negotiations.

## ARGENTINA

### TRADE EVENTS

- Name of Event:** Argenplás  
**Date:** June 11-14, 2018  
**Location:** Centro Costa Salguero, Buenos Aires, Argentina  
**Website:** <http://www.argenplas.com.ar/en/>  
**Description:** Argenplás is the leading plastics show, held in Argentina every two years.  
**Source:** CAIP – Argentine Plastics Industry Chamber: [www.caip.org.ar](http://www.caip.org.ar)
- Name of Event:** Envase/Alimentek/Farmatek  
**Date:** September 10-13, 2019  
**Location:** Centro Costa Salguero, Buenos Aires, Argentina  
**Website:** <http://www.envase.org>  
**Description:** Envase show is the leading packaging show, held in Argentina every two years.  
**Source:** Instituto Argentino del Envase: <http://www.packaging.com.ar/web>.

## AUSTRALIA



**CAPITAL** Canberra  
**POPULATION** 24.13 million  
**GDP** US\$ 1.205 trillion (est.)  
**CURRENCY** AUD  
**LANGUAGE** English



### U.S. Commercial Service Contact Information

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### SUMMARY

In 2017 Australia surpassed the world record for the longest period of uninterrupted economic growth, 26 years, held by the Netherlands. With few barriers to entry, a familiar legal and corporate framework, sophisticated consumer and industrial sectors, and a straightforward, English-speaking business culture, Australia remains a vibrant and important pro-U.S. market for American goods and services.

Under the Australia U.S. Free Trade Agreement, over 99 percent of U.S. exports now enter Australia duty-free. This includes all plastics and articles of plastic under HS Chapter 39.

Total demand in Australia for plastics and articles of plastics under HS Chapter 39 is estimated at US\$ 6.2 billion. Imports satisfy 70 percent of the Australian market. Demand can be described as stable with little change recorded between 2014-2016.

### MARKET ENTRY

It is rare for overseas suppliers to sell directly to Australian end-users. In some cases U.S. job shops have produced plastic parts and components for Australian customers, but these customers have usually been local subsidiaries of multinational operations.

The most common method of market entry is to appoint a local Australian stocking-distributor. Sales representatives or agents are virtually non-existent in Australia.

Distributors interested in a product will often request national exclusivity. In some cases Australian distributors will have networks that allow them to also market to New Zealand.

The distance from many of their trading partners and the sheer size of the Australian continent – comparable to the continental U.S. – causes Australian firms to stress the importance of local support and service. American companies should visit Australia both to meet prospective partners and demonstrate ongoing support, as this is the common practice of their competitors.

A small number of well-established associations servicing various aspects of the plastics industry exist. These associations can offer one way for U.S. companies to locate potential representatives and distributors. Australia does not have any trade shows designed exclusively for the plastics industry. Depending on the applications offered by plastic-based solutions, suppliers and distributors will often exhibit in other industry-specific trade shows.

Most of the criteria American firms use to select distributors in markets throughout the world are also applicable to Australia, with expectations adjusted to the scale of the market, given the population of 24 million. Performing due diligence is just as important in Australia as in the United States, and the Commercial Service in Australia offers resources to assist in this area.

## CURRENT DEMAND

Total demand in Australia for plastics and articles of plastics under HS Chapter 39 is estimated at US\$6.2 billion. Imports satisfy 70 percent of the Australian market. The majority of companies in the plastics industry are wholesale distributors that service key channels.

Flexible-plastic product manufacturing in Australia covers packaging film, plastic bags, shrink wrap, builder's film and agricultural films such as bale wrap. Rigid plastics manufacturing is focused on bottle and container manufacturing as well as for pipe manufacturing. Furniture, toys and kitchenware are primarily imported.

There are a number of Australian companies with extrusion blow-molding and injection-molding capabilities. There is a market for machinery and ancillary equipment that supports this subsector.

More than 1.5 million tons of plastic is consumed annually with less than 20 percent recycled. Emerging opportunities exist for plastics-recycling technologies and solutions. Australia currently has over 100 sorting facilities. Local councils use private waste-management firms to collect recyclables. Almost all recycling is undertaken by private companies.

## MAIN COMPETITORS

According to the Global Trade Atlas ([www.gtis.com](http://www.gtis.com)), in 2016 Australia imported US\$ 5.4 billion in plastics and articles of plastics under HS Chapter 39. There was little change in demand over the 2014-2016 period. China was the main supplier, holding a 33 percent import-market share, followed by the U.S. (10%), Thailand (6%) and Malaysia (5%). In 2016 Australia exported US\$825 million under HS 39. Local production represents 30 percent of total market demand.

In 2016 Australia imported US\$ 118 million in machinery and equipment used for working rubber or plastics. China was the dominant supplier with an import-market share of 24 percent followed by Germany (21%) and the U.S. (10%). Injection- molding machines represented the largest subsector, with China, Canada, Germany and South Korea being the main suppliers. Blow-molding machines represented the second largest subsector, with Japan, China, India and Germany being the main suppliers.

## MARKET ISSUES AND OBSTACLES

Australia's remote location from the United States is often cited as the single most significant non-tariff barrier to trade.

American companies may find that Australian and third-country competitors in Australia have some long-established brands with strong reputations and well-established supplier relationships.

Australia has ready access to Asian and other low-cost producers. American firms must therefore demonstrate sufficient added value to overcome the costs of getting the product to market, and to compete. The Australian market is very price-sensitive.



## U.S. Commercial Service Contact Information

**CAPITAL** Brasilia  
**POPULATION** 207.7 million (2016)  
**GDP** US\$ 1.8 trillion  
**CURRENCY** Real  
**LANGUAGE** Portuguese

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## SUMMARY

Brazil is the second largest economy in the hemisphere behind the United States and the ninth largest economy in the world. In 2015, the United Nations Conference on Trade and Development (UNCTAD) named Brazil the eighth largest destination for global Foreign Direct Investment (FDI) flows. The U.S. is a major investor in Brazil; and in recent years Brazil has received more than half of South America's total incoming FDI. The Brazilian Central Bank (BCB) indicated that the United States had the largest single-country stock of FDI (US\$ 112 billion) in Brazil in 2014, the latest year with available data.

The Government of Brazil (GOB) has made attracting private investment in infrastructure a top priority for 2017. Brazil's recession has been longer and deeper than most economists anticipated. The country's GDP contracted by 3.6 percent in 2016 and is projected to grow only 0.5 percent in 2017. Per capita GDP decreased 4.4 percent in 2016 for a combined drop of almost 10% over two years. While unemployment stood at just 6.5 percent as recently as 2014, it ended 2016 at 12% and is projected to end 2017 above 13%.

In 2015, Brazil was the world's eighth largest destination for Foreign Direct Investment (FDI) with inflows of US\$64.6 billion, according to UNCTAD. The nominal deficit stood at 9 percent of GDP (US\$161.7 billion) in 2016 and is projected to end 2017 at around 10% of GDP (US\$ 180.1 billion). Brazil's debt-to-GDP ratio reached 70% in 2016 and is projected to reach 77% by the end of 2017. In part due to the slower than anticipated return to growth, annual inflation fell to 6.3 percent by the end of 2016 – inside the Brazilian Central Bank's (BCB) target range of 4.5 percent +/- two percentage points – for the first time in two years. This allowed the BCB to cut its benchmark interest rate to 11.25% (from a high of 14.25% in 2016) in April 2017.

## Doing Business in Brazil

Indicator	2016	2017	2018	2019	2020
Real GDP growth	-3.6%	0.5%	1.9%	2.1%	2.2%
Consumer price inflation (av)	8.7%	4.3%	4.5%	4.7%	4.5%
Exports of goods fob (US\$bn)	\$184	\$197	\$197	\$206	\$216
Imports of goods fob (US\$bn)	\$139	\$151	\$163	\$178	\$191

Source: The Economist Intelligence Unit; 07 April, 2017

President Temer took over as interim President after the impeachment of former President Dilma Rousseff began in May 2016; he officially took office in August 2016 after the impeachment was completed. President Temer has pursued corrective macroeconomic policies to stabilize the economy. Additionally, the Brazilian Congress approved a landmark constitutional federal spending cap in December 2016 and is now debating complementary constitutional reforms to curb social security spending. If robust social security reform is approved, financial analysts assert that investor confidence in debt sustainability will strengthen.

Additional reforms to increase labor-market flexibility and to rationalize Brazil's complex tax system are also on the agenda. International capital markets have recognized the efforts of the Temer administration, including lowering risk premiums significantly from 2015 peak levels and boosting the value of the real. Likewise, 2016 and 2017 foreign direct investment inflows have been strong. Both portfolio and direct investors, however, remain sensitive to political uncertainties linked to ongoing corruption scandal investigations, and Brazilian risk premiums fluctuate accordingly. Brazil has been taking steps to improve infrastructure and education, expand trade, and increase the presence of multinational businesses in the development of Brazil's huge oil reserves. Brazil's large and diversified economy makes it attractive for investors.

In 2016, the United States was the second-largest goods exporter to Brazil, accounting for 16 percent of Brazil's total imported goods, behind China, and followed by Germany, Argentina, and South Korea. In 2016, Brazil imported US\$30.3 billion from the United States – a 4 percent decrease from 2015, attributable to Brazil's economic recession. Brazil ranked as the United States' 12th largest export market for goods in 2016. Brazil is also a large market for U.S. services, accounting for US\$24.9 billion in exports in 2016, the most recent year for which services data is available. Overall, the United States' estimated goods and services surplus with Brazil in 2016 totaled US\$22.3 billion, and Brazil remains the United States' largest trading partner with which it maintains a trade surplus. (Source: Global Trade Atlas).

Brazil represents an excellent partner for experienced U.S. exporters. Major reasons to export to Brazil include:

- Representing the largest market in Latin America, Brazil's population of 207 million is the fifth largest in the world, totaling nearly 3 percent of global consumers.
- Brazil is also a traditional leader among emerging markets. A BRICS member, many multi-national companies consider it as an essential market for truly global businesses.
- Brazil has a natural affinity for the United States and a high regard for American products, brands and technology.
- The Brazilian Government is actively cultivating relationships with international and U.S. businesses and prioritizing macroeconomic stability.

## MARKET ENTRY

Success in Brazil's business culture relies heavily upon the development of strong personal relationship, which is the keystone of productive business partnerships. In most cases, U.S. firms need a local presence, and therefore, should invest time in developing relationships through frequent visits to Brazil. Some firms may also need to establish an office or joint venture in Brazil.

It is essential to work through a qualified representative or distributor when developing new business in the Brazilian market. It is difficult for U.S. companies to get involved in public-sector procurement at the federal or state levels without a Brazilian partner or a physical presence in Brazil.

## CURRENT DEMAND

The plastics sector has over 11,459 companies distributed throughout Brazil. Considering company revenues, 41% of plastics firms are micro and small enterprises, which reflects a high rate of entrepreneurship in the sector, as well as the presence of family-owned businesses. Fifty-nine percent are medium and large enterprises that dictate the sector's growth and technological dynamism. Additionally, many of these companies belong to multinational corporations that produce on a global scale – such as construction, automotive, food and beverages – and conform with strict production and quality standards required worldwide. This demonstrates the competence of the Brazilian companies.

The plastics sector employs more than 313,000 workers nationwide, down from about 355,000 in 2007. Even so, this sector is still the fourth-biggest employer in the Brazilian transformation industry.

In 2016, sales of the plastics-transformation sector in Brazil reached US\$ 20.89 billion. The consumption of plastics products in Brazil was at R\$ 22.82 billion, a decrease of 11% compared to 2015. Exports and imports of processed plastics in 2016 were 256,000 tons (valued at USD1.1 billion) and 586,000 tons (valued at USD2.7 billion) respectively. The constant drop in processed-plastic imports is attributable to the shrinkage in Brazilian consumption caused by the existing crisis.

The year of 2016 came to an end with 12 million people unemployed in the country. The production of the typical inputs of the construction sector, the main consumer of the processed-plastic industry, recorded a drop of nearly 24% in the past two years. In addition, the automotive industry, the 3rd major processed-plastic consumer sector, also recorded a drop of nearly 40% in production in the past 2 years.

The processed-plastics industry produced 403,000 tons (valued at USD1.9 billion) in 2015 and 330,000 tons (USD1.6 billion) in 2016, representing a historical drop, attributable to diminished imports.

The United States occupies the third position as the principal origin of imports of processed plastics into Brazil, only behind China and Uruguay. The main destinations of processed plastic exports were Argentina, United States, and Paraguay.

## MAIN COMPETITORS

Domestic competition: There are about 92 manufacturers of machines and accessories for the plastics industry in Brazil, whose products serve the extrusion, injection, blow-molding, cutting and welding, printing, thermoforming, recycling and machine-accessory businesses. These companies are members of the Brazilian Association of Machine Manufacturers. Information on the companies is available at this link:

<http://www.camaras.org.br/site.aspx/Associadas-da-CSMAIP>

International competition: Major international plastic-machine manufacturers presently operate in Brazil with manufacturing facilities, sales offices or commercial representatives. In order to avoid the strong competitive influence of local producers and the established local representation of imported machinery, import representatives tend to search for niche products for which the number of suppliers is smaller than conventional machines, thus increasing their profit margins.

## MARKET ISSUES AND OBSTACLES

There are no restrictions whatsoever to the import of plastic resins, technology, or services. The tariff on most machines imported into Brazil is at 14%, however other taxes and costs related to importing into Brazil increase the final price of imported machinery by about 60%.

In order to incentivize Brazilian industries to invest in technologies not available in Brazil and enable the production of higher-quality products and generate future exports, the Government of Brazil adopted a program called "Ex-Tarifario". The program reduced the import tariff of various industrial machinery to 2 or 0 percent for a two-year period.

## BRAZIL

Doing business in Brazil requires intimate knowledge of the local environment, including both the direct and indirect costs (referred to as “Custo Brasil”). Such costs are often related to distribution, government procedures, employee benefits, complex labor code, environmental laws and a complex tax structure. Logistics also pose a particular challenge, given the lack of sufficient infrastructure. According to the World Economic Forum, Brazil ranks 107th out of 144 countries in the level of infrastructure development. In addition to high tariffs, U.S. companies need to navigate a complex legal system and customs procedures. The Government of Brazil is the nation’s largest buyer of goods and services. Navigating the government procurement process, however, is challenging. U.S. exporters may find themselves at a competitive disadvantage if they do not have a significant in-country presence – whether via established partnerships with Brazilian entities or some type of company subsidiary – as well as the patience and financial resources to respond to legal challenges and bureaucratic delays.

## TRADE EVENTS

**Name of Event:** Interplast  
**Date:** August 14 – 17, 2018  
**Location:** Complexo Expoville – Joinville, Santa Catarina  
**Website:** [www.interplast.com.br/en/](http://www.interplast.com.br/en/)  
**Description:** Bi-annual Trade Show. Interplast is an event geared exclusively to the plastics industry. The fair is held in Rio Grande do Sul - the second largest plastics market in South America. The region also has a considerable number of global brands that manufacture for various industries, such as automotive, home appliance, construction, furniture, cosmetics and personal care, pharmaceutical, packaging and housewares, forming an extensive supply chain.

**Name of Event:** Feiplastic  
**Date:** April 08 – 12, 2019  
**Location:** Expo Center Norte – São Paulo, SP  
**Website:** [www.feiplastic.com.br/en/home/](http://www.feiplastic.com.br/en/home/)  
**Description:** Bi-annual and the largest trade show in Latin America. Feiplastic is one of the top trade shows in the plastics industry for introducing trends, showcasing product launches, and networking opportunities.

## AVAILABLE MARKET RESEARCH

ABIPLAST – The Brazilian Association of Plastics Transformers publishes statistics on the plastics industry in Brazil: [www.abiplast.org.br](http://www.abiplast.org.br)

## CHINA



### U.S. Commercial Service Contact Information

**CAPITAL** Beijing  
**POPULATION** 1.39 billion  
**GDP** US\$ 1.379 billion (2016)  
**CURRENCY** Renminbi (RMB) or Yuan  
**LANGUAGE** Chinese

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## SUMMARY

China is currently the third largest export market for U.S. goods (after Canada and Mexico), and the United States is China’s largest export market. Two-way trade in goods between China and the United States has reached USD 578.59 billion in 2016. The Chinese government recently introduced an ambitious agenda to restructure China from a large, low-cost manufacturing country to a leading advanced-manufacturing country. Accordingly, China’s plastics industry is undergoing a critical stage of upgrading its structure.

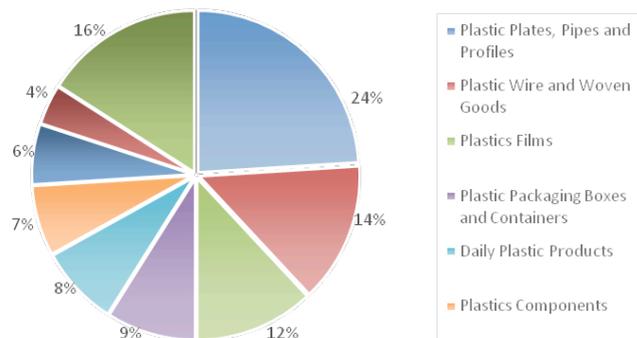
China has become the largest consumer and producer of plastics in the world since 2010. China’s plastics industry recorded a double-digit growth rate before 2012 and maintained a steady growth rate in the following years until 2015. In 2015 and 2016, China’s plastics industry experienced a bout of slower growth because of low macroeconomic growth.

### Plastics Products:

In 2016, China reported production of 69.89 million tons of plastics products. It generated revenue from principal businesses of RMB 2285.51 billion yuan (USD 362.77 billion). At the same time, China imported 25.70 million tons of plastics in primary forms, amounting to USD 41.32 billion, and 5.81 million tons of natural and synthetic rubber valued at 57.66 billion yuan (USD 9 billion). The largest plastic materials and products consumed in China are for packaging, agricultural, building, electronics, automobile and consumer-goods industries.

Plastics production is mainly concentrated in the east, south and central China regions, with five major provinces (Zhejiang, Guangdong, Jiangsu, Henan and Hubei) accounting for more than 50 % of China’s output of plastic products in 2016.

### Type of China's Plastic Products



#### Plastics Machinery

China is the world's largest market for plastic machinery, representing 20% of the global total. In 2016, Chinese plastic-machinery manufacturers generated revenue from principal businesses of RMB 59.59 billion yuan (USD 9.4 billion). Although China-made plastics machinery accounts for over 80% of the total domestic plastic machinery market, China still relies on foreign supplies for high-end plastic machinery. Ninety percent of high-end plastic machinery in China is imported. In 2016, China imported 28,297 sets of plastics machines with a value of USD 1.63 billion, particularly injection molding, extruder, and blowing-molding machinery. The top three suppliers are Japan, Germany and Taiwan.

#### MARKET ENTRY

Companies should consider their own resources, previous export or business experience abroad, and long-term business strategy before entering the China market. Representation in China by Chinese agents, distributors or partners who can provide essential local knowledge and contacts will be critical for success. Intellectual Property rights holders should understand how to protect their IP under Chinese law before entering the China market, and should conduct thorough due diligence on potential partners or buyers before entering into any transaction. Foreign companies have a wide range of options for corporate formation in China, including wholly-foreign-owned enterprises, joint ventures, representative offices and other investment vehicles. Each option has its own advantages, disadvantages and risks. All companies (IP rights holders and others), should consult closely with lawyers who have extensive experience with the China market, including lawyers based in the United States and China.

The U.S. Department of Commerce, United States Foreign Commercial Service (USFCS) offers customized solutions to help U.S. companies, including small- and medium-sized enterprises, succeed in the China market. USFCS stands ready to help U.S. companies develop comprehensive market-entry or expansion plans, learn about export- and customs-related requirements, obtain export financing and identify potential partners, agents, and distributors through business matchmaking programs, trade shows, and trade missions led by senior U.S. government officials.

#### CURRENT DEMAND

The plastics industry in China is entering a new stage for structural optimization and industry upgrading, driven by the Chinese government's encouragement on technological progress and innovation. Although China has a huge plastics industry, most domestic companies only have the capability to produce low- and middle-level plastic products. They rely on importing products for high-end plastic materials, such as special-engineering plastics, high-end medical-plastic materials and materials for special industry pipes. The following are some key areas where China is seeking common and pivotal-technology breakthroughs:

- High-end polyolefin pipe materials, 3D printing additive, medical-plastics, bio-based polymer and biodegradable plastics.
- Functional-polymer alloy
- Aromatic heterocyclic polymer and its high-performance composites and modified materials.
- Selective porous membrane, especially microfiltration film, ultrafiltration film, nanofiltration film.
- High-end battery diaphragm, optical film and film for OLED
- Bio-based plastic auto component and packaging product, high-performance PE building and construction materials, high-performance rigid PVC foam product, large caliber high strength PO pipe.
- Waterborne polyurethane synthetic leather

#### MAIN COMPETITORS

##### Domestic Competitors

In China, there were about 150,000 enterprises above the designated size producing plastics products and 403 enterprises above the designated size manufacturing plastics machinery by the end of 2016, according to the statistics from China Plastics Industry Association and China Plastic Machinery Industry Association (Note: "enterprise above designated size" is a statistic term used by the Chinese government since 1996, the threshold is that an enterprise need to generate revenue from its principal business at and above RMB 20 million/USD 3.23 million). Most of these plastics-production enterprises are small-size companies. Large-scale enterprises total 143, the medium-size enterprises 1666. There are also thousands of small and medium size enterprises in the plastic industry not included in the statistics because of their revenue generation. The huge and complex Chinese market offers various business opportunities for all kinds of companies at home and abroad. Local companies have grown quickly and have acquired sophisticated technology over the years. Competition is inevitable and fosters the rapid development of the industry.

