



Germany: The Plastics Market – Situation and Trends

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Summary

Germany is the largest plastics market in Europe. Germany's plastics processing industry, which achieved EUR 51 billion (USD 71 billion) in sales in 2010, offers a strong market for innovative U.S. plastics materials and equipment.

The market offers good potential for "green" plastic materials; medical plastics products; packaging; smart plastics in electronics; nanotechnology products, and plastics for building applications. Sophisticated and innovative U.S. peripheral instrumentation, equipment and machinery are also in demand.

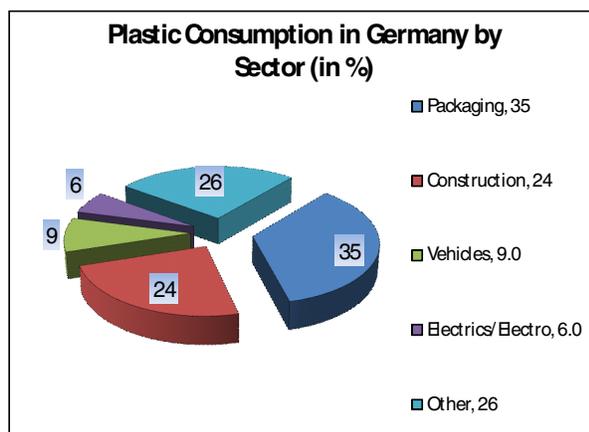
B2B marketplaces, direct purchase and marketing via wholesalers and/or distributors are the major channels of distribution in the German plastics materials sector. German distributors usually prefer long-term business relationships. In addition to pricing, quality and supplier reliability are major buying factors.

EU and German regulations apply to machinery sold in Germany. It is essential for market acceptance that products have undergone full testing and are labeled with the CE mark.

U.S. firms interested in the German or European plastics markets may wish to consider participating in the triennial K' trade fair. K' is the world's prime trade event for plastics and rubber materials and machinery. In 2010, the K' Show hosted 3,102 German and international exhibitors (among them 110 from the United States) and attracted 222,000 visitors. The next K' will take place in Dusseldorf, October 16-23, 2013.

Market Demand

Plastics Materials



Green Plastics/ Bio-plastics

Europe is considered the world's largest and most attractive market for bio-plastics.

Introduced into Germany in 2002, green plastics have continued to gain in importance. Presently, the share of bio-plastics in the German plastics market is estimated at approximately 1% and increasing. In Germany, green plastics are mostly used in packaging.

While it is still primarily used for packaging purposes, bio-plastics have entered new fields. The materials can be found in: Catering products; consumer

electronics; automotive; agriculture/horticulture; toys; textiles and other applications. Parallel to the expansion of the materials, demand for plastics manufacturing and processing technology has increased. Demand for bio-plastics and appropriate machinery is unbroken in Germany.

Plastics used in Medical Devices

Insiders report that over 50% of all medical devices worldwide are made out of polymers. Over the past few years, Germany's medical plastics segment has seen limited but regular growth rates. Polymers have become important for implants and medical coatings that help limit infections by catheters and surgical instruments. Nano-particles carrying medicines into damaged cells and micro-spirals that help to fight coronary diseases are among innovative applications. The numerous regulations and directives in the EU market pose challenges for plastics producers supplying the medical market.

Packaging

Packaging constitutes the largest user segment for processed plastics. Unlike most of the other plastic market segments, it was only slightly affected by the financial crisis in 2009 (-6%). Annual sales totaled EUR 12.2 billion in 2010; a 14 % growth over the previous year. With a demand of 1.7 million tons, packaging films, in particular, ranked on top of the demand list.

Electronics

Organic flexible displays; organic solar cells; printed RFID tags made of plastics, and OLED-lighting have the best potential for growth in the medium term. Insiders expect that the market for organic and printed electronics will grow to a multi-billion-dollar market over the next ten years.

Nanotechnology

Germany is the largest market for nanotechnology in the EU. Approximately 750 SMEs are developing and marketing nanotechnology and materials. The German nanotechnology market size amounted to EUR 33 billion (approximately USD 46 billion) in 2007. Nano additives enhancing plastic materials are of particular interest.

