Market Study: PUR – Adhesives & Sealants





Dear decision-makers,

Nowadays, information is available in overwhelming amounts. But what is the best way to find the crucial data?

Thousands of companies use our knowledge. Based on our experience, we provide decisive data for our clients.

Our extensive and practiceoriented studies offer precise market analyses and forecasts!

Why should you make use of our knowledge?

Our understanding of the markets helps you to assess potentials, products, and technologies, but also competitors. Our studies will help you save time and prevent costly wrong decisions. That way, you can create an ever more effective and efficient future for your company.

We are your experts

Ceresana has been the most trusted market research company for the industrial sector already for 15 years.

We would be pleased to assist you in this challenging market environment as well!

Oliver Kutsch, CEO



The market research company Ceresana analyzed the global market for adhesives and sealants based on polyurethane (PUR) in detail. Until 2024, Ceresana expects an increase in revenues generated with these products to over USD 9.7 billion. Adhesives and sealants based on other products are NOT included in this study. Polyurethanes are plastics resulting from a polyadditional reaction of polyisocyanates with polyols and are either hard and porous or soft and elastic depending on its production. Different kinds of PUR are needed for reactive, thermally activated, hot melt, dispersion, and solvent-borne adhesives. These adhesives are for example used to bond car front spoilers, sandwich constructions, and facade elements, to glue metal brackets, or to seal electronic casings. PUR Sealants are particularly utilized in the transport industry as well as in the construction industry for window joints, and sealing of windows, pipes, and more.

Building with PUR

The most important application areas of adhesives and sealants based on PUR are the construction industry and the segments transportation, packaging, shoes/leather, and wood processing. The most important sales market in 2016 was the segment construction that consumed about 36% of total global consumption. Adhesives and sealants are, for example, used for wall and floor coverings. In new constructions, maintenance or building refurbishment, they are used for construction parts, such as coverings, panels, and insulation materials, pipes, and interior construction.

Adhesives Instead of Screws

The highest growth rate between 2016 and 2024 is forecast for the segment transportation that is likely to see market volume increase by 4.1% p.a. in the next eight years. The manufacture of cars and utility vehicles is most important in this segment. This application area, however, also includes demand for adhesives and sealants in the production of buses, motorcycles, trains, planes, and ships. Adhesives are, for example, used to bond single parts, such as plates, fittings, and other parts of the interior design. In addition, they are increasingly used to bond metals and plastics.

Light and Durable

PUR adhesives are also important for the packaging industry. Flexible packaging is made of a variety of film types and materials. Different technical characteristics, such as tensile strength, UV light durability, adherence, and air permeability, are to be combined. In 2016, more than 317,000 tonnes of adhesives and sealants were utilized for the segment packaging worldwide. Thus, demand in this segment had risen at an average rate of 3.8% p.a. since 2008.

The Study in Brief:

Chapter 1 provides a depiction of the global market for adhesives and sealants based on PUR – including forecasts up to 2024: Data on demand for adhesives and sealants are analyzed for the regions Western Europe, Eastern Europe, North America, South America, Asia-Pacific, the Middle East, and Africa.

Chapter 2 provides market data for the 17 most important countries, that is, country-specific information on demand and revenues. Furthermore, demand is split by application areas.

Chapter 3 analyzes the regional markets for adhesives and sealants: Data and influencing factors on the use in the segments construction, wood processing, transportation, shoes and leather, packaging, and other application areas.

Chapter 4 provides profiles of the largest manufacturers of PUR adhesives and sealants – clearly arranged according to contact details, turnover, profit, product range, production sites, and profile summary. Extensive profiles of 69 manufacturers are given, including 3M Company, Ashland Global Holdings Inc., BASF SE, Covestro AG, DIC Corporation, DowDuPont Inc., Henkel AG & Co. KGaA, Huntsman International LLC, and Illinois Tool Works Inc.

Market Study PUR - Adhesives & Sealants: 17 Countries, 69 Producers; 310 Pages

1 Market Data

...