### International Competitors

China's market includes international brands and products. In 2016, the key suppliers of plastics materials were Saudi Arabia, South Korea, Singapore, the United Arab Emirates, the United States, Thailand, Iran, Qatar and Taiwan. The key suppliers of plastic machinery Japan, Germany, Taiwan, Italy, South Korea, the United States and Austria. The United States was ranked as the 6th largest importer, accounting for 3.06% of China's total import of plastic machinery.

U.S. companies have better market opportunities if they offer innovative materials or substances to enhance plastics, or the processing of plastics. Chinese companies are constantly trying to improve their products. Chinese companies like to turn to U.S. companies for innovative technology and products such as energy-saving production solutions, new and lightweight materials, bio-based polymers, plastics-recycling technology/equipment, engineering plastics and manufacturing equipment, etc.

### MARKET ISSUES AND OBSTACLES

China is a challenging place to do business. According to the American Chamber of Commerce in China (AmCham), in 2016, American businesses in China faced headwinds arising from slowing economic growth, inconsistent and generally unfavorable interpretations of regulations, growing pressures from domestic industrial policy, and rising costs of doing business. AmCham's most recent member-survey reported that 81 percent of respondents felt foreign businesses were less welcome in China than before. Likewise, less than three-quarters of U.S. China Business Council member companies have an optimistic five-year outlook, the lowest total over the past decade.

Day-to-day business operations present a variety of obstacles. The World Bank, in its Ease of Doing Business Report, ranks China 78th out of 190 countries with respect to opening and running a business while complying with local regulations. For starting a business, the World Bank ranked China 127th, reporting that starting a business requires at least 11 procedures in Shanghai and Beijing that average more than 30 days to complete. Despite significant Chinese government efforts to streamline bureaucracy and reduce red tape, foreign companies continue to complain about administrative procedures, especially with respect to registration and licensing.

China also continues to pursue industrial policies that seek to limit market access for imported goods, foreign manufacturers, and foreign-services providers, while offering substantial government guidance, resources, and regulatory support to Chinese industries. The principal beneficiaries of these policies are state-owned enterprises, as well as other favored domestic companies attempting to move up the economic value chain. Provincial and local governments often have an ownership stake in private companies, which can result in government support. Foreign enterprises report that Chinese government officials may set conditions for approvals on a foreign enterprise's agreement for technology transfer; to conduct research and development in China; and satisfy performance requirements relating to exportation or the use of local-content concessions.

### TRADE EVENTS

**Name of Event:** ChinaPlas 2019

**Date:** May, 2019

**Location:** Guangzhou, China

**Website:** [www.chinaplasonline.com](http://www.chinaplasonline.com)

**Description:** ChinaPlas is the second-largest exhibition in the world for the plastics industry. It is held alternately in Guangzhou and Shanghai. In 2017, the show was held in Guangzhou, attracting over 155,258 visitors and 3,487 exhibitors from 38 countries and regions. ChinaPlas has been organized by the Hong Kong-based Adsale Exhibition Services Ltd. for over 20 years.

### AVAILABLE MARKET RESEARCH

**China:** Country Commercial Guide 2017

Major Chinese Plastics Industry Associations:

China Plastics Processing Industry Association ([www.cppia.com.cn/](http://www.cppia.com.cn/))

China Plastics Machinery Industry Association ([cpmia.org.cn/](http://cpmia.org.cn/))

China Synthetic Resin Supply and Sale Association ([www.csra.org.cn/](http://www.csra.org.cn/))

Shanghai General Plastics Association ([www.sspi.com.cn](http://www.sspi.com.cn/))

Guangdong Plastics Industry Association ([www.gd pia.com](http://www.gd pia.com))



## U.S. Commercial Service Contact Information

**CAPITAL** San Jose  
**POPULATION** 4.93 million  
**GDP** US\$ 80.7 billion (est.)  
**CURRENCY** Colones  
**LANGUAGE** Spanish

**NAME** Emilio Cordoba  
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## SUMMARY

Since 2010, Costa Rica has enjoyed strong and consistent economic growth. Costa Rica's government, democratic traditions, and commercial- promotion efforts have made the country a leader in the region for international business and tourism. Costa Rica has attracted one of the highest levels of foreign-direct investment per capita in Latin America. The United States remains Costa Rica's largest trading partner and Costa Rica's largest foreign-direct investor. In 2016, the U.S. had a US\$1.6 billion trade surplus with Costa Rica Foreign-direct investment in Costa Rica reached US\$2.85 billion in 2015. Nearly 53% of that investment came from the United States. Costa Rica's economy also faces challenges due to a rising fiscal deficit, rising public debt and relatively low levels of domestic revenue.

## MARKET ENTRY

Costa Rica has few market entry challenges. U.S. products and services enjoy an excellent reputation, making Costa Rica a good market for U.S. companies. One of the most common market entry options is to appoint an agent or distributor. Another is to find a local partner who can provide market knowledge and contacts. Other businesses have been successful via licenses or franchises. The U.S. Commercial Service in Costa Rica advises U.S. companies on how best to enter the market and offers a range of services to assist U.S. companies in finding a local partner or promote, through the local partner, products already being commercialized or soon to be launched in the market. The U.S. Commercial Service can also assist with due diligence on a prospective local-company partner.

## CURRENT DEMAND

The plastic industry represents approximately 2.5% of GDP. Approximately 5% of Costa Rica's plastic production is exported. Almost half of the exports is made under CAFTA/DR (Dominican Republic-Central America Free Trade Agreement). 34% of the plastic products are used in the industrial sector and 24% in the food sector.

For 2016, imports were \$1.4 billion and exports were \$360 million.

## MAIN COMPETITORS

The industrial plastic sector is comprised of about 160 processing and manufacturing companies. Distribution and size of companies:

Approximately 160 converters and recyclers:

- 15% large companies
- 73% of medium and small companies
- 12% micro-enterprises
- Employment generation: Around 14,000 direct jobs

Approximately 50% of companies that manufacture plastics are located in the capital, San José. 80% of the technical workforce is employed by large companies. Imports of plastics come mainly from the United States. 34% of plastic products are destined for the industrial sector, while 24% is utilized by the food sector.

## MARKET ISSUES AND OBSTACLES

By 2021, Costa Rica will try to eliminate 80% of single-use plastic by replacing it with materials with less of an environmental impact.

## TRADE EVENTS

There is no plastics-focused trade show taking place in Costa Rica at present.

## AVAILABLE MARKET RESEARCH

Costa Rica Country Commercial Guide



**U.S. Commercial Service  
Contact Information**

**CAPITAL** Zagreb  
**POPULATION** 4.171 million  
**GDP** US\$ 50,4 billion (est.)  
**CURRENCY** Kuna (HRK)  
**LANGUAGE** Croatian

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## SUMMARY

After Croatia's EU Accession on July 1, 2013, the need for product double-testing and customs clearances when distributing goods and services between the EU countries and Croatia was eliminated. U.S. companies already exporting to the EU now have an additional market opportunity, accessible without any further administrative burden. EU accession negotiations provided an additional impetus for the Croatian Government to undertake measures in recent years to address corruption and bureaucratic and judicial inefficiency. The current Croatian Government (elected in October 2016) has demonstrated its determination to further strengthen these reforms as well as to find new and more effective ways to consolidate public spending, improve the business climate and foster economic growth.

The country's population of roughly 4.2 million is largely homogenous in ethnicity, language and religion; but in the summer months its numbers are doubled by tourists from throughout Europe and the world, making it a cosmopolitan market for products and services. Its ports and transportation infrastructure make Croatia a natural trade gateway into southeast Europe. In brief, Croatia is a market of opportunity, but one that should be entered with due diligence.

Analysis of movements in economy of industrial processing of plastics and rubber from 2008 to 2016 show that this industry branch, during this period, was more resistant to the economic crisis. Overall industrial activity of processing plastics and rubber in 2013 was 0.55 percent higher than in 2008. The Croatian rubber and plastics industry relies heavily on imported raw materials. Croatia imported approximately \$680 million worth of plastics and \$250 million worth of rubber products in 2016. Key areas of growth in Croatian imports are in the pneumatic rubber tire industry and plastic packaging industry. An overview of the Croatian plastics and rubber industry is provided below:

<b>Industry income</b>	\$23.491 Million (2016)
<b>Total number of employees</b>	8,522 - 4.0% of Croatian manufacturing industry (2016)
<b>Number of active companies</b>	698 firms - 1 large, 21 medium, 131 small, 542 micro (2016)
<b>Plastic imports</b>	\$681,2 Million (2016)
<b>Rubber imports</b>	\$254,5 Million (2016)
<b>Plastic exports</b>	\$357,2 Million (2016)
<b>Rubber exports</b>	\$68,9 Million (2016)
<b>Share of total exports</b>	2.96% (2016)

## MARKET ENTRY

With Croatia's accession into the EU, U.S. companies based in the EU are facing considerably less barriers to entry than in previous years. Croatia has completed the legal harmonization process with the EU, and there are no unique legal barriers for the rubber and plastic industry in Croatia. US firms have similar regulatory regimes to exist in Croatia as in other EU countries. Because the Croatian market is fairly sophisticated, businesses considering entry should plan well and consider:

- The price sensitive nature of consumer demand in Croatia;
- A judicious selection of one of three low-risk entry strategies: representation, agency, or distributorship. (Note that a Croatian agent or distributor is preferable to a "European office" due to the difficulty of the language and other idiosyncratic market factors);
- The entrenched bias of a conservative market that sticks to known suppliers and therefore requires sustained market development.

## CURRENT DEMAND

The Croatian plastic industry is a very healthy and growing sector of Croatia's manufacturing sector. Small and especially medium sized businesses are showing healthy growth and an increasing appetite for capital investments in production and innovative technology.

According to the Croatian Chamber of Economy, the Croatian rubber and plastics industry is heavily dependent on raw materials. Many of the larger Croatian firms process raw materials themselves, while some smaller firms are more likely to use semi-finished materials.

Due to the implementation of EU environmental regulations, demand for pollution control and green manufacturing equipment is on the rise. There has been increasing interest in sustainable technology and techniques as they relate to the rubber and plastics industry. Bio plastics and tire recycling are rising in prominence within the Croatian market.

## MAIN COMPETITORS

Domestic: There are 698 Croatian rubber and plastic manufacturers. Gumiipex, MuraPlast, AD Plastik, Stražaplastika, Alpla, Wachem, Bomark Pak, Vargon, Heplast-Pipe, Aquestil Plus and Alpro-Att are largest companies in the Croatian rubber and plastic industry.

International: German firms are by far the largest exporters of rubber and plastics to Croatia. Italy and Hungary import much of Croatia's rubber and plastic products and raw materials.

## MARKET ISSUES AND OBSTACLES

Croatia has been fully integrated into the European common market. So, exporter's familiar with EU regulations such as CE-marking and REACH, will encounter similar regulations regarding exports to Croatia. More information on REACH and CE-Marking can be found on the export.gov webpage <http://export.gov/europeanunion/eustandardsandcertification/index.asp>

## REACH

**REACH**, "Registration, Evaluation and Authorization and Restriction of Chemicals", is the system for controlling chemicals in the EU and it came into force in 2007 (Regulation 1907/2006). Virtually every industrial sector, from automobiles to textiles, is affected by this policy. REACH requires chemicals produced or imported into the EU in volumes above 1 ton per year to be registered with a central database handled by the European Chemicals Agency (ECHA). U.S. companies without a presence in Europe cannot register directly and must have their chemicals registered through their importer or EU-based 'Only Representative of non-EU manufacturer'. A list of Only Representatives (ORs) can be found on the website of the U.S. Mission to the EU: <http://export.gov/europeanunion/reachclp/index.asp>

Material Safety Data Sheets (MSDS) must be updated to be REACH compliant. For more information, see the guidance on the compilation of safety data sheets: [https://echa.europa.eu/documents/10162/23036412/sds\\_nutshell\\_guidance\\_en.pdf/5d5eff4a-3596-4ba8-a4c8-3311ba4ad07b](https://echa.europa.eu/documents/10162/23036412/sds_nutshell_guidance_en.pdf/5d5eff4a-3596-4ba8-a4c8-3311ba4ad07b)

U.S. exporters to the EU should carefully consider the REACH 'Candidate List' of Substances of Very High Concern (SVHCs) and the Authorization List. Substances on the Candidate List are subject to communication requirements. Companies seeking to export products containing substances on the Authorization List will require an authorization. The Candidate List can be found at: [https://echa.europa.eu/documents/10162/23036412/sds\\_en.pdf/01c29e23-2cbe-49c0-aca7-72f22e101e20](https://echa.europa.eu/documents/10162/23036412/sds_en.pdf/01c29e23-2cbe-49c0-aca7-72f22e101e20)

US exporters unfamiliar with EU CE-Marking should consult the US Commercial Service's EU Commercial Guide for more information. The EU Commercial Guide can be accessed free of charge at <http://export.gov/europeanunion/eustandardsandcertification/index.asp>

## TRADE EVENTS

**Name of Event:** Plastics and Circular Economy  
**Date:** October, 2018  
**Location:** Croatian Chamber of Economy, Zagreb  
**Description:** Croatian Chamber of Economy is organizing a conference in association with the Slovenian Chamber of Economy, Plasttechnics Cluster Slovenia and the EU association PlasticsEurope. This will be 12th conference in a row organized in order to support the plastics and rubber industry in Croatia and the neighboring countries.

**Name of Event:** ModernPack  
**Date:** May 2019 (date TBD)  
**Location:** Zagreb Fair  
**Website:** <http://www.eventseye.com/fairs/f-modernpak-3451-1.html>  
<http://www.zv.hr/fairs-2863/modernpak-3110/visitors-3112/about-fair-3113/3113>  
**Description:** All relevant international and local manufacturers of equipment, finished products and auxiliary materials in the field of printing, paper, packaging materials and the packaging industry will be gathered under a single roof.

Their participation in these fairs is sufficient indication that INTERGRAFIKA and MODERNPAK are the most important printing and packaging industry fairs in the region.

## AVAILABLE MARKET RESEARCH

Croatia Country Commercial Guide:  
[http://www.buyusainfo.net/docs/x\\_9017539.pdf](http://www.buyusainfo.net/docs/x_9017539.pdf)  
<http://export.gov/croatia/marketresearch/index.asp>

Institute of Packing and Graphing Art  
<http://www.ambalaza.hr/en/>

# CZECH REPUBLIC



## U.S. Commercial Service Contact Information

**CAPITAL** Prague  
**POPULATION** 10.5 million  
**GDP** US\$ 192.9 billion (est.)  
**CURRENCY** Czech Crown (1 US\$=20 CZK)  
**LANGUAGE** Czech

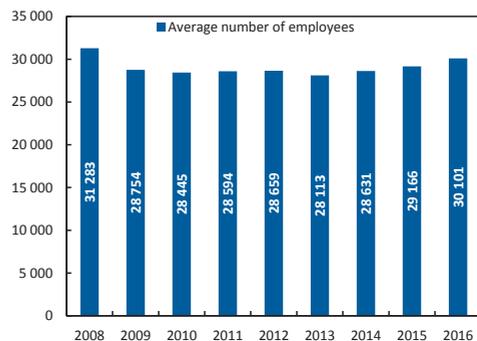
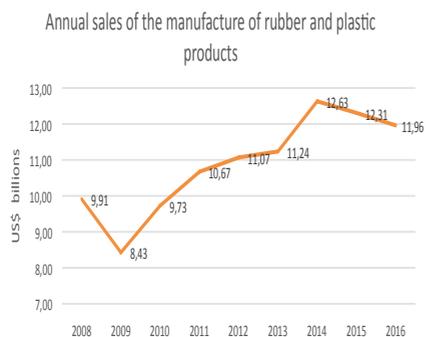
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## SUMMARY

The manufacture of rubber and plastic products (NACE 22) is one of the most important sectors contributing to the stability and growth of the Czech national economy. The sector accounted for 7.5 % of total Czech industrial production and generated revenues of \$11.9 billion in 2016; exports reached \$7.4 billion and imports \$6.9 billion. Exports of primary plastics (HS 3901-3914) reached \$1.3 billion and imports \$3.1 billion. U.S. exports of primary plastics and plastic products to the Czech Republic represented \$172 million, of which primary plastics accounted for \$59 million. The Czech consumption of plastics was 1.2 million tons in 2016, which represented the ninth highest consumption among the EU member states.

## MARKET DATA

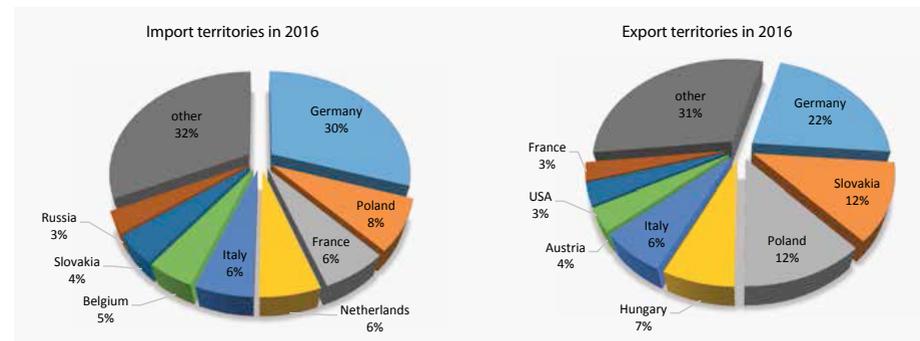
Annual sales of the manufacture of rubber and plastic products and the number of employees in the sector:



Source: CZSO, MIT calculations

Total Czech production capacity of primary plastics amounted to one million tons in 2016 (Unipetrol PE 470 kt, Spolana PVC 130 kt, Syntos PS 100 kt, etc.). Approximately 50% of the output was exported primarily to EU countries.

Below are graphs showing imports and exports for 2016:



Source: CZSO, data as of 3 May 2017

## CURRENT DEMAND

High-performance plastics, bioplastics, biodegradable plastics, nano-composites and wood-plastics composites have good market potential. Demand for additives to improve traditional plastic performance is also high.

While typical major European plastic-consumption sectors are packaging (39.4%), construction (20.3%), automotive (8.2%) and electrical/electronics (5.5%), the structure of Czech plastic consumption is slightly different. Due to enormous car production capacities in the Czech Republic, the automotive and electrical/ electronic sectors consume 15-25% of rubber and plastic production. The demand for polystyrene (PS) thermal insulation in the construction sector is also high and rose to a record of 62,100 tons in 2016.

## PLASTIC MACHINERY

Machinery for injection molding, extrusion and pressing is imported mainly from Germany and Italy. However, imports of cheaper Asian equipment have been increasing. The U.S. import share of plastics-processing machinery is approximately 2%; however, some American companies supply and service European markets through their European manufacturing facilities. About 48% of plastic-packaging waste is recycled and plastic-recycling lines are also in demand.

## CZECH REPUBLIC

Manufacturers based in the Czech Republic dominate the supply of injection molds (almost 100%) and blow-molding machinery (80%) in the Czech market. There are also local manufacturers of injection, extrusion and recycling lines (BOCO Pardubice, Chodos Chodov, INVERE, INKOS, Milacron, etc.), but their market shares are less important.

### MARKET ENTRY

The Czech Republic is geographically small, with 10 % of the population centered in Prague, the capital city. Success in this market requires an in-country presence such as an agent, distributor or representative office. Local distributors generally take responsibility for handling customs clearance, dealing with established wholesalers/retailers, marketing the product directly to major corporations or the government, and handling after-sales service. The country's communications network is well-developed and email communication and website offerings are an increasingly effective means of reaching local buyers. Price remains the most critical factor in positioning a product or service for sale.

### MARKET ISSUES AND OBSTACLES

Most U.S.-origin equipment has a nominal duty rate of 2%, while equipment imported from EU countries enters duty-free. All products, regardless of origin, are subject to 21% VAT (value added tax).

Plastic-processing machinery and equipment must comply with EU / Czech safety requirements. Producers of primary plastics, additives, etc., should be aware of the EU chemical regulation called REACh (Registration, Evaluation, and Authorization of Chemicals), a safety assessment system. Any chemical introduced into the EU market has to comply with REACh.