Construction

Increasingly, plastics are finding their way into the German construction industry. Annual sales in this segment amounted to EUR 10.8 billion (USD 15 billion) in 2010. The local construction industry has been somewhat reluctant to replace traditional construction materials by construction plastics. Over the medium term, insiders see good potential for plastics in the construction market. Increasing energy costs, in particular, and German legislation requiring houses to meet energy-efficiency standards are considered major driving factors. Innovative plastic insulation, for example, offers greater energy efficiency compared with traditional materials. At present, the German construction market is stagnating but insiders expect modest increases over the next 1-2 years.

Automotive

Insiders estimate that today, about 15% of a car is made out of plastics. After the severe downturn a few years ago, the situation in the German car industry has stabilized and is improving. This positive trend is also reflected in increased sales of technical components in 2010. About two thirds of technical components are produced for the automotive industry. The segment experienced an increase by 22.7% in 2010 compared with 2009, the strongest growth of all plastics processing market subsectors.

Market Data

In 2010, Germany's total plastics processing market increased by 14% to EUR 51.3 billion which is close to the record level of 2008 (EUR 52.3 billion). 12.2 million tons of plastics were processed in 2010 -- by far the largest volume throughout the EU, followed by Italy (about 800,000 tons) and France

(approximately 500,000 tons). 97% of German consumers' plastics wastes in Germany were recycled; the highest recycling quota in the EU.

Plastics Materials

	2010	
Total Market Size	EUR 15.8 billion	USD 22.1 billion
Total Local Production	EUR 23.4 billion	USD 32.7 billion
Total Exports	EUR 20.4 billion	USD 28.5 billion
Total imports	EUR 12.8 billion	USD 17.9 billion
Imports from the U.S.	EUR 0.64 billion	USD 0.89 billion

As indicated in the table above, over 88% of Germany's production of plastics was exported in 2010. Insiders expect a growth of the overall German plastics materials market by at least 2% over 2011. In 2010, German plastics imports totaled 8.4 million tons or EUR 12.8 billion, an increase of 39.2% in value and a 16% growth in volume. In 2010, over 80% of all plastics imports originated from the European Union; 5% were imported from the United States. Plastic imports from the United States into Germany amounted to EUR 0.64 billion or USD 0.89 billion respectively (2009: EUR 0.43 billion/USD 0.60 billion). Compared to 2009, imports of plastics materials from the United States increased by 50% in 2010. The extremely high increase of plastics imports from the United States is a likely consequence of the reduction in German production capacities as a result of the financial crisis in 2009. Imports of plastics materials from the United States are expected to continue to grow at a good but more moderate rate over the next few years. Commodity plastics mainly came from Asia, particularly from China, Malaysia and South Korea.

German producers of plastics materials presently suffer from the increased costs for crude oil and energy which have not yet been passed on to the OEM due to the difficult economic climate. Since profit margins have become very small, insiders expect prices to increase soon.

Plastics Machinery

Competition for U.S. producers of standard plastics machinery is strong in Germany. Innovative machinery and peripherals do, however, have strong potential. Like traditional plastics machinery, U.S. mold manufacturers face strong local competition.

After a difficult 2009 causing a decrease of orders by up to 38%, the German plastics machinery market improved substantially in 2010. Annual sales of plastics machinery increased by 18% over the previous year to approximately EUR 2.2 billion/USD 3 billion (excluding peripherals). Traditionally, about 70% of German plastics machinery production is exported. According to official German statistics, imports of U.S. plastics machinery into Germany amounted to approximately EUR 0.048 billion (USD 0.067 billion) in 2010. Forming machinery for rubber and plastics as well as machinery to produce cell rubber and foam dominated the machinery imports from the United States.

Market data for the German plastics machinery market are as follows:

	2009	2010
Total Market Size	EUR 1.7 billion/USD 2.3 billion	EUR 2.2 billion/USD 3 billion
Total Local Production	EUR 3.8 billion/USD 5.3 billion	EUR 4.9 billion/USD 6.8 billion
Total Exports	EUR 2.6 billion/USD 3.6 billion	EUR 3.3 billion/USD 4.6 billion
Total imports	EUR 0.5 billion/USD 0.7 billion	EUR 0.6 billion/USD 0.8 billion
Imports from the U.S.	EUR 0.04 billion/USD 0.06 billion	EUR 0.04 billion/USD 0.6 billion

Interest in energy efficient machinery is the major trend in this industry. The need for energy efficient production also calls for energy measurement instrumentation and more automation.

Best Prospects

For U.S. producers of plastics materials, innovative plastics such as green plastics have the best sales potential in Germany. Nano materials are of high interest.