1.1 World1.1.1 Demand1.1.2 Revenues1.2 Western Europe

1.3 Eastern Europe

1.4 North America

- 1.5 South America
- 1.6 Asia-Pacific

1.7 Middle East

... 1.8 Africa

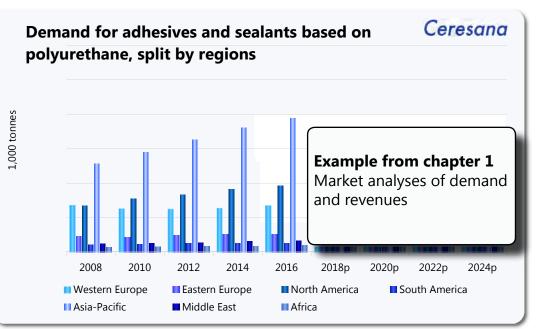
•••

2 Country Profiles

- 2.1 Western Europe
 2.1.1 France
 2.1.2 Germany
 2.1.3 Italy
 2.1.4 Spain
 2.1.5 United Kingdom
 2.1.6 Other Western Europe
 2.2 Eastern Europe
 2.2.1 Poland
 2.2.2 Russia
- 2.2.3 Turkey
- 2.2.4 Other Eastern Europe

2.3 North America 2.3.1 Canada 2.3.2 Mexico 2.3.3 USA

- 2.4 South America2.4.1 Brazil2.4.2 Other South America
- 2.5 Asia-Pacific
 2.5.1 China
 2.5.2 India
 2.5.3 Japan
 2.5.4 South Korea
 2.5.5 Taiwan
 2.5.6 Other Asia-Pacific



3 Applications

3.1 World
3.1.1 Construction
3.1.2 Transportation
3.1.3 Packaging
3.1.4 Shoes/Leather
3.1.5 Wood Processing
3.1.6 Other Applications
3.2 Western Europe

...
3.3 Eastern Europe
...
3.4 North America
...
3.5 South America
...
3.6 Asia-Pacific
...
3.7 Middle East
3.8 Africa

4 Company Profiles

4.1 Western Europe Belgium (1 Producer) Finland (1) France (4) Germany (17) Italy (3) Norway (1) Spain (1) Sweden (1) Switzerland (4) The Netherlands (2) United Kingdom (1)

4.2 Eastern Europe Poland (1) Slovenia (1)

4.3 North America Mexico (1) USA (13)

4.4 South America Brazil (2)

4.5 Asia-Pacific China (3) India (3) Japan (6) Singapore (1) Taiwan (2)

1.2 Western Europe

1.2.1 Demand

About X tonnes of adhesives and sealants were utilized in Western Europe in 2016. Thus, demand has decreased by an average of X% p.a. since 2008. Until 2024, we expect an increase in demand by X% p.a. Given this growth rate, Western Europe's share of global demand is likely to decline from X% in 2016 to roughly X% in 2024.

About X% of Western European demand originated in Germany. The remaining Western European countries (the Netherlands, Sweden, Austria, Portugal, Belgium, Denmark, Switzerland, Finland, Norway, and Ireland) reached an aggregated market share of X%. The most dynamic growth rate of X% p.a. in the upcoming eight years is projected for Germany. The United Kingdom and Italy will presumably develop at the weakest rates.

in 1,000 tonnes	2008	2010	2012	2014	2016	2018p	2020p	2022p	2024p	2016- 2024
Germany	х	х	х	х	х	х	х	х	х	X% p.a.
France	х	х	х	х	х	х	х	х	х	X% p.a.
United Kingdom	х	х	х	х	х	х	х	х	х	X% p.a.
Italy	х	х	х	х	х	х	х	х	х	X% p.a.
Spain	х	х	х	х	х	х	х	х	х	X% p.a.
Other	х	х	х	х	х	х	х	х	х	X% p.a.
Total	x	x	x	x	х	x	x	х	х	Х% p.a.

Table: Demand for adhesives and sealants in Western Europe from 2008 to 2024 – split by major countries



by products

1.2.2 Revenues

About EUR X billion were generated with the sales of adhesives and sealants in Western

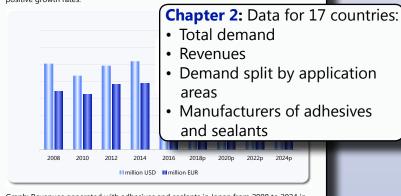


Graph: Revenues generated with adhesives and sealants in Western Europe from 2008 to 2024 in million USD and million EUR

2.5.3 Japan

In 2016 about X tonnes of adhesives and sealants were utilized. This translates into an increase of X% p.a. between 2008 and 2016. We forecast a positive growth of X% p.a. for the 2016 to 2024 period. Market volume will amount to approx. X tonnes in 2024. Revenues generated with adhesives and sealants totaled about USD X million in 2016. Japan's share of total regional revenues therefore declined to about X% in 2016. We forecast a market value of approx. USD X million to be reported in 2024. Compared to 2016, this constitutes a growth rate of X% per year, which falls short of the regional average.

The most important application area for adhesives and sealants in 2016 was the segment construction, which utilized X tonnes, followed by the sector packaging. With the exception of the sector wood processing, which will lower its demand by presumably X% p.a. until 2024, we expect all other application areas to account for positive growth rates.