### TRADE EVENTS

**Name of Event:** PLASTEX – International Fair of Plastics, Rubber and Composites  
**Date:** October 1-5, 2018  
**Location:** Brno, Czech Republic  
**Website:** [www.bvv.cz/en/plastex](http://www.bvv.cz/en/plastex)

## DOMINICAN REPUBLIC



### U.S. Commercial Service Contact Information

**CAPITAL** Santo Domingo  
**POPULATION** 10.65 million  
**GDP** US\$ 71.65 billion (est.)  
**CURRENCY** Dominican Pesos  
**LANGUAGE** Spanish

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### SUMMARY

The plastics industry of the Dominican Republic represents one of the largest industrial sectors in the Caribbean. There are approximately 300 companies operating in the local market. These firms are small to medium-size companies, with the exception of a few large manufacturing plants, such as Industrias Nacionales, Corvi PVC and Alambres Dominicanos that manufacture tubing, fittings and pipes for building/construction and agriculture industries. Also, Plasticos Duralon, Plastiflex, Termopac, Polyplas and Nesplas manufacture housewares, bottles, caps, bags, disposable dishes, spoons, forks and packaging products for the food processing industry. Some of these companies are currently exporting to the Caribbean and Central America.

The plastics-processing industry in the Dominican Republic is mainly composed of four different categories: injection molding, comprised of manufacturers of houseware and other plastic containers and plastic parts; extrusion – this group manufactures tubing, fittings and pipes; blow-molding, comprised of 80 percent of the plastic-processor companies engaged in the manufacturing of food packaging, bottles, caps, disposable dishes, spoons, forks, cups and thermoforming; foam products.

### MARKET ENTRY

There are a small number of agents and distributors of plastic-processing machinery in the Dominican Republic. End-users import their equipment directly from foreign suppliers. According to industry sources, 50 percent of the plastic-production machinery imported into the Dominican Republic is used or refurbished.

## DOMINICAN REPUBLIC

### CURRENT DEMAND

There is no domestic production of plastic-production machinery in the Dominican Republic. The demand is entirely supplied by imports.

### MAIN COMPETITORS

Currently, the principal suppliers for plastic machinery and parts are: United States, Italy, Spain, Germany, Brazil, Switzerland, UK, China and Korea. Other secondary players that contribute to the total imports by supplying spare parts and small machinery are: Canada, Mexico, Venezuela, Ecuador, France, and Belgium among others.

### MARKET ISSUES AND OBSTACLES

Exporting plastic-production machinery to the Dominican Republic is not currently subject to specific regulations or incentives. There are no safety standards or technical requirements contrary to U.S. standards, and there are no specific labeling requirements.

Although the import tariff rate for most equipment in this sector is 3 percent of the CIF value, the effective tax rate can exceed 45 percent. This is a result of the application of other taxes, such as the 18 percent value-added tax (ITBIS) and the exchange surcharge tax of 13 percent.

## EGYPT



### U.S. Commercial Service Contact Information

**CAPITAL** Cairo  
**POPULATION** 97,041,072 (July 2017 est.)  
**GDP** US\$ 332.3 billion (2016 est.)  
**CURRENCY** Egyptian Pound (EGP)  
**LANGUAGE** Arabic

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### SUMMARY

The plastics industry is a well-established sector in the Egyptian market. It has many key manufacturers that feed into many wide-ranging sectors, including current production in food-packaging, medical-packaging, and industrial-packaging. As of 2017, total investment in the plastics industry was \$8.7 billion. The total number of factories in 2017 exceeds 3000 with a total work force of 52,5000 employees. It is estimated that at least \$160 million in investment is added to the industry on an annual basis. The Egyptian government plans to reduce plastic waste and is encouraging investment in recycling.

### MARKET ENTRY

The plastics industry in Egypt is well-supported by the government, as this plays a great role in employment. Egyptian Plastic Exporters and Manufacturers Association are two private-sector associations that play a key role in advocating on behalf of the manufacturers and assists in the upgrade of the industry.

US exporters are encouraged to assign a distributor/agent to represent them in the local market, as a way to facilitate doing business and dealing with the Government of Egypt.

## EGYPT

### CURRENT DEMAND

The plastics and petrochemical industry have significant potential for expansion, as reflected in the rapid growth of investments. During the last decade, Egypt witnessed an enormous growth in its plastics and petrochemical sector in terms of advancing the technology used by manufacturers.

Many key players in Egypt export their finished products to the African markets (45%), the European market (37%) and other markets (18%). These exports are key to the local economy and demonstrate that Egypt is a key player not only in the region but also in the international market. Egyptian manufacturers invested heavily in obtaining high-technology machinery from Europe mainly to use in the different production lines.

The US is considered one of the main suppliers of raw materials and resins to the Egyptian market. The US quality is perceived highly in the Egyptian market.

### MAIN COMPETITORS

Machinery in the Egyptian market comes predominately from China (approximately 37%), the European Union (35%), local production (20%) and other markets (8%).

### MARKET ISSUES AND OBSTACLES

As of November 2016, the Egyptian Government has floated the Egyptian pound, which lead to a significant increase in the cost of imported goods. In addition, US products entering Egypt are subject to customs duties while goods coming from Europe enjoy duty-free treatment due to the free trade agreement between Egypt and the European Union.

### TRADE EVENTS

**Name of Event:** Egyplastex  
**Date:** January 2019  
**Location:** Egypt International Exhibition Center  
**Description:** EGYPLASTEX is considered the largest prime-plastic show in the region (African Continent and the MENA region) hosting 650+ exhibitors and receiving 25K+ Visitors. All plastic sectors are represented in the show. The Egyptian plastic sector is growing tremendously with a current figure of 3,000 plastic factories operating in the market.

## EL SALVADOR



### U.S. Commercial Service Contact Information

**CAPITAL** San Salvador  
**POPULATION** 6.1 million  
**GDP** US\$ 26.8 billion (2016 est.)  
**CURRENCY** U.S. Dollar  
**LANGUAGE** Spanish

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### SUMMARY

In 2016, plastics exports were \$355 million. 77% of plastics exports from El Salvador are destined for Central America, especially Guatemala and Honduras (29% and 24%, of the products respectively). El Salvador is one of the largest suppliers of plastic products in Central America.

In 2017, the plastics sector experienced an increase of 4% of exports, mainly of polypropylene, trays and disposable containers. Salvadoran companies continue investing and implementing new techniques to improve their productivity and efficiency in the plastics industry. The three largest areas of production are beverage bottles (20%), plastic bags (19.3%) and dishware (15.9%).

The United States is El Salvador's leading trade partner. El Salvador's Central Bank (BCR) reported the United States had a 33.8% import market share. Central America countries are other top trade partners. The most common imported products are polymer ethylene and plastic packaging.

### MARKET ENTRY

There are good opportunities in the market for U.S. exporters of equipment and materials in the plastics industry, especially energy-efficient plastic processing machines that save time and minimize waste. The use of bio-based plastic materials is growing in El Salvador; there is niche for machinery that processes durable bio-based plastic products.

The Central America Free Trade Agreement (CAFTA –DR) became effective in El Salvador on March 1, 2006. CAFTA-DR countries include: Costa Rica, Guatemala, Honduras, Nicaragua, and the Dominican Republic.

El Salvador belongs to the World Trade Organization (WTO). In addition to CAFTA-DR, the country has free trade agreements with Chile, Mexico, Dominican Republic, Panama, Taiwan, Colombia, and Central America. It also has an Association Agreement with the European Union. Free trade agreements with Canada, Peru, Ecuador and Belize are under negotiation.

The country offers an open market for U.S. goods and services. Tariffs are relatively low, and were reduced further with the implementation of CAFTA-DR. The value-added tax (VAT) rate is 13 %.

## CURRENT DEMAND

Leading equipment and materials in the plastics industry include: Equipment for sacks and bags of polymers of ethylene, polyethylene, ethylene-vinyl acetate copolymers, plastic tubes, pipes, hoses of plastics, self-adhesive sheets, and thermoformed equipment.

The sector continuously needs machinery updates. Therefore, it is anticipated that imports of the equipment will continue to grow as well.

The Salvadoran Association of the Plastic Industry (ASIPLASTIC) with its Plastic Recycling Program “Eco Amigos” is committed to providing information to other companies on how to separate and recycle plastic and reconvert it into a new product. Equipment and technology for plastic residual and disposal has strong potential in the market.

## MAIN COMPETITORS

El Salvador’s plastics machinery and equipment are mainly supplied by United States, Taiwan, Guatemala, Mexico and China.

There are local companies representing various categories of the industry such as: molds & dies makers, plastic processors, traders, exporters, manufacturers and consultants. The most important plastics companies are members of the “Salvadoran Plastics Associations – ASIPLASTIC”.

Top companies in the plastics industry are: Termoencogibles, S.A. DE C.V., Sigma Q, Carvajal Empaques El Salvador S.A. de C.V., Plastiglas de El Salvador, S.A. de C.V., Celpac, S.A. de C.V., Tubos y Perfiles Plásticos, S.A. de C.V., Salvaplastic Internacional, S.A. de C.V., Polybag, S.A. de C.V., Iberplastic, S.A. de C.V. and Plasticos El Panda, S.A. de C.V.

## MARKET ISSUES AND OBSTACLES

Currently, there are no significant trade barriers against U.S. imports.

## TRADE EVENTS

**Name of Event:** Packaging Trends 2018

**Date:** September 4-5, 2018

**Location:** CIFCO, San Salvador, El Salvador

**Website:** <http://www.cifco.gob.sv>

**Description:** This local show is open to U.S. companies interested in exhibiting their products. There will be an expo and a series of educational sessions for participants. The targeting industries include: packaging, printing and graphics, recycling, plastics, and carton/paperboard.

## AVAILABLE MARKET RESEARCH

ASIPLASTIC – Salvadoran Association of the Plastics Industry

Website: <http://www.asiplastic.org/>

# EUROPEAN UNION (EU)

# EUROPEAN UNION (EU)



**CAPITAL** Brussels  
**POPULATION** 507 million  
**GDP** US\$ 16.52 trillion (est.)  
**CURRENCY** Euro  
**LANGUAGE** 24 official languages



## U.S. Commercial Service Contact Information

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## SUMMARY

The EU demand for plastics remains stable at approximately 49 million tons per year. In 2018, the EU will launch a new policy initiative that will emphasize the recovery of used plastics for recycling purposes. This could contribute to an increase in demand for waste management services.

## MARKET ENTRY

Plastic manufacturers will need to comply with the EU chemical regulation "REACH". REACH requires manufacturers of plastics to register their constituent monomers and additives with the European Chemical Agency (ECHA). In addition, REACH also allows the European Commission (EC) to impose restrictions on the use of chemicals used to manufacture plastics. Finally, sectoral legislation, such as the EU regulation applying to materials, also imposes restrictions on plastics used by the food-packaging industry. Compliance with REACH and other sectoral legislation often requires companies to seek specialized advice.

## CURRENT DEMAND

The EC estimates that European demand for plastics amounted to 49 billion tons in 2015. The main uses for plastics were: packaging (39.9%), building and construction (19.7%), automotive (8.9%), and electronics (5.8%).

In Europe, the plastics sector employed 1.5 million people and generated US\$ 400 billion (est.) in turnover in 2015. The EC anticipates that EU plastics manufacturing will remain stable, but its global market share will decrease as other countries increase production.

## MAIN COMPETITORS

United States  
China

## MARKET ISSUES AND OBSTACLES

The EC will publish a strategy to address the environmental impact of plastics in the European economy. The strategy will establish a policy framework for preserving the benefits created by plastics to modern society while addressing the problem of plastic waste. The implementation of this framework will likely focus on measures to encourage plastic recycling and waste management.

## TRADE EVENTS

The European Union does not host trade events.

## AVAILABLE MARKET RESEARCH

The EU does not have a specific piece of legislation applying to plastics. It has enacted various pieces of legislation applying to specific product categories. In addition, the EU will publish a strategy applying to plastics on 16 January 2018. The implementation of this strategy will potentially have significant ramifications for the composition and recycling of plastics in the region. Please contact the Commercial Service at the U.S. Mission to the European Union about your product and a local Commercial Specialist will respond with relevant information about the Plastics Strategy and the EU rules applying to your company's product.

## HELPFUL LINKS

Directorate General for Environment - Plastic Waste:  
[http://ec.europa.eu/environment/waste/plastic\\_waste.htm](http://ec.europa.eu/environment/waste/plastic_waste.htm)

Directorate General for Environment – Circular Economy:  
[http://ec.europa.eu/environment/circular-economy/index\\_en.htm](http://ec.europa.eu/environment/circular-economy/index_en.htm)

European Chemical Agency:  
<https://echa.europa.eu/>

Business Association Plastics Europe:  
<http://www.plasticseurope.org/>

# FRANCE

# FRANCE



## U.S. Commercial Service Contact Information

**CAPITAL** Paris  
**POPULATION** 66 million  
**GDP** US\$ 2.735 trillion  
**CURRENCY** EURO  
**LANGUAGE** French

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## SUMMARY

The crisis of 2008 is now over and the French plastic industry is in recovery. In the next couple of years, the growth of the French plastics industry will be 1.3 higher than that of the French GDP.

The annual turnover of the French plastics industry ranks third in Europe after Germany and Italy and sixth in the world after China, the United States and Japan. In 2015, the turnover in the UE-28 reached 377 billion dollars (this includes plastics raw materials producers, plastics converters, plastics machinery manufacturers). France represents 8.7% of the European plastic industry's turnover (33 billion dollars).

### Raw Materials:

The world plastics production in 2015 reached 322 million tons (Includes plastics materials (thermoplastics and polyurethanes) and other plastics (thermosets, adhesives, coatings and sealants). It does not include the following fibers: PET-, PA-, PP- and polydactyl-fibers. This is a 3.4% increase compared with 2014. Europe produced 58 million tons of plastics in 2015 and stabilized its position compared to 2014 (59 million tons produced). It represents 18.5% of the worldwide plastics production. China counts for 27.8%, NAFTA countries for 18.5%, Asia for 16.7%, Middle East & Africa for 7.3%, Latin countries for 4.4%, Japan for 4.3% and CIS countries for 2.6%.

For the coming years, Asian and Middle East production levels should continue to grow. United States plastic production should continue to increase thanks to its massive exploitation of shale gas and natural gas.

France ranked 3rd in Europe (after Germany and Italy) and produced around 7.5 million tons of plastic materials in 2015 (thermosets, thermoplastics and technical thermoplastics). The “big seven” plastic types that stand out in terms of their market share are:

- Polypropylene (PP), approximately 1.7 million tons
- Polyethylene – including low density (PE-LD), linear low density (PE-LLD) and high density (PE-HD), approximately 1.4 million tons
- Polyvinyl chloride (PVC) approximately 1.2 million tons
- Acrylic polymers, approximately 6 million tons
- Polystyrene, approximately 6 million tons
- Polyester, 200 thousand tons
- Polyamide, 190 thousand tons

France's biggest export markets for plastic raw materials outside of Europe in 2015 are: Turkey (13,3%), China (11,7%), the United States (11,7%), Russia (6,6%) and Switzerland (6%). The United States ranks eighth as a trading partner with France after Germany, Belgium, Italy, Netherlands, Spain, China, and U.K., with sales of USD 190 million of raw materials (see table n.1).  
 (Source : Société Chimique de France)

USA exports of Plastic Raw Materials to France in 2016 NAICS		US\$ Million
3911	Petro Resins, Polysulfide	41
3907	Polyether, Epoxides, Polyesters	30
3902	Polymers of Propylene	22
3904	Polymers of Vinyl Chloride	19
3910	Silicones	18
3906	Acrylic Polymers	15
3901	Polymers of Ethylene	14
3908	Polyamides	9
3909	Amino Resins & Polyurethanes	8
3905	Polymers of Vinyl Acetate	4
3903/3912/3913/3914	Others	10

(Table 1: Source: Common Data Platform/ITA information)

### Plastics Processing:

In 2016, the core plastics converting activity (finished and semi-finished products) accounts for 125,000 employees, 3,350 companies and 33 billion dollars in sales turnover. The French plastic industry is mainly composed of small and medium-sized companies (an average of 37 employees/company) (100 in Germany in comparison). French companies in the plastic industry are focused on export. The small size of most of French companies in this sector makes it essential for them to innovate and develop highly technical products.

In 2016, exports increased by 6.5% compared with 2015 totaling 9.4 billion dollars. The European Union (mainly Germany, Belgium, U.K., Italy & Spain) is France's main trading partner (75% of French exports). France increased its exports to Africa and Asia in 2016. Imports to France mainly come from Germany, Italy, China, Belgium and Spain (78% of imports come from the European Union).

The United States sold 514 million dollars in plastic products to France in 2016. In regard to new production capabilities in the United States, the Middle East and Iran, French companies could diversify sourcing in coming years.

Two thirds of plastics demand in Europe is concentrated in six countries: In 2015, the plastics demand in Europe reached 49 million tons. Germany counts for 24.6%, Italy for 14.3%, France for 9.6%, Spain for 7.7%, the U.K. for 7.5% and Poland of 6.3%.

### Leading Subsectors

1. Technical parts
2. Packaging products
3. Construction parts
4. Semi-finished products (sheets, shapes, tubes)
5. General consumption parts

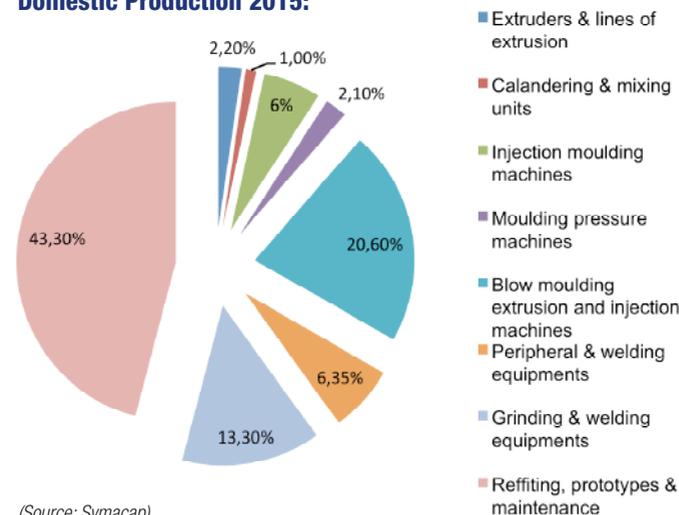
### Distribution of plastics demand by segment is as follows:

- Packaging 39.9%
- Consumer & Household good 22.4%
- Building & Construction 19.4%
- Automotive 8.9%
- Electrics & Electronic 5.8%
- Agriculture 3.3%

### Plastics Machinery:

France is one of the top four plastics machinery and equipment producing countries in Europe after Germany, Italy, and Austria, with a production share of 10% out of 18.2 billion dollars. The French plastics machinery and equipment industry generated a turnover of around 2 billion dollars in 2015, and supplied the following industries:

### Domestic Production 2015:



(Source: Symacap)

The French market for plastic and rubber equipment reached 1 billion dollars in 2015. France is third in Europe in terms of plastic and rubber equipment consumption, after Germany and Italy.

French manufacturers of plastics machinery and equipment sell most of their production within the European Union. Outside Europe, France's main two clients are China and the United States. Exports represented about 70% of the global 2015 production to reach one billion dollars. Most machinery and equipment exported are blow molding machines (44%), followed by mixing machines (33%), extrusion machines (20%), injection machines (13%), pressing machines (5%).

Imports of plastic machinery mainly originate from Europe. The United States is the 9th largest supplier of machinery and equipment to France after Germany, Italy, Austria, U.K., China, Switzerland, Poland and Luxembourg. The U.S. sold 15.5 million dollars of machinery and molds to France in 2016, mainly HTC (Harmonized Tariff Code) 847790 (9 million dollars), HTC 847780 (3 million dollars), HTC 847720 (2 million dollars), HTC 847759 (390 thousand dollars), HTC 847710 (250 thousand dollars), HTC 847730 (235 thousand dollars) and HTC 847740 (230 thousand dollars).

## MARKET ISSUES AND OBSTACLES

### Machinery:

All plastics machinery and equipment coming from non-European countries must be tested and approved by the European Committee for Standardization, which ensures that every product brought into Europe meets the European Union's health, safety and environmental requirements to ensure consumer safety throughout Europe (Directive "Machines" 2006/42/CE). The CE Mark certifies that the product follows EU standards. Usually, plastics machinery from the United States is marketed in France via distributors. French processors expect their machinery supplier to be local for after-sales service purposes. Manufacturers, representatives or importers of any machinery or equipment brought into Europe from non-European countries must fill out an "EC-Declaration of Conformity" or an "EC-Declaration of Incorporation" document stating that the product is complying with all necessary standards.