Packaging materials for cosmetics and pharmaceuticals followed by food packaging are considered best prospects in the German packaging industry.

There are good prospects for highly sophisticated or innovative U.S. peripheral instrumentation, equipment and machinery

5. Key Suppliers

In 2010, the number of firms in the German processing segment was estimated at about 2,650 achieving total annual sales of EUR 51 billion.

Over the same period, approximately fifty German firms produced plastics raw materials in the amount of EUR 23.4 billion (20 million tons). Of this total, 12.2 tons valued at EUR 20.4 billion were exported in 2010, 73% of which went into other EU countries.

In Germany, about 300 firms with 25,713 employees produce plastics and rubber machinery. In 2010, German industry produced plastics machinery for EUR 4.9 billion. As in the years before, nearly 70% of the machinery was exported.

6. Prospective Buyers

German plastics processors are the main buyers of U.S. plastics materials, equipment and machinery. The most important processing subsectors are automotive and electronics, packaging, consumer goods and construction. Injection molders are Germany's major polymer processors, specifically for packaging.

Among the processed products, technical components experienced the strongest growth in 2010 with a plus of 22.7% over the previous year.

Main applications for technical components are in the automotive, general engineering and electrical segments. With 14.6% in 2010, the consumer goods saw the second largest increase in that year, followed by packaging (14%) and construction (5%). These high growth rates stand for a return to the pre-crisis level after the downturn in 2009. Growth for 2011 will continue but at a more moderate pace. As in the years before, the automotive and packaging sectors will offer U.S. companies the best business opportunities.

German statistics show an overall figure for household and consumer goods, medical, sports and leisure. Traditionally, the household consumer goods market is particularly difficult to enter due to the highly

Plastics Processing Industry according to Segments	Annual Sales in € Billion				
	2008	2009	Change (%)	2010	Change (%)
Plastics Processing total: Sub-segments below:	52.3	45.0	-14.0	51.3	+14
Packaging	12.5	10.7	-14.4	12.2	+14
Construction	11.1	10.3	-7.3	10.8	+5.0
Automotive/ Electro Engineering	12.1	9.7	-23.0	11.9	+22.7
Other, i.e., household, consumer goods, medical, sports & leisure	16.1	14.3	-11.1	16.4	+14.6

Source: German Association of Plastics Processors (GKV)

competitive situation. A limited amount of household and consumer goods are produced in Germany; the majority originates from Asia. Medical, sports and leisure offer U.S. companies the most promising opportunities in this market segment.

Market Entry

B2B marketplaces, direct purchase and marketing via wholesalers or distributors are the major channels of distribution in the German plastics materials sector.

Specialized plastics machinery and equipment are marketed primarily through local distributors. In a market where a production standstill due to a machinery breakdown can cost a fortune, U.S. machinery suppliers need to ensure that they have immediate repair service and easy spare part access available. Moreover, technical as well as training support is expected. Distributors vary in size. A number of small distributors are usually

specialized in certain types of

materials. In general, distributors supply select industry sectors with plastics materials. Large German distributors often operate in various EU countries or partner with local firms. U.S. firms often use one well-established German distributor or wholesaler that distributes their products in Germany as well as in other European markets.

Highly innovative plastics materials, like green plastics, often require direct communication between supplier and processor to ensure satisfactory product results due to lack of experience. Big automotive, telecommunications and packaging producers expect their plastics processors to locate nearby. This limits the opportunities for U.S.-based plastics processors.

German distributors usually prefer long-term business relationships. In addition to pricing, quality and supplier reliability are major buying factors.

Market Issues and Obstacles

EU and German regulations may apply to machinery sold in Germany. It is essential for market acceptance that products have undergone full testing and are labeled with the CE mark. The CE mark certifies that the product is in compliance with the appropriate EU standards.

The CE mark (including conformity statement and technical documentation of the country of import) is required for:

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

Certification of bio-plastics: The European Bioplastics Association is fostering the use of bio-plastics throughout Europe and also develops the appropriate standards. Further details are available from: <http://en.european-bioplastics.org/standards/certification/>. In Germany, biodegradable and compostable products are certified according to EN 13432/14995 or ASTM D 6400 standards. Firms properly certified are allowed to use the label. Only finished products can be certified; raw materials and semi-finished materials can be registered as bio-degradable. Especially in the packaging field, certification assuring the materials’ green contents has become essential. The materials’ compliance is marked with a label in the form of a “seedling”. The responsible German institution for certification and registration is: DIN CERTCO, http://www.dincertco.de/en/products_made_of_compostable_materials.html, or any of its partners. Cereplast, Mitsubishi and BASF are examples of companies that have registered their biodegradable materials. No European-wide label for bio plastics exists yet.