### Materials:

- REACH affects all supply chains in the EU that produce, import and use chemicals. It is volume-oriented, affecting substances in volume of/or exceeding one ton.  
([http://echa.europa.eu/home\\_en.asp](http://echa.europa.eu/home_en.asp).)
- European BioPlastics Association members have made a voluntary commitment to certify and label their products according to EU Standard EN 13432 / EN 14995 when advertising, using the descriptions: "compostable" or "biodegradable". The Association supports the establishment of national certifying bodies, together with unified labeling of compostable bioplastics products in Europe. It is lobbying for the establishment of a European regulation regarding the treatment of these products under waste legislation. A 2006 French regulation required all disposable retail-carry bags to be biodegradable by 2010. (loi d'orientation agricole n° 2006-11 du 5 janvier 2006).

## MARKET ENTRY

### Distribution:

The French plastic market is highly orientated towards technical and other specialty products such as: performance plastics, reinforced plastics and self-reinforced plastics, wood plastics-composites, other natural fiber composites, innovative composites, bioplastics (conductive and biodegradable) and nano materials.

B2B marketplaces, direct purchase and marketing via wholesalers, distributors or agents are the main distribution channels in France for plastic materials and equipment. For plastics machinery, a partner with repair capabilities and spare parts availability is necessary. Price is a crucial factor in most transactions, as are quality and supplier reliability.

To sell innovative and specialty plastic products, direct communication between supplier and processor is often necessary to ensure product quality satisfaction. Unlike innovative specialty plastics, B2B marketplaces are often used to purchase standard plastics. These types of standard material orders are usually placed with long-term suppliers.

Plastics machinery and materials are primarily marketed through local distributors. The demand for imports from outside the EU is limited since many plastics manufacturers in France are small companies. French companies generally import in small quantities, acquired more easily locally (in Europe) than abroad.

French companies generally prefer long-term business partners, and business-partner decisions are conscientiously taken. French-language product literature is a necessity in communicating with most French plastics companies.

### Customs:

Prior to exporting, U.S. manufacturers must consider certification for the EU market. Certification is about conformity assessment (testing and certification) to declare compliance with EU regulatory requirements. For most exported products, compliance involves using CE marking. Use of standards is part of the process. Valuable information included into the following website:  
<http://www.export.gov/europeanunion/eustandardsandcertification/index.asp>

Customs duties: between 5 % and 7% and the standard value-added French tax of 20% must be added.

## FRANCE

### WEB RESOURCES:

#### Trade Shows

K Show, major international exhibition for the plastics & rubber:  
October 16-23, 2019. Dusseldorf, Germany  
<http://www.k-online.com/>

Euromold, major international trade show for additive Manufacturing / 3D Printing:  
October 23-25, 2018 Munich, Germany  
<http://euromold.com/en/>

#### Associations

French Plastic Industry Association – Fédération de la Plasturgie  
<http://www.laplasturgie.fr>

European Plastics Trade Association  
<http://www.plasticseurope.org/>

Plastics Converters  
<http://www.plasticsconverters.eu>

Plastics Recycling  
<http://www.plasticsrecycling.org>

Symacap  
<http://www.symacap.org>

Euromap  
<http://www.euromap-ess.org>

Global Trade Atlas (GTA) Trade Data

Embassy U.S. Commercial Service Trade Specialist: Stephanie.Pencole@trade.gov  
Phone: (33-1) 43 12 71 38 - Website: <http://export.gov/france>

## GERMANY



### U.S. Commercial Service Contact Information

**CAPITAL** Berlin  
**POPULATION** 82.8 million  
**GDP** US\$ 3.4 billion (est.)  
**CURRENCY** Euro  
**LANGUAGE** German

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### SUMMARY

Germany is the largest consumer market in the heart of the European Union. It has the highest GDP of all EU member states. One of its federal states alone, North Rhine-Westphalia, has a higher GDP than Switzerland. The significance of the German marketplace goes well beyond its borders. International companies appreciate its central location within the EU, favoring shipments into other European countries. Not surprisingly, an enormous volume of worldwide trade is conducted in Germany at some of the world's largest trade events. For example, K' Show, the world's largest plastics show, attracts international visitors from 160 countries. These are but a few of the many reasons why U.S. firms make Germany the cornerstone of their European-expansion strategies.

Plastics Processing Industry according to Segments	Annual Sales in EUR/USD billion 2014-2016				
	2014	2015	Change	2016	Change
Plastics Processing total:					
Sub-Segments below	58.1	58.9	+1.3%	60.8	+3.2%
Packaging	13.4	13.6	+1.5%	14.2	+4.4%
Construction	18.3	18.3	0%	19.1	+4.7%
Cars/Electr/Engineering	17.2	17.6	+2.3%	17.9	+1.7%
Consumer goods, medical, sports & leisure; other	9.2	9.4	+2.2%	9.6	+2.0%

Source: GKV (Association of the German Processing Industry) 2017

Germany is home to Europe's largest plastics market. It offers good potential for innovative U.S. plastics materials and equipment. In 2017, approximately 2,910 firms with 320,000 employees are active in the German plastics industry, achieving annual sales of EUR over 61 billion. The local plastics industry consists of three main pillars: processing; machinery and materials.

### Plastics Processing

The majority of the German plastics companies are focused on plastics processing. In 2016, local industry processed plastics in value of EUR 60.8 billion, an increase of 3.2% over 2015. Most of the plastics material is processed into packaging material, mainly supplied to the food industry. Finally, the long-expected strong demand for plastics construction became a reality. In 2016, the sale of plastic products in the construction industry increased by 4.7% over the previous year – a substantial growth rate in the German plastics industry.

### Plastics Machinery

Over 200 German firms produce plastics and rubber machinery in Germany, achieving annual sales of EUR 7 billion in 2016. This excludes peripherals, which amount to an extra EUR 3 billion. Germany is one of the world's largest producers of plastics and rubber machinery. A number of global players, such as Arburg, Wittmann/Battenfeld, Dr. Boy, Engel, Kreyenborg, Kiefel/ Brueckner Group, Leistritz and others are based in Germany or in neighboring countries. As a direct consequence, foreign manufacturers of standard plastics machinery seeking to enter the German market face very strong competition. Peripherals, such as instrumentation to secure high product quality or non-destructive testing devices, have better chances. In general, U.S. products have a good reputation and are known for their high quality.

### Plastics Materials

The third pillar of the German plastics industry is the raw materials sector. In 2016, annual sales in this segment amount to EUR 24.7 billion. Both the materials and the machinery sectors have a similar amount of active companies – only the German materials companies generate three times more in annual sales.

An average growth rate of 1.5% is expected for this segment. Packaging, construction and automotive are the main applications for plastics materials in Germany. While there are several large chemicals and plastics producers headquartered in Germany (BASF, Covestro, Lanxess, Wacker and others), there still is a strong demand in Germany for new materials, innovative additives and other material-enhancing substances.

**Bio-plastics:** Bio-plastics, in general, are increasingly gaining importance in Europe. Compared to other European countries like the United Kingdom or Italy, German industry has been hesitant to use bio-plastics, fearing problems during production processes. After the successful introduction of reliable processes in other countries, however, it seems that this situation is slowly changing. It helps that today, additives, fillers and reinforcing substances for bio-plastics are readily available - demand is growing.

**Certification of bio-plastics:** The European Bioplastics Association fosters the use of bio-plastics throughout Europe and develops the appropriate standards. Certification is on a voluntary basis. For more details: <http://www.european-bioplastics.org/bioplastics/standards/certification/>.

## MARKET ENTRY

The major channels of distribution in the German plastics industry are.

- Direct purchase or B2B marketplaces
- Distributors or Wholesalers
- Agents

**Direct Purchase or B2B:** Sales of highly innovative plastics materials often require direct communication between supplier and processor to ensure satisfactory product results. Unlike specialty innovative plastics in small amounts, standard plastics are often purchased via B2B marketplaces. B2B orders are preferably placed with long-term suppliers.

**Wholesalers/ Distributors:** Plastics machinery or materials are marketed primarily through local distributors. Distributors vary in size. Large German distributors or wholesalers often operate in various EU countries or partner with local firms. U.S. firms are usually better-positioned in the local markets by using a larger distributor. Experience has also shown that changing market conditions can negatively affect small distributors more easily than larger companies.

**Agents:** There only are a limited number of agents in the German plastics industry. Currently, it is extremely difficult for U.S. companies to find agents or distributors in Germany, inasmuch as local representatives are fully occupied with an already full portfolio.

German companies usually prefer long-term business relationships. In an industry where production standstill can cost a fortune, fast response time is essential. In addition to pricing, quality and supplier reliability are major buying factors. German-language product literature is appreciated.

The products marketed in Germany need to comply with local and European regulations. The CE mark (including conformity statement and technical documentation of the country of import) is required for:

- Components regulated by the EMV Directive 2004/108/EG (electro-magnetic compatibility);
- Machinery covered by the machinery safety regulation 2006/42/EG;
- Equipment covered under the EU Low Voltage Directive 2006/95/EG.

In the materials segment, the following regulations are the most important ones:

- REACh (Registration, Evaluation and Authorization of Chemicals).
- CLP-Regulation (Classification, Labeling and Packaging of Substances and Mixtures).

Trade barriers, such as quotas, do not exist. The German import duty for injection- molding machinery, blow-molding machinery and extruders is 1.7%. The average customs duty for plastics raw materials is 6.5%. In addition to import duties, a 19% import-turnover tax (Einfuhrumsatzsteuer) must be paid at the EU border point of entry, which is then passed on to the ultimate end-user in the form of the value-added tax (VAT or Mehrwertsteuer, MWSt).

## CURRENT DEMAND

German industry is highly receptive to innovative U.S. products that are appreciated for their high quality. Below are some best prospects for U.S. companies:

- There is good potential for plastic construction products.
- Rather than standard machinery, spare parts and innovative peripherals from the United States have good prospects, e.g., measurement or testing devices, particularly for new materials.
- New materials with special features, including lightweight applications
- Hybrid materials, a material mix that allows new or improved product characteristics
- Flexible solar cells or displays; electronics on foil, organic light-emitting diodes (OLEDs) as in light emitting-wall paper; materials for smart textiles
- Green products, such as bio-based additives or “green’ chemicals
- Bonding or innovative adhesive solutions that can combine with different materials
- Innovative packaging for food, i.e., “intelligent” packaging or, packaging with security features (specialty inks, holographic enhancements) to prevent fraud
- Innovative recycling solutions, particularly for the separation of material mixes.

## TRADE EVENTS

**Name of Event:** FAKUMA  
**Date:** October 16-20, 2018  
**Location:** Friedrichshafen  
**Website:** <http://www.fakuma-messe.de/en/fakuma/>  
**Description:** The annual Fakuma show offers a wide range of products from injection-molding to extrusion, including machinery and systems, peripheral equipment, raw materials, additives, tools and molds, automation and quality control. In 2017, some 1,800 exhibitors participated in the event, attracting 48,375 visitors from 128 countries. Compared to the highly international K’ Show, FAKUMA mainly focuses on Germany and southern Europe and has grown in importance over the past few years.

**Name of Event:** European Coatings Show  
**Date:** March 19-21, 2019  
**Location:** Nuremberg  
**Website:** <http://www.european-coatings-show.com/en/>  
**Description:** The biennial European Coatings Show (ECS) is Europe’s major trade event for the coatings and paint industries. It also showcases adhesives, sealants and construction chemicals. In 2017, 30,198 trade visitors attended the event.

**Name of Event:** K’ Show  
**Date:** October 16-23, 2019  
**Location:** Duesseldorf  
**Website:** <http://www.k-online.de>  
**Description:** K’, the world’s prime trade event for plastics, rubber materials and machinery, offers exhibition opportunities for the whole range of the plastics industry. In addition to raw materials and machinery, it covers auxiliaries, semi-finished products and services. The show takes place every three years. In 2016, it hosted 3,285 German and international exhibitors and attracted 230.000 visitors from 160 countries.

## AVAILABLE MARKET RESEARCH

- Country Commercial Guide Germany 2017
- Aspects of the German Plastics Market 2016



### U.S. Commercial Service Contact Information

**CAPITAL** New Delhi  
**POPULATION** 1.34 billion  
**GDP** US\$ 2.4 trillion (2017, est.)  
**CURRENCY** Indian Rupee  
**LANGUAGE** English/ Hindi

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## SUMMARY

The Indian plastics-processing subsector has grown at an annual rate of 10% (volume) and 11% (revenue) from \$5.47 billion in 2005 to \$15.6 billion in 2015 per the Federation of Indian Chambers of Commerce and Industry (FICCI) Knowledge Paper on Plastic Industry for Infrastructure, dated February 2017. FICCI also projects India will process 22 MMTs (Million Metric Tons) of plastic annually and will continue double-digit growth through 2020. According to the 2016 annual report of the Indian Ministry of Chemicals and Fertilizers, India imported \$6.5 billion in performance plastic, polymers and synthetic rubber. Imports from the United States accounted for 18% (\$1.19 billion) of total imports. Growth in the automotive, construction, electronics, healthcare, textiles, household and fast-moving consumer goods sectors are driving increasing demand. The plastics processing subsector is highly fragmented, made up primarily of small and medium-sized manufacturers. These companies take advantage of low labor costs, and employ basic technologies to make inexpensive products for mass consumption.

## MARKET ENTRY

We recommend new entrants work with a local distributor or representative. Our seven offices across India (Delhi, Mumbai, Chennai, Kolkata, Bangalore, Hyderabad, and Ahmedabad) offer a full range of fee-based services to find qualified partners.

## MARKET DESCRIPTION

The plastics-processing subsector is made up of 30,000 manufacturing firms, the majority of which are small and medium-sized, making economy products for mass consumption. These companies are underinvested in technology and utilize relatively inexpensive labor. Plastics and articles are imported under Harmonized Code 3901-3926 and plastic machinery is imported under Harmonized Code 8477. India has many domestic polymer producers, ensuring adequate domestic supply of commodity polymers. Imports increase when domestic supply is disrupted. India is exporting plastic raw materials, molded and extruded items and packaging material to Bangladesh, Nepal, Pakistan, Vietnam, Africa and Latin America. Indian processors added 6,450 injection-molding machines in 2016-17, increasing domestic demand for plastic materials. The Government of India has approved 10 new industrial parks for plastics in Madhya Pradesh, Assam, Tamil Nadu, West Bengal, Chhattisgarh, Uttarakhand and Haryana. Their development will increase demand for more machinery and increase polymer consumption. Polymers and machinery are freely importable, subject to customs basic duty and Integrated Goods & Service Tax on the assessable value.

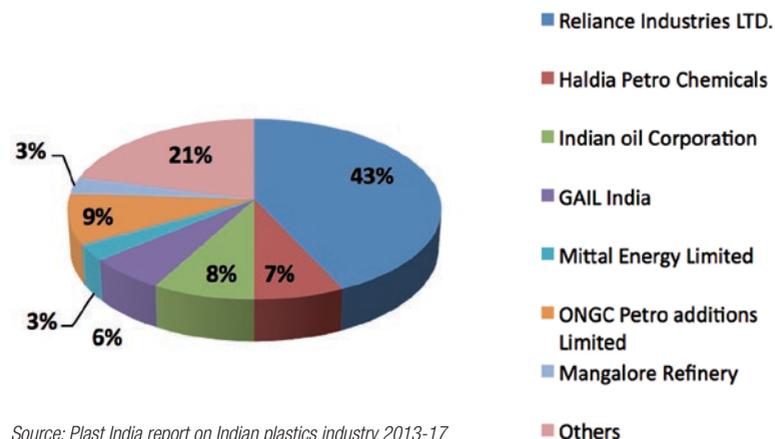
## CURRENT DEMAND

Population growth, changing demographics, rising incomes, increasing foreign-direct investment, and the introduction of modern technology is driving growth in the sector. We divide the sector into the following subsectors: (1) raw material, (2) plastic machinery, and (3) plastic processing.

## RAW MATERIAL

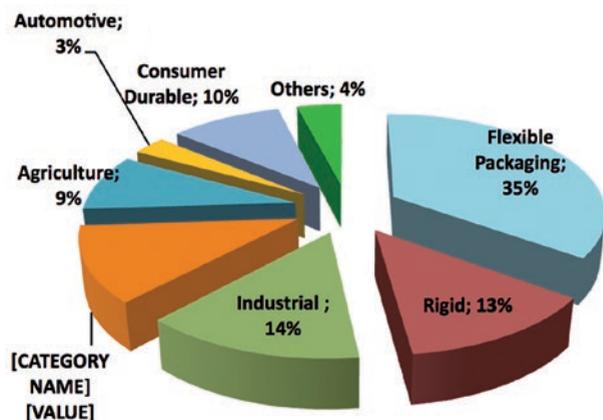
Polymers are classified based on type and application. The broad polymer categories include polyethylene, polypropylene, polyvinyl chloride, polystyrene and PET. According to the TATA Strategic Management Group, India's polymer-processing industry has grown at a compound annual growth rate (CAGR) of 10% in volume terms from 8.3 MMT in FY10 to 13.4 MMT in FY15, and expects it to grow at a CAGR of 10.5% from FY15 to FY20 to reach 22 MMT, based on an economy growing at 6-8%.

### Market Share of Major Polymer Manufacturers (PE/PP/PVC/PS/PET)



Source: Plast India report on Indian plastics industry 2013-17

### Polymer Application by Sector



Source: Plast India report on Indian plastics industry 2013-17

India is importing the following petrochemical products from the United States, per India's Ministry of Chemicals & Fertilizers:

Polymer	Import in MT during 2015-16	Value in million USD
Acrylonitrile	62736.0	74.0
PVC compound	5726.6	5.5
Ethyl Propylene Dimers	10605.8	24.2
Butyl Rubber	9597.6	27.6
Ethylene Oxide	84.7	1.4
Nylon-6	19328.9	48.9
PTFE	302.4	4.1
Propylene	1927.7	2.5
Ethylene Dichloride	142857.5	42.2
Vinyl Chloride Monomers	9696.7	6.4
Propylene Glycol	2116.1	3.1
Methyl Isobutyl Ketone	2704.0	3.6

### PLASTICS MACHINERY

India is the third-largest consumer of polymers in the world. There is growing demand for new and advanced technologies to increase output and improve quality. There is increasing demand for automatic blow-molding, multilayer blow-molding, stretch blow-molding and other machines. Demand for PVC calendaring, multilayer film plants for barrier films, multilayer cast lines, BOPP and nonwovens is also increasing.

The high-tech machinery market is dominated by imports from Europe, the United States and Japan. We anticipate growing demand for plastic-recycling machines and technology as India adopts more stringent environmental standards. Commodity plastics including PE, PP, PVC and PS account for the majority of consumption. India has increased its plastics-production capacity, ensuring adequate raw-material supplies. We project greater export opportunities in downstream plastic processing. Auto sales continue to increase, driving the demand for plastics and polymer composites like PP and PC+PBT, as well as low-density foam polymer materials.

**Processing Machinery by Sector, 2013-14**

Machine Application Type	No. of Machines Installed	Installed Capacity (in '000 MT)
Injection Molding	76810	10350
Blow Molding	9450	1410
Extrusion Total	33091	21115
Monolayer Film (extrusion)	9812	1740
Multilayer (extrusion)	1351	1125
BOPP (extrusion)	35	645
PPTQ (extrusion)	3089	690
Raffia (extrusion)	1843	2885
PO Pipes (extrusion)	1461	1675
RPVC Pipe (extrusion)	5445	5775
Others (extrusion)	10055	6580
Total of Injection + Blow + Extrusion	119351	32875

Source: Plastic Machinery Manufacturers Association of India report

**PLASTICS PROCESSING**

The current per capita consumption (11 Kg) of plastics in India is below China (38 Kg) and the United States (109 kg). Rising incomes, growth in end-use industries, including automotive, construction, electronics, healthcare, textiles and FMCG, are leading to increased consumption.

**Snapshot of the Indian Plastic Processing industry**

Estimated size of plastic processing in value	\$ 15.6 Billion
Market size in Volume	13.4 MMTPA*
Processing Units	Over 30,000
Technical Manpower	1.1 million employees
Growth Rate	10–11 %
Per Capita plastic consumption (kg/ person)	11 Kg

\*MMTPA: Million Metric Tons per Annum

The plastic-processing industry is divided into (1) upstream Industry; manufacturing of polymers, and (2) downstream Industry; converting polymers into plastic articles. Upstream polymer manufacturers are more organized and have set up globally-competitive sized plants with imported state-of-the-art technology. The downstream plastic processing industry is highly fragmented and consists of micro, small and medium-sized units. There are over 30,000 registered plastic processing units, of which about 75% are small, producing only 25% of supply. Recycled plastic accounts for 30% of supply.

**BEST PROSPECTS****1. Placticulture**

Applications such as water conservation, irrigation efficiency, crop protection, crop storage and transportation.

**2. FMCG (Fast Moving Consumer Goods), Construction, Infrastructure and Agriculture**

Increasing population and urbanization is increasing plastics consumption.

**3. Bio-Plastics**

Growing interest in green products, healthier lifestyles and conservation is increasing demand for bio-plastics. Manufacturers are using bio-based raw materials to develop alternative feedstock.

**MARKET ISSUES & CHALLENGES**

- Plastic processing Industry is highly fragmented.
- Constant pressure on feedstock prices of polymers by large, international suppliers.
- Manufacturers are dependent more on labor-intensive low output / low-technology machines.
- Solid waste management, air and water pollution are of increasing political interest.

**DUTIES AND TAXES**

The basic duty on plastic machinery such as injection molding, blow molding and extrusion machines and major polymers such as polyethylene, polypropylene, vinyl chloride, polystyrene is 7.5%. Under the newly introduced Goods and Service Tax (GST) regime, the Countervailing Duty (CVD) and the Special Additional Duty (SAD) have been replaced with the Integrated Goods and Service Tax (IGST). Plastics and articles are imported under HS heading code 3901-3926 and plastic machinery is imported under HS heading code 8477. At present, IGST on both plastics and machineries is fixed at 18% along with a Basic Duty of 7.5% as well as a Social Welfare Surcharge of 10% on basic duty. So the current duty structure is as follows:

Basic Custom Duty + Social Welfare Surcharge + IGST = Total duty

## INDIA

Example: If the assessable value of an article imported into India is \$101, the Basic Customs Duty is 7.5%, the Social Welfare Surcharge is 10% on Basic Duty, IGST is 18% then:

- Assessable Value = \$101
- Basic Customs Duty (7.5% on Assessable Value) = \$ 7.58
- Social Welfare Surcharge (10% on Basic Customs Duty) = \$ 0.76
- Value for levying IGST = \$ 101 + \$ 7.57 + \$ 0.75= \$ 109.34
- IGST (18% on \$ 109.34) = \$ 19.68
- Total duty = \$ 28.02

## TRADE EVENTS

**Name of Event:** PlastIndia 2018  
**Date:** February 7 – 12, 2018  
**Location:** Gandhinagar, Gujarat  
**Website:** <http://plastindia2018.plastindia.org/>  
**Description:** Major Indian plastics exhibition.

**Name of Event:** India Chem 2018  
**Date:** October 4 – 6, 2018  
**Location:** Mumbai, Maharashtra  
**Website:** <http://www.indiachem.in/>  
**Description:** The most important chemical & petrochemical show in India, organized by the Government of India and FICCI.

**Name of Event:** Indplas'18  
**Date:** November 30 – December 3, 2018  
**Location:** Kolkata, West Bengal  
**Website:** <http://www.indplas.in/>  
**Description:** The largest plastics exhibition in East India, with exhibitors also from Bangladesh, Nepal and Bhutan.

## ISRAEL



**CAPITAL** Jerusalem  
**POPULATION** 8.7 million  
**GDP** US\$ 329 billion  
**CURRENCY** New Israeli Shekel  
**LANGUAGE** Hebrew and Arabic



### U.S. Commercial Service Contact Information

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## SUMMARY

### In 2016:

- There was an annual growth of about 8% in the output of the rubber and plastic industry after a moderate decline of 0.4% in 2015. The output constituted approximately 4.5% of the country's total manufacturing output.
- Total sales by the industry are estimated at NIS 19.8 billion (\$5.6 billion), accounting for about 5% of total manufacturing sales.
- Exports of rubber and plastics materials and products rose by about 10.5% in real terms, amounting to \$2 billion.
- The industry employs about 23,800.
- Imports of machinery and equipment by the industry increased by approximately 14% and amounted to NIS 547 million (\$156 million).

Israel's plastic and rubber industry is innovative and resourceful. It is focused on specialty, customized applications, high-quality, quick-delivery, large and small batch productions, and benefits from strong ties with universities and research institutes. The industry is export-driven and includes manufacturers of raw materials and additives, packaging solutions, advanced products for agriculture and construction industries, DIY and consumer-goods products, industrial parts, automotive parts, medical devices and disposables and plastic components for the aviation and aerospace industries. Raw materials and specialty compounds such as polyethylene, polypropylene, polystyrene and PVC are produced in Israel on a large scale by Carmel Olefins Ltd, Israel's sole manufacturer of petrochemical products that are used as raw materials for the plastics industry.

Reports from the industry show an increase in exports of goods in the second quarter of 2017, alongside an increase in fixed-capital investments and job creation. Industrialists expect that the increase in investments in fixed assets will continue in 2018, accompanied by an increase in production output, sales to the domestic market, export shipments and hiring additional workers.

## MARKET ENTRY

Partnering with a local representative is important for maintaining an active in-country presence. Because of Israel's small geographic size, most agents have exclusive representation rights. Distribution methods vary by type of product. For industrial equipment, raw materials and commodities, manufacturers use non-stocking commissioned agents, while stocking agents represent high-volume items. Direct-purchase through agents is the most common Israeli distribution channel for raw materials and machinery. Israeli agents represent most major multinational producers.

The industry relies on a quick delivery, flawless supply of raw materials and dependable machinery and equipment. Interested suppliers can contact Yael Torres, Commercial Specialist, at: [yael.torres@trade.gov](mailto:yael.torres@trade.gov)

## CURRENT DEMAND

Demand for Plastics Raw Materials:

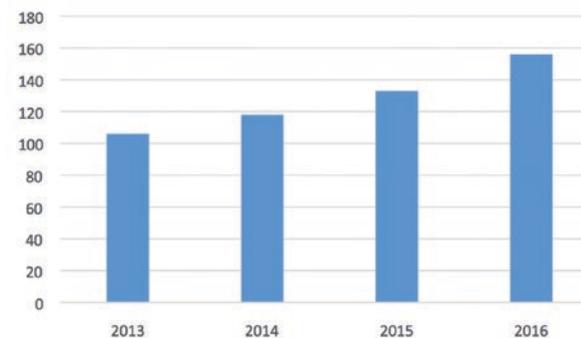
In 2016, Israeli manufacturers imported over \$1B worth of plastic raw materials. Shipments from the United States accounted for about 25% of imports, at \$250 million.

	3901 POLYMERS OF ETHYLENE, IN PRIMARY FORMS	\$ 89,702,745	38.4 %
	3904 POLYMERS OF VINYL CHLORIDE ETC., IN PRIMARY FORMS	\$ 26,691,305	11.4 %
	3902 POLYMERS OF PROPYLENE OR OTHER OLEFINS, PRIM FORMS	\$ 17,941,339	7.7 %
	3926 ARTICLES OF PLASTICS (INC POLYMERS & RESINS) NESOI	\$ 17,054,499	7.3 %
	All Others	\$ 82,153,845	35.2 %
<b>Grand Total</b>		<b>\$233,543,733</b>	<b>100 %</b>

Source: the Israel Central Bureau of Statistics [www.cbs.gov.il](http://www.cbs.gov.il)

Demand for Plastic Machinery and Equipment:

Importation of machinery and equipment for the plastics industry grew 14% in 2016, accounting for \$156 million.



Machinery Imports in USD Millions, 2013-2016

## MAIN COMPETITORS

Israel is a mature market in many sectors and U.S. companies will face significant local and international competition. Machinery for the Israeli plastic-industry market is imported predominately from the European Union. Israel imports raw plastics materials from Europe, Asia and the United States.

## MARKET ISSUES AND OBSTACLES

Becoming a major player in the Israel plastic & rubber industry requires an investment in marketing, logistics and R&D. Suppliers are also required to comply with international standards and regulations and should be ready to submit products for relevant testing and market approvals.

## TRADE EVENTS

No trade events are planned for the industry in Israel in 2018

## AVAILABLE MARKET RESEARCH

2016 – An Overview of the Israeli Plastics and Rubber Industry by the Israel Plastics and Rubber Industry Association



**U.S. Commercial Service  
Contact Information**

**CAPITAL** Rome  
**POPULATION** 61 million  
**GDP** US\$ 1.8 trillion (est.)  
**CURRENCY** Euro  
**LANGUAGE** Italian

**NAME** Kira Migliorini  
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## SUMMARY

The European plastic industry employs about 1.5 million people, with over 62,000 companies and a turnover of EUR 300 billion. Italy ranks as the second largest plastics market in Europe after Germany. Italian domestic plastic and rubber machinery production amounts to EUR 4.23 billion, with high international sales and a 12.8% growth in imports in 2016. The plastics-processing sector has important applications in the domestic packaging, automotive and aerospace industries. There are new opportunities for U.S. companies because the demand for new innovative materials to improve plastics performance. High demand for traditional additives is supplemented by demand for nanocomposites, bioplastics, and innovative composites.

## MARKET ENTRY

Direct purchase through wholesalers and distributors is the most common Italian distribution channel. Participation at one of the major European trade shows presents a good opportunity for meeting potential Italian distributors and buyers. Major Italian distributors of plastics offer a complete range of high-quality products, from polymers to additives, representing the major world producers. Major distributors include Brenntag, Eurochimind, Eigenmann & Veronelli, Biesterfeld Polybass, Eico Specialties, Prochema, Caldic Italia, Velox and Nachmann. Through their knowledge of the market and interest in acquiring new products, they are key contacts for market entry.

## CURRENT DEMAND

The Italian plastic market consists of three main sectors: plastic materials production, plastic processing and plastic and rubber machinery.

The plastic market is significantly developed in Italy with 11,000 companies, about 160,000 employees and a turnover of EUR 43 billion.

	Plastic Materials	Plastic Processing	Plastic Machinery	Plastic Recycling
<b>Companies</b>	360	9,410	900	300
<b>Employees</b>	13,000	129,000	13,500	2,000
<b>Turnover (bln €)</b>	7.1	31.2	4.2	0.5
<b>Export (bln €)</b>	5.7	12.2	2.9	n/a

Source (The European House – Ambrosetti on data from PlasticsEurope, Euromap, Assocomplast and Assorimap).

### Plastic materials

In 2015, plastic-materials demand in Europe, including thermoplastics and polyurethanes, thermosets, adhesives, coatings and sealants, reached 49 million tons, with the Italian market comprising 14.3% or 7.5 million tons. Italy is Europe's sixth largest supplier of ethylene, with a capacity of 1,54 million tpa reported in 2016 (data from BMI), while polyethylene (PE) capacity is 785,000 tpa. Italy no longer produces polyvinyl chloride (PVC).

### Plastic processing

Italy is the second largest country in Europe for plastic consumption, after Germany. Major polymers used in Italy include: Polypropylene (19.1%), Low Density Polyethylene (17.3%), PVC (10.1%) and High Density Polyethylene (12.1%). The packaging industry accounts for about 39.9% of the plastic materials used in Italy, most of which are used for food packaging and packaging of pharmaceutical and hospital equipment.

The building and construction industries use 19.7% of plastic materials produced in Italy, primarily for door and window frames, paneling, tubes, and thermal and acoustic insulation. Applications in the automotive sector are increasing than other sectors due to the innovative composites used in new-generation vehicles. The electronics industry accounts for 5.8% of plastics applications, where they are used in fiber optics, microchips, computers, compact discs, cellular phones, TV sets and refrigerators. Other applications include agriculture (3.3%), health and sporting goods. Germany, France and Spain are the largest markets for Italian polymer exports.

The top plastics supplier to Italy is Germany, followed by France and Belgium, with the United States ranked eleventh. Leading materials imported from the United States include polymers of vinyl chloride (PVC), polymers of ethylene and polyethers, epoxides & polyesters.

### Plastic and rubber machinery

In 2016, Italian production of plastics and rubber machinery amounted to EUR 4.23 billion, with an increase of 1.9% over the previous year, making Italy one of the major plastics-machinery producers after Germany and Japan. According to data released by Assocomplast, Italian production increases signal the recovery of the Italian plastics industry to levels before the economic crash in 2009. In 2016 Europe was a first destination for Italian machinery, followed by NAFTA countries, with Mexico demonstrating a sales growth of 70%. Germany remains the top destination for Italian plastics exports, followed by China and Austria. In 2016, there was a 12% increase of Italian injection machines, extruders and blowing machines. Plastics imports from the United States increased by 5.3% in 2016, totaling EUR 24.9 million.

## MAIN COMPETITORS

### Plastic material production

Many foreign companies have production subsidiaries in Italy, including Basf, Solvay, Borealis, Dow, LyondellBasell, and Cytec. Major Italian producers are Esso Italiana, ENI, M&G Polimeri, Polynt, Poliver, CFP Flexible Packaging, Coim, F.A.R. Fabbrica Adesivi Resine and Leda Industrie.

### Plastic processing

Major Italian converters are Pirelli, Marangoni, Crocco, Industrie Ilpea, IVG Colbachini, Ciga, CF Gomma, Metaform Lucchese, Si.Con, Sinterplast, Manuli Stretch, Plastotecnica, Coes and ITP.

### Plastics and Rubber Machinery

Major Italian machinery producers also known abroad for their products are: Bausano, Dolci Extrusion, Bandera, Ghioldi, Piovan, Icma, Amut, Moretto, Plas Mec, Negri Bossi (Sacmi Group – leading European designer and producer of injection molding machines for thermoplastics), Macchi (European leading supplier of blown film extrusion lines) and Presma.

## MARKET ISSUES AND OBSTACLES

### REACH

Manufacturers and importers are required to gather information on the properties of the chemical substances they produce/import in volumes of more than one ton per year and to register the information in a centralized database run by the European Chemicals Agency (ECHA).

REACH is a European Union Regulation on chemicals and their safe use (EC 1907/2006). It deals with the Registration, Evaluation, Authorization and Restriction of Chemical substances. The law entered into force on 1 June 2007. For information:

[http://ec.europa.eu/environment/chemicals/reach/reach\\_intro.htm](http://ec.europa.eu/environment/chemicals/reach/reach_intro.htm)

Although REACH focuses on chemicals, U.S. producers of plastic materials and additives should carefully review this EU legislation and determine if registration is required. Information on the List of Pre-registered Substances is available on ECHA website:

<https://echa.europa.eu/regulations/reach/legislation>

The REACH Regulation includes the obligation for a review every 5 years to monitor progress of its objectives. The second REACH Review, due in 2017, is being carried out in parallel with the eligibility check on the most relevant chemicals legislation excluding REACH. Information is available on:

[http://ec.europa.eu/environment/chemicals/reach/review\\_2017\\_en.htm](http://ec.europa.eu/environment/chemicals/reach/review_2017_en.htm)

### CE MARK

The CE mark is a mandatory European marking for certain products in order to indicate conformity with the essential health and safety requirements set out in European Directives. To permit the use of a CE mark on a product, proof that the item meets the relevant requirements must be documented. U.S. suppliers should be aware that machinery exporters wishing to sell into the European market, either directly or through a distributor are required to conform to the New Machinery Directive 2006/42/EC, which provides the regulatory basis for the harmonization of the essential health and safety requirements for machinery. The directives apply only to products that are intended to be placed (or put into service) on the EU market for the first time. For information: <https://osha.europa.eu/en/legislation/directives/directive-2006-42-ec-of-the-european-parliament-and-of-the-council>

## TRADE EVENTS

**Name of Event:** K' SHOW

**Date:** October 16-23, 2019

**Location:** Düsseldorf (Germany)

**Website:** [www.k-online.de](http://www.k-online.de)

**Description:** K Show is the world number one trade show for plastic and rubber, 3,200 exhibitors and 232,000 visitors.

**Name of Event:** PLAST

**Date:** May 29-June 1st, 2018

**Location:** Milan (Italy)

**Website:** [www.plastonline.org](http://www.plastonline.org)

**Description:** PLAST, held in Milan every three years, is one of the most important exhibitions for plastics and rubber industry worldwide. With more than 1,500 exhibitors from 55 countries and 50,000 visitors, it is the key plastic trade show in Europe after K Show.

## AVAILABLE MARKET RESEARCH

Italy: Best opportunities in the Plastic Sector



## U.S. Commercial Service Contact Information

**CAPITAL** Kuala Lumpur  
**POPULATION** 32,161,026 (Oct'17)  
**GDP** US\$ 296.36 billion (2017)  
**CURRENCY** Ringgit Malaysia  
**LANGUAGE** Malay, English, Chinese, Tamil

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**CONTACT** Commercial Specialist  
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## SUMMARY

Malaysia is a net exporter of major petrochemical products, ranging from olefins, polyolefins, aromatics, ethylene oxides, glycols, oxo-alcohols, acrylic acids, phthalic anhydride, acetic acid, styrene monomer, high impact polystyrene, ethyl benzene, vinyl chloride monomer, polyvinyl chloride and polybutylene terephthalate. The availability of these feedstocks has contributed significantly to the development of the local downstream plastic-processing activities. This sector is the most dynamic of Malaysia's manufacturing sectors and is also rated as the most competitive in the Asian region.

This sector can be divided into the following subsectors:

- Packaging products and material
- Consumer & industrial products
- Electronics and electric components
- Automotive components

The packaging subsector remains the largest segment with production of both rigid and flexible-packaging components/ products.

## MARKET ENTRY

There are over 1,200 large and medium-sized plastic manufacturers in the country and many smaller players. With advancement in polymers and pliable engineering plastics, these materials are fast gaining popularity in the increasing applications of plastics in high-end electrical and electronic, engineering and automotive-components segments.

## CURRENT DEMAND

The plastics industry registered a total sale of US\$6.83 billion (RM27.32 billion) for 2016, representing an increase of 10.3% from US\$6.19 billion (RM24.77 billion) for 2015. Exports increased marginally by 1.14% from US\$3.24 billion (RM12.96 billion) for 2015 to US\$3.28 billion (RM13.12 billion) for 2016. Domestic sales increased substantially by 20.3% from US\$2.95 billion (RM11.81 billion) to US\$3.55 billion (RM14.21 billion).  
 (The above-mentioned figures were provided by MPMA members from sales recorded in 2016 and 2015).

On the production-demand side, most of the feedstock are sufficiently supplied by local manufactures and suppliers.

## MAIN COMPETITORS

Petrochemical Feedstock	Capacity	Producers
Naptha	611000 bbl/day	PETRONAS Penapisan (Terengganu) PETRONAS Penapisan (Melaka) Shell Refinery Co Petron Malaysia Refining & Marketing Kemaman Bitumen Co
Methane, Ethane, Propane, Butane, Condensate, Liquefied Petroleum Gas (LPG)	42.16 Million mtpa*	PETRONAS Gas Malaysia LNG MLNG Dua MLNG Tiga
Ethylene	1.22 Million mtpa	Lotte Chemical Titan Holding PETRONAS Chemical Ethylene PETRONAS Chemical Olefins
Propylene	955,000 mtpa	Lotte Chemical Titan Holding PETRONAS Chemical MTBE PETRONAS Chemical Olefins
Benzene, Toulene, Xylene (BTX)	888,000 mtpa	Lotte Chemical Titan Holding PETRONAS Chemical Aromatics

\*metric tonnes per annum

## MALAYSIA

Major Malaysian plastic manufacturers include Malaysia Electro-Chemical Industry Co. (polyvinyl chloride), Petrochemicals Malaysia (polystyrene), Toray Plastics (acrylonitrile butadiene styrene), and Synthomer (nitrile butadiene rubber). The bulk of the plastics produced in the country is in nonprimary forms (e.g., household goods, acrylics sheets, packaging, etc.). However, Malaysia also exports plastics in their primary forms, including polyethylene, polyvinyl chloride, and polyethylene terephthalate, and produces more than 60% of the polymers used to produce these plastics. Malaysia exports primary-form plastics to China, Hong Kong, Singapore, Japan, and Indonesia.

## MARKET ISSUES AND OBSTACLES

The packaging sector is the largest end-user of plastic, accounting for almost 45% of the market demand in the country. However, the whole industry faces serious challenges due to the volatile prices of raw materials as well as the rising environmental concerns over the disposable and sustainability of plastic products. Plastics were favored over paper bags due to their strength and durability. These properties are now its greatest enemy. The mandatory switching of feedstock material from the traditional polyethylene/ polystyrene to bio-degradable plastic has dampened growth in this sub-sector.

Most plastics or plasticizers are assessed 0-20% import duties and 6% sales tax. However, for more accurate rates, please check headings and sub-headings of products at <http://tariff.customs.gov.my/>

## TRADE EVENTS

**Name of Event:** M'sia-Plas 2018  
**Date:** July 19-22, 2018  
**Location:** Putra World Trade Center (PWTC) Kuala Lumpur  
**Website:** <http://www.malaysiaplas.com.my/>  
**Description:** M'sia-Plas, also known as Malaysia International Plastic Mould & Die Exhibition, is a leading event for the plastic, mold and die industry. It is in its 29th edition and is an annual trade show. It is supported by Malaysia External Trade Development Corporation (MATRADE) and the Malaysian Plastic Manufacturers Association (MPMA).