Until 2012, biodegradable biopolymers are given preferential treatment and are exempt from the German packaging ordinance, thereby saving costs of approximately EUR 1.5 per kilogram in “Green Dot” license fees (fees charged to cover the cost for recycling).

A manufacturer supplying plastics products to the German/European medical markets must comply with the special set of regulations for medical products, in addition to Good Manufacturing Practices (GMP) Guidelines: <http://www.emea.europa.eu/Inspections/GMPHome.html>. Moreover, a tightening of labeling requirements and the need for protection against fraud by special packaging enhancements are driving forces in today’s pharmaceutical packaging.

Although special applications may be regulated by additional regulations, nano-materials would normally fall into the framework for chemicals. The discussions regarding health risks by nano-particles are continuing. The EU Commission and the OECD have launched projects to develop methods for risk assessment and health protection.

Producers of petro-based plastics materials, additives or other chemicals for plastics applications, should be aware of the EU Commission’s REACh (**R**egistration, **E**valuation and **A**uthorization of **C**hemicals) regulations. Detailed information on REACh is available at: http://echa.europa.eu/home_en.asp.

U.S. manufacturers shipping chemicals and related materials to Europe should also be familiar with the EU Regulation (EC) No. 1272/2008 on **C**lassification, **L**abeling and **P**ackaging of Substances and Mixtures, the so-called CLP-Regulation. The CLP-Regulation is based on the Globally Harmonized System of the United Nations concerning the classification and labeling of chemicals (GHS). The purpose of this regulation is to identify hazardous chemicals and ensure the proper handling and transportation of chemicals by standardized symbols and phrases on the packaging labels or safety data sheets.

Trade Events

German and European trade shows present opportunities for U.S. firms seeking to network with German and international buyers/distributors and to assess their competitors' lines and market situation. Upcoming shows in related sectors are:

- **FAKUMA, Friedrichshafen, October 18-22, 2011:**

The biennial 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 2009, 1,500 exhibitors from 30 countries participated in the event, attracting 37,281 visitors. FAKUMA mainly focuses on Germany, Austria and Switzerland. Website: <http://www.fakuma-messe.de/en/37515>.

- **European Coatings Show, Nuremberg, March 19-21, 2013:**

The biennial European Coatings Show (ECS) is Europe's major trade event for the coatings and paint industries, as well as for adhesives, sealants, and construction chemicals. In 2011, 25,955 trade visitors attended the event, which showcased 887 German and international exhibitors. Website: <http://www.european-coatings-show.com/en/>. The U.S. Commercial Service plans to support the U.S. exhibitors in this show, as in the past, with targeted e-mails to German distributors and buyers, company information on the CS Germany website, and individual phone consultations and on-request market and company research.

- **K' Show, Duesseldorf, October 16-23, 2013:**

K', the world's prime trade event for plastics and rubber materials and machinery, offers exhibition opportunities for the whole range of the plastics industry, including plastics and rubber machinery, raw materials and auxiliaries as well as semi-finished products and services. In 2010, the K' Show hosted 3,102 German and international exhibitors and attracted 222,000 visitors. Website: <http://www.k-online.de>. The 110 U.S. firms in two U.S. pavilions were very satisfied with the results of their participation. As in 2010 and 2007, the U.S. Commercial Service will provide extensive support and enhancements to U.S. exhibitors, including special matchmaking services.

Medical plastics products are displayed at medical manufacturing trade shows such as the annual Compamed show in Dusseldorf, which is co-located with the annual MEDICA trade show in November of each year: <http://www.compamed-tradefair.com/>, or at Medtec Europe, Stuttgart: http://www.canontradeshows.com/expo/medtec10/index_en.html.

10. Resources and Contacts

For more information, U.S. companies may contact the author of this report, commercial specialist Kirsten Hentschel at the U.S. Commercial Service office at the U.S. Consulate General in Dusseldorf, Germany. Her contact information is: Kirsten.Hentschel@trade.gov; Phone: 011-49-211-737-767-30; Fax: 011-49-211-737-767-67; website: <http://www.export.gov/germany>.

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