## AVAILABLE MARKET RESEARCH

Malaysian Plastics Manufacturers Association  
37, Jalan 20/14, Paramount Garden  
46300 Petaling Jaya, Selangor, Malaysia  
T: +60 3 7876 3027  
F: +60 3 7876 8352  
E: [info@mpma.org.my](mailto:info@mpma.org.my)  
W: [www.mpma.org.my](http://www.mpma.org.my)

## MEXICO



**CAPITAL** Mexico City  
**POPULATION** 127 million  
**GDP** US\$ 1,046 billion  
**CURRENCY** Peso  
**LANGUAGE** Spanish



### U.S. Commercial Service Contact Information

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## SUMMARY

Mexico has become one of the most attractive countries for investments in the plastics industry. Plastics and resins in Mexico represent a market worth \$26 billion with capital investments reaching \$2.7 billion (2016). Mexico's plastic-processing is still highly dependent on imports. Mexico's plastic industry growth has increased at the same pace as companies in the automotive, aerospace, aeronautics, electronics and other industries enter the market. A substantial number of industrial establishments are clustered in three major regions: Central Mexico (Mexico City, state of Mexico, Puebla, Hidalgo); Bajío (Jalisco, Guanajuato, Queretaro, San Luis Potosi and Aguascalientes); and northern Mexico (Tamaulipas, Nuevo Leon, Coahuila, Chihuahua, Sonora and Baja California). Leading industrial products include bag and film manufactures, followed by industrial parts and injection-molded bottles.

## MARKET ENTRY

Mexico's industry constantly requires new and cost-effective resins. However, OEM, Tier 1 and Tier 2 manufacturers have already identified and certified their best suppliers. This leaves Tier 3 and SMEs small- and medium-size manufacturers as potential suppliers to new international manufacturers. The production of plastic parts has a low margin and therefore, low-cost, high-quality materials are easy to sell. Smaller manufacturers would consider reprocessed and off-grade plastic resins.

International suppliers sell more in Mexico's plastic market when they are represented by distributors who have knowledge of plastic-processing techniques and serve a large customer base, providing a variety of resins, additives and mold-release agents.

## CURRENT DEMAND

Much of Mexico's imports follow a shortage of PE, PP and engineering resins. In 2016, Mexico's imports of resins amounted to 3.9 million tons. Pemex, the largest petrochemical company in Mexico, is the main supplier of ethane and propylene derivatives. Another manufacturer, Etileno XXI, has a production capacity of 1 million tons per year. The company also manufactures HDPE and LDPE. Another good prospect for U.S. suppliers has developed due to Mexico's acquisitions of molds, tools, machinery and equipment and this continues to grow every year. In 2016, this segment amounted to \$2.5 billion in investments.

## MAIN COMPETITORS

The leading manufacturers of plastic resins in Mexico are PEMEX, Braskem/IDESA (Etileno XXI), Mexichem and Alpek (with grupo ALFA). Despite their large-volume production international companies such as Dupont, Bayer, Dow Chemical, Sabic and BASF, are also successful players in the Mexican-plastics market.

## MARKET ISSUES AND OBSTACLES

Mexico's plastic industry is wide-open to the international supplier. There are no restrictions on imports of plastic resins or related technology or services. Although Mexico has resin-manufacturing capabilities, there are no visible signs that protective tariffs will be imposed on imports of materials like those manufactured in Mexico. Many of the problems reported by international exporters who have products stuck in customs are the result of insufficient documentation, wrong classification of merchandise or packaging and labeling issues. Exporters are advised to engage a licensed customs broker for every case.

## TRADE EVENTS

**Name of Event:** Plastimagen  
**Date:** November 2018  
**Location:** Mexico City, Mexico  
**Website:** [www.plastimagen.com.mx](http://www.plastimagen.com.mx)  
**Description:** Mexico's largest showcase for plastics and resins, machinery, tools and services, as well as modern technologies and applications for plastic-processing.

**Name of Event:** Expo Plasticos  
**Date:** November 7-9, 2018  
**Location:** Guadalajara, Mexico  
**Website:** [www.expoplasticos.com.mx](http://www.expoplasticos.com.mx)  
**Description:** Mexico's international exhibition and business forum for machinery, technology, raw materials and plastic solutions for all industries. Expo Plastics runs simultaneously with Residuos Expo, the ideal showcase for recycling technologies.

**Name of Event:** Expo Pack  
**Date:** June 5-8, 2018  
**Location:** Mexico City, Mexico  
**Website:** <http://www.expopack.com.mx/>  
**Description:** Expo Pack is the largest exhibition for food and beverage, cosmetics, personal care, pharmaceutical packaging and processing technologies

## AVAILABLE MARKET RESEARCH

Industrial Molds. 2016 Top Markets Report. Manufacturing Technology ITA)  
[http://www.trade.gov/topmarkets/pdf/Manufacturing\\_Technology\\_Industrial\\_Mold.pdf](http://www.trade.gov/topmarkets/pdf/Manufacturing_Technology_Industrial_Mold.pdf)

Mexico – Plastic Materials and Resins. Country Commercial Guide (2016)  
<http://apps.export.gov/article?id=Mexico-Plastic-Materials-Resins>



## U.S. Commercial Service Contact Information

**CAPITAL** Rabat  
**POPULATION** 35.28 million (2016)  
**GDP** US\$ 101.45 billion (2016)  
**CURRENCY** Moroccan Dirham (MAD)  
**LANGUAGE** Arabic, French

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## KEY FIGURES

The plastics industry in Morocco comprises about 600 companies in various fields that directly employ some 30,000 people and more than 10,000 additional people in allied industries.

Seventy percent (70%) of the companies are headquartered in Casablanca and more than 73% are plastic processors; 24% are distributors of machinery, plastics or service providers and 2% are mold makers.

These companies generated a turnover of about 12 billion dirhams in 2016. Consumption of raw materials amounted to 21 kg per inhabitant in 2016 (excluding finished products and integrated plastics). Therefore, the sector still has a strong potential for development. Household consumer goods account for about 8 percent of the purchase basket. Five percent of companies specialize in footwear (plastic shoes and outsoles) and clothing (hangers, coloring cones, etc.). 6 percent of companies are involved with the automotive and aerospace industry, in line with the Emergence Plan of the Ministry of Industry and with the development of the production of vehicles manufactured in Morocco. Tangier Free Zone, Nouaceur Technopole, saw the creation of new units in this area. The number of plastics companies that work for the car industry tends to increase following the relocation of plastics workers from Europe to Morocco.

All types of plastic processing are represented in Morocco, but the majority of companies are specialized in conventional processes, mainly in extrusion blow molding (65%), injection molding (36%) and blow molding (17%).

## VERY IMPORTANT INDIRECT EXPORTS

In 2014, exports of finished products accounted for approximately 4.6% of total turnover, about 600 million dirhams. France is a major customer, followed by Spain, the Maghreb and Sub-Saharan African countries. Taking into account semi-finished products such as packaging, textiles, exports of plastic articles are much more important. However, the plastics industry in Morocco produces mainly for the local market.

## IMPORTS OF MACHINERY AND EQUIPMENT

All machines for the plastic industry are imported. The most popular machine suppliers in Morocco are based in Europe (Germany, Italy, France, Austria, etc.). Asian suppliers have gained an important share in this area, especially China, Taiwan, Korea and India. Morocco has a few local mold makers (5 to 10) producing simple molds. The majority of technical molds are imported from Europe and Asia.

## MAIN COMPETITORS

Very weak competition

## STRENGTHS AND WEAKNESSES OF THE SECTOR

### High production costs

Energy accounts for a large share of production costs, particularly in Morocco where the cost of energy is high (the price per Kwh is 60% higher than in Tunisia). As young industries, plastics companies require standardization and structuring. Few companies are still certified, although the number is growing every year. However, with Morocco's energy plan 2020, there is a strong hope that this balance will change.

### Company Profile

More than 70% of the companies in the field are SMEs, with 29% having a capital stock of less than USD 50k, 24% between USD 100k and USD 200k, 20% between USD 200k and USD 500k and 27% more than USD 500k. However, there are still many small-scale businesses that manufacture simple, low-quality products with aging equipment. More than 60% have their headquarters in Casablanca.

### A sector in constant growth

Sales between 2015 and 2016 increased by around 11%, and the sector has been growing steadily over the last 20 years. Production increased by 9.5% in 2016, and the sector still has significant development potential. Growth in the plastics industry remains above the average national growth.

## MOROCCO

### Good prospects for development

The plastics industry has significant potential for export development. Among the factors of success of the plastics industry are the various governmental actions, both at the agricultural level with the irrigation plans (Green Morocco) and the industrial level in the framework of the mega project of industrial Morocco.

### Challenges

The plastics industry faces challenges, the first of which is the cost of energy. This is common to all industrial sectors. The second is the lack of harmonization resulting from the signing of several free-trade agreements between the customs tax applied on certain finished products and the raw material (Example: the case of PVC). The good news is that this does not affect trade between Morocco and the U.S., which makes imports from the U.S more appealing.

## TRADE EVENTS

<b>Name of Event:</b>	Plast Expo 2019 (takes place every two years)
<b>Date:</b>	April 2019
<b>Location:</b>	Casablanca
<b>Website:</b>	<a href="http://plast-expo.ma/">http://plast-expo.ma/</a>
<b>Description:</b>	International Trade Fair for Industrial Plastics and Rubber

## PERU



### U.S. Commercial Service Contact Information

**CAPITAL** Lima  
**POPULATION** 31 million  
**GDP** US\$ 190 billion  
**CURRENCY** Sol  
**LANGUAGE** Spanish

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## SUMMARY

The plastics industry in Peru transforms plastic inputs into end products processed by the foreign petrochemical industry. These inputs are imported in their primary form and represent the basis of the productive chain of the local industry. The petrochemical industry has thus become an important platform as first link in the supply chain of the plastics industry and other related industries, with ties to industry sectors like food and beverage, pharmaceuticals, fisheries, agriculture, construction and wholesale and retail trade.

## MARKET OVERVIEW

The supply chain of petrochemicals-plastics covers a wide range of industries that convert natural gas and crude oil into raw materials that are the basis of various petrochemical products. Intermediate petrochemical products, such as resins or polymers, are obtained from the international petrochemical industry; thus import prices of these products have a strong correlation with international oil prices. Also, these products are links in the supply chain that will serve as primary inputs in the manufacture of processed goods to produce plastic products, such as containers, packaging, articles for construction or inputs for other products.

The development of plastic products in Peru had significant growth in recent years due to the increase in the number of industrial applications in different sectors of the economy.

Another influencing factor in the development of this subsector was trade liberalization, which created new markets and consolidated others. This is especially noticeable in value-added products such as: agro-export, food and beverages, textiles, clothing, leather products and footwear, chemicals, among other sectors. This generated increased demand for plastic products incorporated in industrial-production structures.

## PERU

### CURRENT DEMAND

Current demand comes from the following sectors: construction 13.8%, trade 10.6%, manufacture of plastic products 8.5% and manufacture of non-alcoholic beverages 5%. This information is obtained from the intermediate demand matrix, which records flows of movement of goods between different activities, i.e., the use of the products in the manufacture or production of others.

The trade balance of the Peruvian plastics industry has historically been a deficit. This is because local plastic production is consumed locally and because most of the intermediate petrochemical products, such as resins or polymers, are imported.

The value of plastics products that the country imports averages four times the export value. The average annual amount over the last three years in CIF terms reached USD 1.98 billion, of which 23.8% came from the United States, 15.8% from China and 8.6% from South Korea. The value of exports in FOB terms reached USD 500 million.

### MAIN PLAYERS

**The main exporters of primary products are:** Andina Plast SRL, Iberoamericana de Plásticos SAC, San Miguel Industrias Pet SA, Basf Peruana SA, Recieporta SAC.

**The main exporters of final products are:** OPP Film SA, Peruplast SA, Emusa Peru SAC, San Miguel Industrias Pet SA, Wenco Industrias Plásticas SA.

**The main importers of primary products are:** Opp Film SA, Dispercol SA, San Miguel Industrias PET SA, Amcor Rigid Plastics del peru SA, Peruplast SA.

**The main importers of final products are:** 3M Peru SA, Peruplast SA, Comercial Industrial Delta SA, Sodimac del Peru SA, Multitop SA.

### MARKET ISSUES AND OBSTACLES

The plastic industry changed dramatically in the last 10 years. In the last 3 years, plastic demand declined in the sectors that consumed the most. This was essentially influenced by lower domestic demand for plastic pipes, fittings, various food packaging and films.

### TRADE EVENTS

**Name of Event:** ExpoPlast 2018

**Date:** May 23rd – 26th 2018

**Location:** Lima, Peru

**Website:** [www.exoplastperu.com](http://www.exoplastperu.com)

**Description:** Peru's exhibition and business trade show for machinery, technology, raw materials and plastic solutions for all industries.

## POLAND



### U.S. Commercial Service Contact Information

**CAPITAL** Warsaw  
**POPULATION** 38 million  
**GDP** US\$ 510 billion (est.)  
**CURRENCY** Polish Zloty  
**LANGUAGE** Polish

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### SUMMARY

The plastics industry in Poland is an important sector: with the 2016 turnover exceeding Polish currency Zloty (PLN) 80 billion (approximately 23.5 billion USD), significantly contributing to GDP. The plastics industry in Poland is represented by approximately 8,000 enterprises that employ nearly 160 thousand people. The largest and most dynamic part of this industry is plastics processing, where companies are responsible for 84% of turnover and 95% of the industry employment. The plastics processing companies in Poland are mainly small enterprises that employ 19 people on average. Among the processing companies, the largest group is represented by manufacturers of packaging (containers, bottles, boxes, plastic foil), followed by manufacturers of pipes and profiles (for application in the construction industry), and manufacturers of cables. The plastics industry in Poland has developed very quickly and has considerably exceeded both the increase in the GDP and the growth of industrial processing in Poland. In 2016, this growth amounted to 6.7% (compared to the 2.7% increase in the GDP and 4.2% increase in the entire manufacturing sector). Long-term analyses related to the manufacture of plastic products and rubber products reveal that over the past 15 years, the production in this sector has tripled, despite a slowdown during the 2008-2009 crisis. On the other hand, due to minor investments in new production capacities, the production capabilities of plastics in the basic forms are maintained at a stable level. All the basic plastics - polyolefins (HDPE, LDPE, PP), polyvinyl chloride (PVC), polystyrene (PS, EPS) and polyethylene terephthalate (PET) - are produced in Poland. Engineering plastics (PA6 and POM), polyesters, epoxy and phenol resins, and polyurethane systems are also produced here. All the leading global manufacturers of plastics whose products are delivered by their local representatives or distribution companies operate in the Polish market as well.

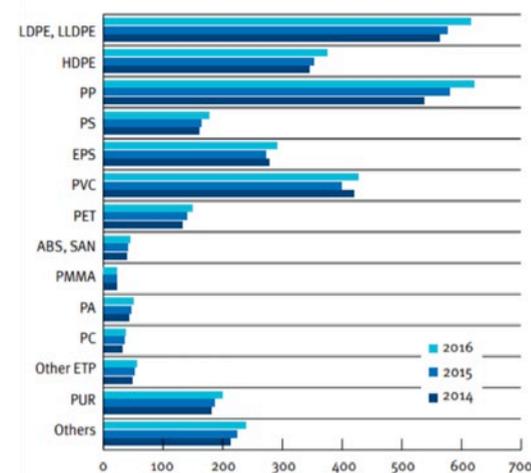
## MARKET ENTRY

Poland holds the United States in very high regard and believes its products to be both reliable and of high quality. U.S. companies interested in establishing business ties in Poland should take advantage of this. American companies interested in expanding into the Polish market must devote time and effort toward promoting their products. Possible ways for American firms to do so include participating in Polish trade shows (shown on the last page), establishing contacts with Polish companies and institutions, and advertising in local trade publications. For companies interested in selling in Poland, the best strategy is either to find a local Polish partner to be a sole distributor/ agent or to register and establish a representative office in Poland. In any case, it is important to maintain a very close business relationship with potential Polish buyers. It is highly recommended that U.S. companies participate in appropriate trade fairs and advertise in professional magazines. Price is a decisive factor for the lower end of the market, while the high-end market focuses on performance and quality. Also, U.S. machinery suppliers need to ensure that they have immediate repair service and spare parts readily available. Moreover, technical as well as training support is expected.

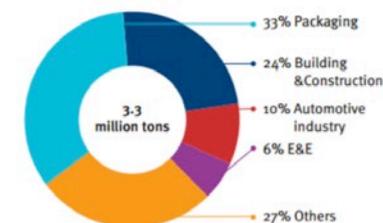
## CURRENT DEMAND

On the European scale, Poland is an important participant in the plastics industry. In terms of plastics demand, it ranks sixth, followed by Germany, Italy, France, Spain and Great Britain. It is estimated that in 2016, the Polish plastics processing industry consumed approximately 3.3 million tons of plastics, increasing by 6.9% compared to 2015. The plastics demand in Europe in 2016 is estimated to be 50.5 million tons, an increase of 3.2 million tons in relation to 2015. The possibilities and potential of the industry in Poland are also reflected in the per-capita demand for plastics (currently ca. 85 kg) whereas the European average exceeds 95 kg. The demand of the processing companies for plastics has been systematically increasing in Poland for a dozen years; this rapid increase is caused by the development of packaging, electrical and electronic equipment and the automotive sectors. This is demonstrated by the increase in investments in the plastics processing industry, which in 2016 amounted to 10%, whereas for the entire manufacturing sector declined by 8% in 2016. The greatest share in the use of plastics in Poland is represented by the packaging industry (33%) and the construction industry (24%). These two sectors also represent the highest consumption of plastics in all Europe, but there the advantage of packaging in relation to the construction industry is more prominent (39.9% vs 19.6%). The dynamic growth in the consumption of plastics for packaging (in the last 5 years, the average annual increase amounted to 4.4%) indicates that in Poland the proportions between the shares of these two sectors will follow an all-European trend. The use of plastics has grown, especially in the automotive, electrical and electronics sectors. In recent years, Poland has become an important European manufacturer of vehicles (passenger cars and buses) and car parts, and the leader in the manufacture of white goods (washing machines, dishwashers, refrigerators). The consumption structure based on the type of polymer indicates the largest shares of polyethylene (LDPE, LLDPE, HDPE) – approximately 30%, polypropylene (19%) and polyvinyl chloride (13%), as well as polystyrene – PS and EPS collectively (14%).

Plastics demand by resin type – Poland 2016\*



Plastics demand by segments – Poland 2016\*\*



\* Estimates based on Eurostat production indices

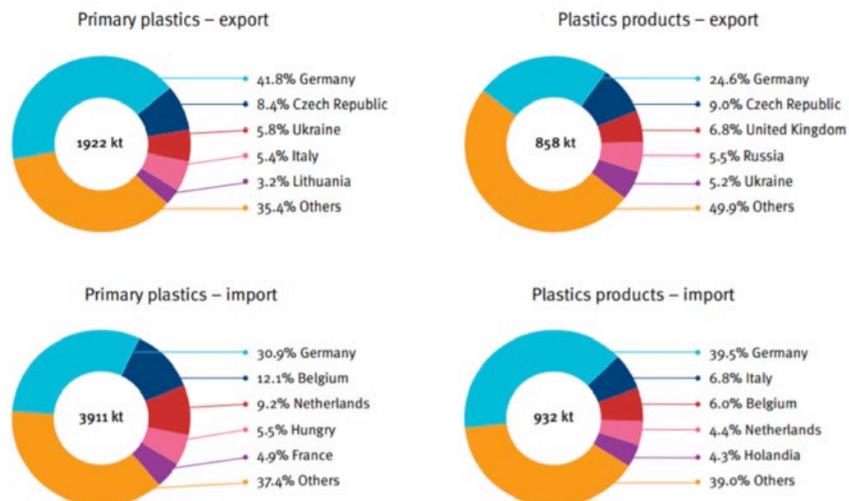
\*\* Estimates based on Eurostat production indices

Source: Eurostat / PlasticsEurope Market Research Group (PEMRG) / Conversio Market&Strategy GmbH

## MAIN COMPETITORS

Production capacities of Polish plants manufacturing polymers in primary forms are insufficient. Hence, a significant amount of plastics has to be imported. The negative trade balance has been increasing for a dozen or so years due to growing demand for plastics on the part of converters and lack of investments in new production capacities of polymers. Poland mainly imports raw materials for processing (polymers in primary forms) from abroad, and the total deficit in international trade of the sector (polymers and products) exceeded 3.3 billion euro in 2016. For many years, Germany has been the main business partner of Poland in intra-EU trade, both in export and import of plastics in primary forms and products. 80-90% of plastics trade takes place with EU countries. For non-EU countries, Poland's largest export markets are Ukraine (plastics in primary forms) and Russia. Imports from non-EU countries include plastics in primary forms from South Korea and products from China.

## Polish plastics industry 2016 – main foreign trade partners



Source: Eurostat / own study of PlasticsEurope Polska

## MARKET ISSUES AND OBSTACLES

**Machinery:** U.S. firms exporting to Poland need to comply with local and European regulations such as the CE mark required for machinery. The CE mark (including conformity statement and technical documentation of the country of import) is required for:

- components regulated by the EMV Directive 2004/108/EC (electro-magnetic compatibility);
- machinery covered by the machinery safety regulation 2006/42/EG of May 17, 2006;
- equipment covered under the EU Low Voltage Directive 73/23/EWG.

**Materials:** For U.S. material exports, the following regulations are of particular importance:

- REACH (Registration, Evaluation and Authorization of Chemicals).
- CLP-Regulation (Classification, Labeling and Packaging of Substances and Mixtures)

Information on the above is available from: <http://echa.europa.eu/web/guest/regulations>.

**Certification of bio-plastics:** The European Bioplastics Association is fostering the use of bio-plastics throughout Europe and also develops the appropriate standards. Certification is on a voluntary basis. Further details are available from: <http://en.european-bioplastics.org/standards/certification/>

## TRADE EVENTS

**Name of Event:** PLASTPOL, International Fair of Plastics and Rubber Processing

**Date:** May 22-25, 2018

**Location:** Kielce

**Website:** <http://www.targikielce.pl/>

**Description:** Poland's largest industry exhibition and one of Europe's highly-regarded industry events. It is the showcase for Polish plastics processing and recycling sector leaders. Over the last few years, Plastpol has reported a steady increase in the number of recycling-business companies exhibiting at this trade-fair. More than 50% of the exhibitors at 2017's expo were foreign companies. The international exhibitors list includes those from Germany, Austria, Italy, France, the Netherlands, Belgium, Czech Republic, Denmark, Greece, Spain, Ireland, Great Britain, Lithuania, Israel, Portugal, Sweden, Turkey, Russia, USA, Slovakia, Hungary, Egypt, Japan, China and Malaysia, with German and Italian companies enjoying the strongest representation. A large group of Turkish and Chinese companies also advanced their countries' plastics industries potential.

**Name of Event:** EPLA Plastics and Rubber Fair

**Date:** September 26-29, 2018

**Location:** Poznan

**Website:** <http://www.epla.pl>

**Description:** EPLA is an exclusive business fair aimed at the plastics and rubber industry and focused mainly on raw materials. EPLA fair will be accompanied by a series of professional lectures and talks, and one of the key features will be a convention of the Plastics Technology Club - the first Polish institution that gathers designers and technologists of the plastics processing industry.

## AVAILABLE MARKET RESEARCH

Plastics Industry in Poland Annual Report 2016 by Plastics Europe

PlasticsEurope Polska

ul. Trębacka 4 p. 109

00-074 WARSZAWA

Poland

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URL: <http://www.plasticseurope.org>



## U.S. Commercial Service Contact Information

**CAPITAL** Lisbon  
**POPULATION** 10.8 million  
**GDP** US\$ 311.3 billion (2017 est.)  
**CURRENCY** Euro  
**LANGUAGE** Portuguese

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## SUMMARY

Mainland Portugal, along with the autonomous island regions of the Azores and Madeira, offers American exporters a market of approximately 10.8 million people in a country roughly the size of the State of Indiana. Portuguese borders have remained the same since the XIII Century, which makes Portugal one of the oldest countries in the world, with nearly 900 years of history. As a member of the European Union (EU) and the euro zone, it is fully integrated with the EU, uses the euro currency, and follows directives from the European Commission in Brussels. As with all EU countries, Portugal's borders and ports are completely open to the free flow of trade with other EU-member countries. Portugal has a politically-stable environment with a democratically-elected parliamentary government and welcomes foreign business and investment. Portugal is ranked 13th (among 137 countries) in terms of the "Quality of Overall Infrastructure", according to the Global Competitiveness Report 2017-2018/ World Economic Forum (WEF).

## MARKET ENTRY

U.S. suppliers should be aware that all products entering the European Union must comply with EU regulations. All plastics entering Portugal from third countries (outside the EU) will pay import duties of 6.5% ad valorem plus 23% VAT (value added tax). U.S. exporters should be familiar with EU regulations, such as CE-marking and REACH. More information on REACH and CE-Marking can be found on: <http://export.gov/europeanunion/eustandardsandcertification/index.asp>.

**REACH**, "Registration, Evaluation and Authorization and Restriction of Chemicals", is the system for controlling chemicals in the EU since 2007. REACH affects virtually every industry sector, from automobiles to textiles. This regulation requires chemicals produced or imported into the EU in volumes above 1 ton per year to be registered with a central database handled by the European Chemicals Agency (ECHA). U.S. companies without a presence in Europe cannot register directly and must have their chemicals registered through their importer or EU-based "Only Representative of non-EU manufacturer." A list of Only Representatives (ORs) can be found on the website of the U.S. Mission to the EU: <http://export.gov/europeanunion/reachclp/index.asp>

Material Safety Data Sheets (MSDS) must be updated to be REACH-compliant. For more information, see the guidance on the compilation of safety-data sheets: [http://echa.europa.eu/documents/10162/17235/sds\\_en.pdf](http://echa.europa.eu/documents/10162/17235/sds_en.pdf)

## CURRENT DEMAND

Portuguese companies are known worldwide for the manufacture of packaging products and aggressively compete with some of the largest packaging manufacturers in the world, given their cutting-edge quality and innovation in design.

Plastics are ranked in the top five import sectors. In 2016, Portugal imported US\$ 67.5 billion worth of products, an increase of 1.1% from the previous year.

Top 5 imports include:

1. Vehicles: US\$ 8.4 billion (12.4% of total imports)
2. Mineral fuels including oil: US\$ 6.8 billion (10.4% of total imports)
3. Machinery: US\$ 5.8 billion (8.6% of total imports)
4. Electronic Equipment: US\$ 5.5 billion (8.2% of total imports)
5. Plastics: US\$ 3.3 billion (4.8% of total imports)

Portugal is one of the world leaders in the production of molds for plastic injection. Many large multinational companies in various industries such as automotive, IT, home appliances and packaging choose to work with Portuguese-manufactured molds. This makes the whole plastics industry an influential sector in the country's economy.

## PORTUGAL

### MAIN COMPETITORS

American exporters face fierce competition in Portugal from savvy European competitors. European companies are familiar with aspects of the business culture, financing, regulations, standards, etc. In addition, they do not face import tariffs that U.S. companies must pay to get their products into Portugal. Some U.S. companies have also reported that they are now encountering Chinese competitors in Portugal. In the plastics sector the top 10 suppliers include:

1. Spain: \$1.3 billion
2. Germany: \$448.5 million
3. Netherlands: \$249.5 million
4. France: \$204.1 million
5. Italy: \$203.4 million
6. Belgium: \$150.9 million
7. UK: \$61.9 million
8. China: \$60.8 million
9. Brazil: \$34.5 million
10. USA: \$32 million

### MARKET ISSUES AND OBSTACLES

US firms exporting to Portugal need to comply with local and European regulations, such as the CE mark, applied for machinery, and REACH (Registration, Evaluation and Authorization of Chemicals) applied for raw materials. Import procedures are governed by international trade regulations and technical specifications established and regulated by the E.U.

More information may be obtained from APIP-Portuguese Plastic Industry Association:  
<http://www.apip.pt/EN/Default.aspx>.

### TRADE EVENTS

**Name of Event:** Moldplas  
**Date:** November 2018  
**Location:** Batalha, Portugal  
**Website:** <http://www.exposalao.pt>  
**Description:** MOLDPLAS (International Molds and Plastics Machinery and Equipment, Raw Materials and Technology Exhibition) will take place in November 2018 at Batalha Centro de Expositoes in Batalha, Portugal.

## RUSSIA



### U.S. Commercial Service Contact Information

**CAPITAL** Moscow  
**POPULATION** 146.80 million  
**GDP** US\$ 1.28 trillion (est.)  
**CURRENCY** Ruble  
**LANGUAGE** Russian

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**PHONE** +7 495 7285405

### SUMMARY

The Russian polymer market has been dynamically developing in the last decade. According to the Russian Federal Statistics Service, production of all polymers in Russia was 7.7 million tons in 2016, including 1.9 million tons of polyethylene, 1.4 million tons of polypropylene and 540 thousand tons of polystyrene.

Polymer demand has been growing faster than local production. Polymer imports soared by 50% and led to an increase in polymer prices, especially for polyethylene. With the increase in production volumes, new international companies have entered the Russian market.

Russia had been forecast to discontinue imports of polypropylene and become an exporter in 2014. However, some major import substitution projects were finalized later than previously planned, delaying polypropylene import substitution.

Domestic production of polypropylene has grown over 20% as a result of the launch of two production plants, "Polyom" ("Titan") and "Tobolsk Polymers" ("SIBUR). Nizhnekamskneftekhim (NKNKh) is Russia's leading petrochemical producer, producing a significant amount of polypropylene and polyethylene. There are more than 300 plastics processors in Russia. Russia imports extrusion equipment from 24 countries; however, 90% of all machines used in Russia are manufactured in China, Germany, Taiwan, Turkey and Italy.

The average unit value of imported equipment for plastics processing by injection, extrusion and blow molding increased from 8% to 57%. The data include all types of equipment for primary processing of polymers and rubber, and all types of machinery and tools for post-processing of semi-finished or finished products, as well as peripheral equipment, tooling, spare parts and accessories. Import duties on all types of equipment have not changed and are still set at 0%.

## MARKET ENTRY

- Russia is a market for sophisticated American firms of all sizes with clear and compelling products/services to offer. Be prepared to invest significant time, personnel and capital on the front end in order to ensure success down the road.
- Use the resources of the U.S. Mission's Commercial Service in Russia to get to market cheaper, quicker and for the long-term. We work with the U.S. Mission's Economic Section and Foreign Agricultural Service to help American firms find reliable partners quickly and expand existing business in Russia and throughout Eurasia.
- Network with the American Chamber of Commerce in Russia and the U.S.-Russia Business Council. These two leading organizations have deep and wide knowledge of the market.
- Face-to-face business is an important factor for Russian partners. Frequent travel and communication will help your business grow and manage the inevitable problems that will arise in this developing market.
- Think long-term. Russia is not a market for quick and easy wins.

## CURRENT DEMAND

Domestic producers of chemical and plastic materials can currently meet only 50% of market demand. This market situation provides good prospects for chemicals and plastics from U.S. suppliers. Market demand for polymers and high-tech chemicals is continuing to grow, offering opportunities for U.S. manufacturers. Other products in demand include polyethylene materials, polyvinyl chloride sheets and films (furniture, posters), polyolefin films, polyethylene films and many others.

Investment in the chemical sector is crucial for the Russian economy, which provides U.S. machinery suppliers with an opportunity to sell their chemical and plastic-processing equipment. The Russian government's plan for the development of the chemical industry will be crucial for funding these purchases. Both injection-molding machines and extrusion equipment are in demand.

Chemical-industry products are sold as unbranded commodities. As a result, marketing strategies are greatly simplified. A local company would be just as likely to buy from a new player on the market as from an established producer. The processes and formulas used to manufacture chemicals used by the Russian industry have been around for decades, in many cases without intellectual-property restrictions.

The competitive situation in the chemical market will force local producers to upgrade their technologies to meet growing demand for new materials and products. Over the next five years, the best opportunities for U.S. exporters will be in production equipment and materials that can enable local manufacturers to gain a higher market share with quality chemical products, such as polyvinyl chloride, acrylonitrile butadiene styrene (ABS), and polyethylene.

## MAIN COMPETITORS

The Russian plastics market is very competitive. Although this market can be considered lucrative for US companies, it is important not to underestimate competition from other countries, including Germany, Italy, Austria, France, Portugal, South Korea, China, Belgium, and Taiwan - all of which have been present in the Russian market for several years.

## MARKET ISSUES AND OBSTACLES

Russia can be a challenging market. U.S. companies should choose local partners wisely and take the time to get familiar with the local business environment. Taking shortcuts in evaluating business opportunities and in selecting local partners is not advisable. U.S. companies interested in doing business in Russia should be aware that the Russian economy is still in the process of transitioning from a closed, centrally-planned economy to a more open-market economy. Moreover, basic business information about regulations, company ownership and credit-worthiness are not always easy to find, and the regulatory framework continues to evolve, requiring companies to stay up-to-date with changes.

## TRADE EVENTS

**Name of Event:** Plastics Industry Show (Industria Plastmass) 2018

**Date:** October 29 – November 1, 2018

**Location:** Expocenter, Moscow

**Website:** [www.plastics-expo.ru](http://www.plastics-expo.ru)

**Description:** Plastic Industry Show 2018 is a special segment of the Technoforum show that brings together key trends in mechanical engineering and material processing, such as plastics, metal-working, glass engineering and wood and stone processing. The Plastics Industry Show 2018 will showcase all segments of the polymer market from manufacturing to recycling, including: machinery and equipment, molds and dies, polymer materials, synthetic resins, raw materials and auxiliaries, as well as the packaging segment: materials and equipment, environmentally-friendly technologies and polymer-waste recycling. 80,000 businesspeople are expected to attend, from various Russian regions, the CIS and Baltic states. Fifty percent of the visitors to the show are executives of their companies.



## U.S. Commercial Service Contact Information

**CAPITAL** Singapore  
**POPULATION** 5.61 million (est. 2017)  
**GDP** US\$ 311.3 billion (est. 2017)  
**CURRENCY** Singapore Dollar  
**LANGUAGE** English

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## SUMMARY

The plastics industry in Singapore began almost 50 years ago in 1969 with small quantities of polyvinyl chloride (PVC) production. Now, five decades later, it is a high-tech, capital-intensive industry with expertise not only in thermoplastics but also in polymers and composites. In 1989, a local industry plastic association comprising member companies that cover product manufacturers (converters/ fabricators), resin producers, machinery/ equipment suppliers, compounders and mold/ tool makers was formed to build up the sector.

At the turn of the century, the plastics/ rubber industry employed more than 20,000 workers; but now with competition, higher overheads and mechanization, only 10,000 workers are now employed in the industry. However, these industry workers are all highly-skilled, which adds value to the overall economy by being able to produce specialty resins and polymers for various industry applications. Since Singapore's production costs are higher than other Southeast Asian countries such as Malaysia, Indonesia, Thailand and Vietnam, the government is encouraging local plastics processing firms to opt for higher value-added manufacturing processes that use more sophisticated machinery. Most distributors of plastics production machinery use Singapore as a distribution hub for the Southeast Asian region.

The plastics industry in Southeast Asia is growing. ASEAN, consisting of 10 Southeast Asian countries including Singapore, is becoming an important plastics processing center due to increasing demand caused by growth in the telecommunications, automotive, electronics, semiconductor, food/ electronics packaging and the consumer goods industries. In 2015, Singapore imported around US\$3 billion of plastic machinery/ products in which 10% was for machinery and equipment. Key suppliers for most types of thermoplastics machinery and equipment are from Japan, Europe or Taiwan.

## CURRENT DEMAND

According to industry sources and government statistics, the ASEAN countries consume over three million metric tons of plastics annually. Singapore's total plastics production capacity is around 750,000 metric tons/ year. Precision parts are the heart of the industry for Singapore and the plastics processing sector benefited from the electronics sector in the past. Now, the growth is from the medical technology sector and additive manufacturing. To stay competitive, Singapore plastic manufacturers are encouraged to produce higher value-added products using high-technology equipment to cater to market demand. This results in the industry becoming more sophisticated in terms of tooling, processes, machinery and materials. Industry trends indicate a strong potential for more automated, innovative and easy-to-use machinery that have quick cycle times.

Singapore consumes various types of thermoplastic products such as bottles/ containers, film/ bags, pipes/ profiles, extrusion and precision engineering components. As such, local plastics manufacturers can produce various types of thermoplastic/ polymer resins such as polyethylene, polypropylene, polystyrene, polycarbonate and polyamide. End products for these manufacturers include simple plastic bags, precision extrusions and medical products to complex injection moldings. They produce around 3.8 million metric tons (about 70% of total production capacity) annually, worth close to US\$12 billion. A third of these end products are exported to ASEAN and China. Specialty chemicals are also part of Singapore's production for various industry applications.

End-users of plastics machinery can be classified under the following categories:

- blow molders who manufacture plastic bottles and plastic bags
- transfer molders who manufacture plugs and power sockets
- plastic films manufacturers who supply signboards and acrylic sheets
- injection molders who manufacture computer and telephone casings
- extrusion molders who manufacture straws and pipes.

Composites that are essentially a combination (two or more) of natural or synthetic material are designed to increase material strength and durability for many industry applications. As such, the global composites market is expected to exceed US\$100 billion in the next 3-4 years. Asia will account for about half of the global market and Singapore as a regional hub will be an important player in this market for many industry sectors such as aviation, electronics, medical, petrochemicals and telecommunications. Singapore will also continue to be a strong producer of carbon fiber materials, composite molding and innovative/ intermediate parts.

## MARKET ENTRY

For new-to-market firms, appointing an agent/ distributor to market U.S. products is highly recommended. Alternatively, a sales office can be established in Singapore to service the Southeast Asia region. Once a viable business is established, U.S. companies should consider joint-venture arrangements with local representatives as a means of further establishing themselves. Plastics processing machinery is sold in Singapore and the region through distributors, who handle the importation, promotion and marketing. Distributors usually add 5-10% mark-up when selling the machinery to end-users. There are several methods to launch and promote plastics machinery:

- advertising in industrial yellow pages and trade journals
- participating in local shows in Southeast Asia
- staging seminars and promotional events

U.S. exporters must be prepared to work with their distributors to build up their networks in this market and to provide marketing support wherever possible, given the high level of competition as well as the different demand patterns of each country. One reason why Japanese suppliers are preferred is their flexible business practices.

In the case of U.S. manufacturers and Singapore distributors, the prevailing practice is for Singapore distributors to obtain a Letter of Credit (LC) from their bank certifying that they can pay for the goods ordered. Upon receipt of the LC and other essential documents, the manufacturers can then ship the goods. Between the Singapore distributor and the end-users, the payment schedule is 30-60 days upon delivery of goods. A longer term contract can be negotiated but countertrade or bartering is not the practice in this industry, though it may be so in some regional countries.

## MAIN COMPETITORS

Although brand is important, local companies feel that after-sales support is the most critical factor. For machines that are relatively unknown in the Singapore market, U.S. manufacturers must be prepared to enter the market with a competitive pricing strategy, especially since they are often perceived to be less flexible. As such, Japanese and European companies have the largest market share in Singapore for various types of molding machines, such as injection molding, blow molding and vacuum molding. For extruders, other types of thermoforming machines and polymerization reactors (used for making industrial polymers) and accessories; however, the U.S. can still compete in terms of price and technical specifications, according to industry sources.

With a combined population of around 630 million, ASEAN can be considered as a growing consumer base with increasing opportunities in the plastics industry. Various ASEAN countries such as Malaysia, Indonesia, Thailand and Vietnam are plastics producers and, according to industry sources, plastics production rates have been growing around 10% annually in recent years. This is due to all four ASEAN countries having a growing middle class and automotive, electronics and food packaging industries respectively.

Singapore plays a role that is more regional and takes the lead in R&D to develop bioplastics, which are more eco-friendly products. It is no secret that Singapore cannot compete with other ASEAN countries in terms of general plastics manufacturing, but the country has large aviation, medical and petrochemical sectors that are home to many of the top global companies.

## MARKET ISSUES AND OBSTACLES

Price, quality and service are the three main selling factors in Singapore and the region. It is equally important for U.S. companies to build a long-term relationship with potential partners. These partners could be in the form of an agent or distributor who can serve Singapore and the Southeast Asia region. The ease of doing business in Singapore - the government has positioned itself as a hub for Southeast Asia. With its excellent business and physical infrastructure, skilled workforce and strong IP protection regime, Singapore offers U.S. companies a base to export their products and conduct R&D.

Singapore is generally a free port as more than 99% of all imports enter Singapore duty-free. Moreover, Singapore has adopted a single-tier income tax system, which means no double taxation on stakeholders. The corporate tax rate is only 17%. However, the U.S. – Singapore Free Trade Agreement makes it easier for U.S. companies to conduct business in Singapore, given that it provides increased protection and enforcement of intellectual property. Generally, there are no duties or tariffs on exports to Singapore, as the country maintains one of the world's most open trading regimes. Other than the Goods & Services Tax (GST) that was first introduced on April 1, 1994, very few goods are dutiable. Goods that are re-exported are eligible for GST refund, but the current GST of 7% is expected to be increased over the next few years. To facilitate trade, the Singapore Government has simplified import and export procedures. Singapore also maintains an open trading policy that works to its advantage to strengthen its status as a distribution hub for the region.

In view of Singapore's desire to be seen as a green nation, various standards and regulations are being introduced. For example, there is a Singapore Packaging Agreement where all plastic manufacturers in Singapore must reduce their packaging waste beginning in 2021 onwards when it becomes a law. Plastic waste recycling is only 7% of all the waste that was recycled in 2016, so more can be done to reach at least 10% within the next 3-5 years. This is still low compared to other types of waste recycles such as paper/ cardboard or glass. Local universities are also conducting R&D to create green ethylene, which is a key building block of plastics that releases no pollutants, resulting in a sustainable biodegradable plastic material.

## RESOURCES

Singapore Plastics Industry Association - <http://www.spia.org.sg/>  
 Singapore Precision Engineering and Technology Association - <https://speta.org/>  
 Society of Plastics Engineers (Singapore chapter) - <https://www.4spe.org/>



## U.S. Commercial Service Contact Information

**CAPITAL** Madrid  
**POPULATION** 47 million  
**GDP** US\$ 1.1 trillion (est.)  
**CURRENCY** EUR  
**LANGUAGE** Spanish

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## SUMMARY

Spain's plastics industry ranks fourth in Europe (after Germany, France and Italy) and eight in the world after China, US and Japan). The plastic industry is comprised of 3,500 companies with more than 65,000 employees. In 2016, the total plastics industry's sales volume was estimated €18 billion, which accounted for 2.2% of Spain's total sales of industrial products.

### Raw Materials

Spain ranked 4th in Europe (after Germany and France) and produced around 5.3 M tons of plastic materials in 2017 (standard plastics, technical, thermosets and other plastics), which represent 7% of European production. The plastic-materials industry is represented by a small group of companies, located in Tarragona and Barcelona. These companies include the subsidiaries of large multinationals, such as Solvay, BASF, Bayer, Dow Chemical, Ube Industries, Lanxess or the Thai giant Indorama, which began production in Spain in 2015.

In 2016, Spain consumed 5.2 M tons of plastics, almost 73% belonging to standards plastics, an increase of 4 percent when compared to the previous year. The most used raw materials are: HDPE (high density polyethylene) followed by PE (polyethylene) and LDPE.

### Plastic processing

The core activity of plastics-converting accounts for 1,276 companies with €15 billion in turnover. Companies are mainly small and medium with an average of 10 employees per company, only about 30 companies are large firms as the US Plastipak.

Plastic processing increased production by 5.8% in 2016. Main industry consumers of plastic materials in Spain include: packaging (40%), construction (17%), automotive (10%), electricity (7%), agriculture (3.4%) and others (22.6%).

The packaging sector grew by 4% in 2016, with a value of € 2.3 billion. In 2016 exports increased by 7.7% and imports increased by 4%. EU countries absorb 84% of Spanish exports, followed by Africa and the US. The second largest sector for processed plastics is the construction sector, which represents about 17% of the total and had a positive but moderate growth. The main raw materials used in this sector are PVC (Polyvinyl Chloride) and PUR (Polyurethane). In 2016, exports increased by 9.6% and imports by 16%.

### Plastic Machinery

The Spanish rubber and plastic-machinery sector is comprised of 27 companies. Although the number of companies is relatively small, Spain has a wide range of machinery that covers nearly every type of production process. There is a high level of foreign investment in the sector. Competition comes mainly from German and Italian companies as well as Asian firms.

The Spanish consumption market for plastic and rubber equipment reached €479 million in 2016, including €328 million of imported equipment.

## MARKET ENTRY

Direct purchase or B2B marketplaces, wholesalers, distributors or professional agents are the main distribution channels in Spain for plastic materials and equipment. For plastics machinery, a partner/joint venture with repair capabilities and spare-parts availability is necessary. Madrid and Barcelona are the two major hubs for the regional market. Most agents, distributors, foreign subsidiaries and foreign trade-related entities are present in both cities. Price is an important factor in most transactions, as are quality and supplier reliability. Customs duties for plastic materials are between 5% and 6.5%. In addition to import duties, a 21 percent Value Added Tax (VAT), must be paid at the border point of entry.

## CURRENT DEMAND

Environmental concerns were one of the main reasons for the increased demand of biodegradable plastics. Europe, including Spain, will focus on using renewable-energy sources in the production of plastics as well as technologies allowing better plastics recyclability. Innovative technologies for application in the packaging, automotive and medical industries should also provide opportunities.

## SPAIN

### MARKET ISSUES AND OBSTACLES

US firms exporting to Spain need to comply with local and European regulations such as the CE mark required for machinery, and REACH (Registration, Evaluation and Authorization of Chemicals).

Import procedures are governed by international trade regulations and technical specifications essentially established by the E.U., since Spain has incorporated those specifications into its regulations. Information on standards can be obtained from AENOR, the Spanish Association of Standards and Certification (see: <http://www.aenor.es>).

### TRADE EVENTS

#### EQUIPLAST – The International Plastics and Rubber Event

**Location:** Barcelona, Spain.

Organized by Fira de Barcelona. (<http://www.equiplast.com>).

**Last show:** October 2017. Next exhibition: 2020. This trade show is organized every three years in Barcelona covering the plastics, chemicals and surface treatment sectors. The show includes products, equipment, machinery, processes and supplies in the chemical, petrochemical, plastics and general-industry sectors.

### RESOURCES & CONTACTS

ANAIP, Spanish Plastics Association: [www.anaip.es](http://www.anaip.es)

AIMPLAS, Technological Institute of Plastic: [www.aimplas.es](http://www.aimplas.es)

CEP, Spanish Center of Plastics: [www.cep-plasticos.com](http://www.cep-plasticos.com)

CICLOPAST, Spanish Association of Plastic Recycling: [www.ciclopast.com](http://www.ciclopast.com)

FEIQUE, Spanish Chemical Business Federation, [www.feique.com](http://www.feique.com)

## TURKEY



### U.S. Commercial Service Contact Information

**CAPITAL** Ankara  
**POPULATION** 79,814,871 (2016)  
**GDP** US\$ 2,237 billion (est.)  
**CURRENCY** Turkish Lira  
**LANGUAGE** Turkish

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### SUMMARY

The plastics industry is one of the youngest and most rapidly developing manufacturing industries in Turkey. The Turkish plastics industry holds a 2.9% market share of the international plastics industry, ranking seventh worldwide with its process capacity, second in Europe, following Germany.

Plastic production has a very high potential in Turkey. In 2016, this potential has been demonstrated by exporting plastic products to 205 countries. In 2016, the Turkish plastics industry produced 8.9 million tons for export with a value of \$33.8 billion. Production increased by 3.5% (3% by value) compared to the year before. Approximately 4.95 million tons was exported indirectly in the form of semi-finished and finished products, i.e. automotive, packaging, construction and electronics. In addition to high exports of plastic products, investment in machinery and equipment was \$880 million in 2016, up 5% from 2015. During the period of 2012-2016, there was an average of \$821 million of machinery and equipment investment in the plastics industry, 37% for presses and other machines, 23% injection-molding machinery, 19% extrusion, 4% thermoform, 2% inflated, and 15% for parts.

The industry currently employs more than 250,000 people. Nearly 14,000 companies work in the plastics industry, of which 6,500 are manufacturers and almost 99% are small- and medium-sized enterprises (SMEs). Of the manufacturing companies, the majority are in the processed-plastic products field and 252 of these firms have foreign capital investment, mostly originating from Germany, Italy, France, the Netherlands and Iran.

## MARKET ENTRY

Turkey's January 1, 1996 accession to the European Union's customs union has resulted in zero duties for imports from the EU countries, and the same agreement has led to general reductions in duty rates assessed on non-EU imports. All imports of plastic-processing machinery are subject to a 1.7% customs duty, whereas customs duty for the majority of plastic processed products is 6.5%. Customs duty for plastic raw materials like PP, is also 6.5%. These duties are assessed on CIF prices. As part of the same agreement, all technical specifications that are required in the EU countries also apply in Turkey, including REACH, ISO, CE Mark, etc. In Turkey, both imported and locally-manufactured products are subject to an additional 18% percent value-added tax (VAT). VAT is also calculated based on the CIF value for imported products. U.S. firms interested in entering the Turkish market should consider having a local distributor or representative. A local partner not only helps U.S. firms market their products, but can also handle import procedures and provide after-sale services.

## CURRENT DEMAND

Opportunities remain in the plastic raw materials market. The table below breaks down the local production and import shares of Turkey's plastics raw materials supply.

Type of plastic raw material	Local Production (%)	Imports (%)
Polypropylene	8	92
Polyethylene	23	77
Polyvinyl chloride (PVC)	15	85
Polystyrene	10	90
Other Materials	12	88
<b>TOTAL</b>	<b>14</b>	<b>86</b>

Source: PAGEV

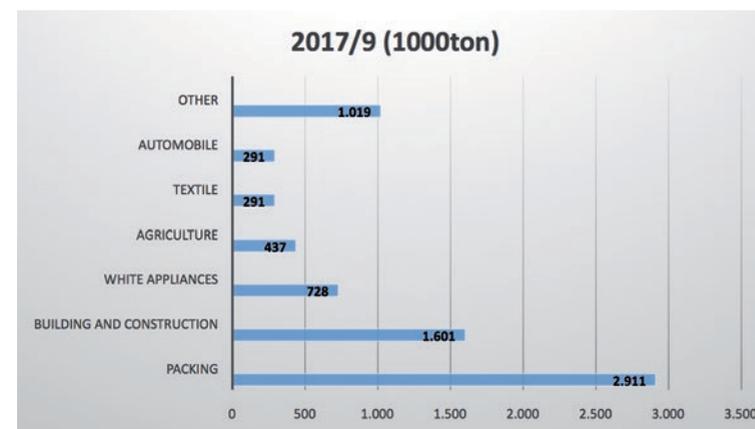
Through September 2017, the plastics-production machinery local- sales market of \$657 million was dominated by injection machinery (20%), followed by press and others (35%), extrusion machinery (15%), parts and components (21%), thermoforming (6%), and blow molding (3%). In the processed-plastic products market, the following products can be marketed effectively: plastic sheets, self-adhesive sheets, foils, strips and films and other flat sheets of plastic, tubes, hoses, pipes and fittings, kitchenware and other household goods of plastics.

## MAIN COMPETITORS

Through September 2017, 7.3 million tons of plastic raw materials, with a value of \$27.5 billion, were imported. If the trend continues, it is estimated that the imports of plastic raw materials will increase by 9.4% in terms of volume, and by 8.5% in terms of value compared to the end of 2016 and reach 9.7 million tons and \$36.7 billion in 2017.

The top supplier countries of plastic raw materials include: Saudi Arabia, South Korea, Germany, Belgium and Italy. The top supplier countries of plastics- production machinery include: China, Germany, Italy, Austria and Japan.

The annual processing capacity in Turkey is 9,4 million tons per year with over 5,000 plastic processing firms manufacturing hundreds of different products. A breakdown of the consumption of plastic raw materials by industry is shown below:



As shown in the above graph, the packaging industry leads all other industries in plastic consumption. There is an increasing trend to package goods to comply with EU standards. Turkey imports plastic products from more than 100 countries every year.

By the end of September 2017, imports from 10 countries accounted for 71% of total imports in terms of volume. It also constituted 74% in value. Processed plastic materials consumption in Turkey is estimated at 8 million metric tons. China, Germany, Italy, South Korea, and France rank as the top five suppliers of processed plastic products.

## TURKEY

### MARKET ISSUES AND OBSTACLES

Currently, there are no significant trade barriers for U.S. imports. Turkey's imports are regulated by an annual import regime published by the Undersecretary for Treasury and Foreign Trade (UTFT). The Import Regime sets forth import rules and regulations for the year, customs duties and surcharges on imported products and lists of "investment" capital equipment machinery, the importation of which is encouraged by the government since it adds value for Turkish exports.

### TRADE EVENTS

**Name of Event:** Plast Eurasia 2018  
**Date:** 05-08 December 2018  
**Location:** TUYAP Fuar ve Kongre Merkezi, Buyukcekmece-Istanbul  
**Website:** <http://www.plasteurasia.com>  
**Description:** Polyurethanes industry and sub-industry product firms, 28th year.

**Name of Event:** Plast Pak 2018  
**Date:** 10-14 April 2018  
**Location:** FuarIzmir Gaziemir – Izmir  
**Website:** [www.plastpakfuari.com](http://www.plastpakfuari.com)  
**Description:** Plastic machinery, plastic raw materials, moulds, 2nd year.

**Name of Event:** Istanbul 10th Rubber Fair  
**Date:** 24-27 October 2018  
**Location:** TUYAP Fuar ve Kongre Merkezi, Buyukcekmece-Istanbul  
**Website:** [www.kaucukistanbul.com](http://www.kaucukistanbul.com)  
**Description:** Rubber, raw materials, and machinery, 10th year

### AVAILABLE MARKET RESEARCH

Turkey - Country Commercial Guide 2017 - Plastic Raw Materials in Turkey 2016

## UNITED KINGDOM



### U.S. Commercial Service Contact Information

**CAPITAL** London  
**POPULATION** 64 million  
**GDP** US\$ 2.52 trillion (est.)  
**CURRENCY** GBP  
**LANGUAGE** English

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**PHONE** +44 20 7894 0459

### SUMMARY

The United Kingdom has the fifth-largest economy in the world, according to the CIA's World Fact book; the second-largest economy in the European Union; and is a major international trading power. While the United Kingdom is geographically relatively small (about the size of Oregon), it has a population of more than 64 million people.

Highly developed, sophisticated and diversified, the UK market is the largest in Europe and the fifth largest in the world for U.S. goods exports. The United Kingdom is the largest market in the world for U.S. service exports. With few trade barriers, the United Kingdom serves as the entry market into the European Union for more than 43,000 U.S. exporters. U.S. exports to the UK of goods and services combined were estimated to be worth about \$120 billion in 2015.

The U.S.-UK investment relationship is the largest in the world, with cumulative bilateral stock in direct investment valued at more than \$1 trillion in 2014. More than two million jobs, approximately one million in each country, have been created over the years to manage and drive this investment. More than 7,500 U.S. firms have a presence in the UK, which is also the top location in Europe for U.S. regional headquarters covering Europe, the Middle East and Africa.

A referendum on European Union (EU) membership was held on 23 June, 2016, and it was decided that the UK would exit the EU. The government invoked Article 50 of the Lisbon Treaty in March 2017, which set in motion a two-year process of a negotiated departure from the EU.

The UK plastics industry is dominant in the following three core sectors: material and additive manufacturing, material processors and machinery manufacturing. Sales account for approximately \$30 billion and the industry employs 170,000 people. The UK plastics industry is the second largest sector employer in UK manufacturing. In 2015, the UK exported \$9.6bn of plastic and plastics products, making it one of the UK's Top 10 exports (\$6.2bn of these exports were to the EU).

Table 1 provides an overview of the plastic industry in the UK. Since 2009 the overall number of plastic processors has decreased by 7%, although overall turnover has increased by 18% (BFS 2015).

<b>Materials Processed</b>	3.3 million tons
<b>Plastics materials produced</b>	1.7 million tons
<b>Processor sales turnover</b>	\$16.7 billion
<b>Value of exports</b>	\$9.6 billion
<b>People employed</b>	170,000
<b>Number of primary processors</b>	3,000
<b>Companies in the plastics industry</b>	6,200
<b>Plastics industry turnover</b>	\$30 billion

*Table 1 - Overview of the UK plastic industry [from British Plastic Federation (BFS)]*

**MARKET ENTRY**

One traditional method of entry to the UK plastic market is to explore partnerships with local distributors that have the benefit of links and knowledge of the local market. US companies favoring direct sales to buyers may find it beneficial to establish relationships with local buyers through trade shows, conferences or associations. Price is an important factor in most transactions, as buyers have constant pressure to keep their costs down. At the same time, product quality and supplier reliability are key to market acceptance.

**CURRENT DEMAND**

The UK's plastics processors consume 3.3 million tons of material. The largest application markets per consumption are packaging, with 44.3% and building and construction, with 23.6%. Although representing comparatively small tonnages of material, the pharmaceutical and medical industries in the UK are driving strong growth in the UK plastics sector.

The use of plastic for electronics has been of significant interest in the UK in recent years, and opportunities can be found for U.S. companies involved in a range of innovative products, such as conformable and rollable electronic displays, ultra-efficient lighting and low-cost, long-life solar cells.

Small to medium sized UK companies serve predominantly niche markets and the focus is on high-quality, small-scale processing machines, testing equipment and process measurement, control and ancillary equipment. In addition, a range of reprocessing technologies and equipment is being examined, due to the UK's strong recycling legislations and focus on environmental issues. The UK has also a strong materials-testing sector serving the plastics industry, as well as rubber, composites and associated textile manufacturers.

**MAIN COMPETITORS**

The UK's domestic competition is very strong and all leading global firms are also present. The UK plastic sector accounts for 7% of UK manufacturing activity, greater than the automotive and pharmaceutical industries combined. There are some 6,200 firms engaged in the UK plastics industry.

The industry has a long and complex supply chain stretching from the producers of plastics raw materials and additives to the end-user (customer industries). Different product groups, for example automotive components and retail packaging, have markedly different supply chains.

The big names in UK polymer manufacturing include Ineos, Basell Polyolefins, Sabic, Inovyn, Lotte Chemicals, Lucite, and Vinnolit, etc.

With regard to processing machines, the UK has a range of producers supplying most key processing technologies. Companies such as MCP are providing all electric mini-molding machines, while Plastech Thermoset Tectonics is involved in the innovative processing of composite materials.

Test equipment companies include Hounsfield, Instron and Tinius Olsen.

The UK is the home to one of the most sophisticated retail environments in the world, which has been a driving force behind an innovative plastics packaging sector.

**MARKET ISSUES AND OBSTACLES**

London is one of the world's most expensive cities in which to do business. Property prices, restaurants and transportation are all expensive relative to most other European cities.

As UK and third-country suppliers represent strong competition, U.S. exporters need to offer differentiated products at competitive prices. Complex EU technical/regulatory requirements can be burdensome.

"Devolved Administrations" present some differences in policies and regulations among England, Northern Ireland, Scotland and Wales.

## UNITED KINGDOM

The UK government has introduced deep cuts to public-sector spending, affecting many businesses and, more broadly, consumer confidence.

A referendum on European Union (EU) membership was held on June 23, 2016, and it was decided that the UK would exit the EU. The government invoked Article 50 of the Lisbon Treaty in March 2017 which set in motion a two-year process of a negotiated departure from the EU.

The UK general election of 2017 resulted in a Parliament without a single party majority, adding to the uncertainty associated with Brexit negotiations.

## TRADE EVENTS

**Name of Event:** Interplas

**Date:** September 29 – October 1, 2020

**Location:** Birmingham (UK)

**Website:** <http://www.interplasuk.com/>

**Description:** One of the UK's leading plastics-industry event covering all of the manufacturing processes, technologies and services essential to the plastics sector. Interplas has a 60-year history, with approximately 400 exhibitors that present solutions, products, machines and ideas to the UK manufacturing industry.

**Name of Event:** TCT Show

**Date:** September 25 – 27, 2018

**Location:** Birmingham (UK)

**Website:** <http://www.tctshow.com/>

**Description:** The TCT Show is the UK's annual showcase of 3D technologies, hosting approximately 250 exhibitors from 24 countries. The show also includes a program of speakers and presentations relevant to the 3D printing industry.

Resource: The British Plastic Federation, <http://www.bpf.co.uk/>



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Helsinki

### **Gabon**

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<b>Italy</b> Milan Rome	<b>Liberia*</b> Monrovia	<b>Mozambique</b> Maputo	<b>Philippines</b> Manila	<b>Slovenia*</b> Ljubljana	<b>Uganda*</b> Kampala
<b>Jamaica</b> Kingston	<b>Libya</b> Tripoli	<b>Namibia*</b> Windhoek	<b>Poland</b> Warsaw	<b>South Africa</b> Cape Town Durban Johannesburg	<b>Ukraine</b> Kiev
<b>Japan</b> Osaka-Kobe Tokyo	<b>Lithuania*</b> Vilnius	<b>Netherlands</b> The Hague	<b>Portugal</b> Lisbon	<b>Spain</b> Madrid	<b>United Arab Emirates</b> Abu Dhabi Dubai
<b>Jordan</b> Amman	<b>Macedonia*</b> Skopje	<b>New Zealand</b> Auckland Wellington	<b>Qatar</b> Doha	<b>Sri Lanka*</b> Colombo	<b>United Kingdom</b> London
<b>Kazakhstan</b> Almaty	<b>Madagascar*</b> Antananarivo	<b>Nicaragua</b> Managua	<b>Romania</b> Bucharest	<b>Swaziland*</b> Mbabane	<b>Uruguay</b> Montevideo
<b>Kenya</b> Nairobi	<b>Malawi*</b> Lilongwe	<b>Nigeria</b> Lagos	<b>Russia</b> Moscow St. Petersburg	<b>Sweden</b> Stockholm	<b>Uzbekistan*</b> Tashkent
<b>Korea (South)</b> Seoul	<b>Malaysia</b> Kuala Lumpur	<b>Norway</b> Oslo	<b>Rwanda*</b> Kigali	<b>Taiwan</b> Kaohsiung Taipei	<b>Vietnam</b> Hanoi Ho Chi Minh City
<b>Kosovo</b> Pristina	<b>Mali*</b> Bamako	<b>Oman*</b> Muscat	<b>Saudi Arabia</b> Dhahran Jeddah Riyadh	<b>Tanzania</b> Dar es Salaam	<b>Zambia*</b> Lusaka
	<b>Malta*</b> Valletta			<b>Thailand</b> Bangkok	
	<b>Mauritius*</b> Port Louis				

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