Graph: Revenues generated with adhesives and sealants in Japan from 2008 to 2024 in million USD and million EUR

in 1,000 tonnes	2008	2010	2012	2014	2016	2018p	2020p	2022p	2024p	2016- 2024
Construction	х	х	х	х	х	х	х	х	х	X% p.a.
Transportation	х	х	х	х	x	х	х	х	х	X% p.a.
Packaging	х	х	х	х	х	х	х	х	х	X% p.a.
Shoes and Leather	х	х	х	х	х	х	х	х	х	X% p.a.
Wood Processing	х	х	х	х	х	х	х	х	х	X% p.a.
Other	х	х	х	х	х	х	х	х	х	X% p.a.
Total	х	х	х	х	х	х	х	х	х	Х% p.a.

Table: Demand for adhesives and sealants in Japan from 2008 to 2024 – split by applications

In the fiscal year 2016, economic growth in Japan amounted to 1.0% while a plus of 1.7% is expected for the current period. The Olympic Games in Tokyo in 2020 will have a positive effect on some sectors and on the economy. In 2016, GDP data collection was adapted to UN directives of 2008. Therefore, the aim of a GDP of approx, USD 5.4 trillion until 2020 is not unlikely anymore. The increase in consumer tax from 8% to 10% planned for summer 2017 was postponed to 2019. This will attenuate the insecurity of private consumers and presumably increase demand. The executed resolution on a free trade agreement between Japan and Europe at the beginning of July 2017 is also beneficial. With the aid of cheaper imported products, Japanese consumers could cope with the tax increase more easily. Overall, the agreement is supposed to create an economic upswing for both Japan and Europe. At the moment, 70% of Japanese exports into the EU are dutiable, while 70% of the imports from the EU into Japan are already duty-free. The reduction of duties will be made gradually. Depending on the product category, duties could be decreased right now or only within the next 15 years. In the segment automobiles, the demand for "Mini Vehicles" in particular declined after taxes for this group of vehicles were raised. The recovery of the Japanese currency had

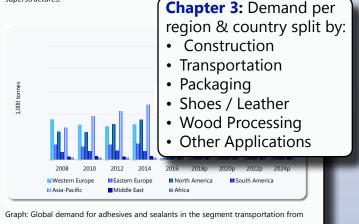
a negative effect on the annual result. Vehicle production decreased compared to the previous year; about 9.20 million vehicles were produced in 2016 (2015: 9.29 million). However, we expect a slight increase in vehicle production in the upcoming eight years. Despite a decrease in state support for vehicles with alternative drive engines, autonomous vehicles are supposed to hold a share of 50-70%, hybrid vehicles of 30-40%, and electric and plug in vehicles 20-30% on the domestic traffic by 2030 according to a plan of the government. Already during the past years, about 30% of the newly registered passenger cars were hybrid vehicles. However, electric and hybrid vehicles only had a share of below 10%.

Construction projects in the run-up to the Olympics 2020 have positive effects on the construction economy. The number of started building projects of hotels increased considerably in 2016 due to the rising number of tourists. 40 million tourists are expected in 2020 and even 60 million in 2030, which is why hotel construction will presumably continue to increase in the years to come. Due to demographic reasons, housing meeting the needs of the elderly are built, which is another growth factor in the construction segment. Environmentally friendly technologies play an increasingly important role in Japan. New constructions but also renovations offer a great potential to construction companies. Infrastructure in Japan is to be expanded by a support program with a volume of over 60 billion dollars in the upcoming years. The Olympic Games in 2020 in Tokyo already foreshadow these plans. In the upcoming years, investments are to be made in airports, railway networks, and roads.

3 Applications

3.1.2 Transportation

Worldwide, approx. X tonnes of adhesives and sealants were consumed in the segment transportation in 2016. We forecast global consumption to increase at an average rate of X% p.a. to a volume of approx. X tonnes in 2024. The most important application area is the manufacture of passenger cars and utility vehicles. This application area, however, also includes demand for adhesives and sealants in the production of buses, motor cycles, trains, planes, and ships. Adhesives are, for example, used to bond single parts, such as plates, fittings, and other parts of the interior design. In addition, they are increasingly used to bond materials such as metals and plastics. Main focus is the production, but also the repair of passenger cars and utility vehicles. Demand for adhesives and sealants in the manufacture of trucks in particular is rising, e.g. in superstructures.



2008 to 2024 - split by regions

in 1,000 tonnes	2008	2010	2012	2014	2016	2018p	2020p	2022p	2024p	2016- 2024
Western Europe	Х	х	х	х	х	х	х	х	х	X% p.a.
Eastern Europe	х	х	х	х	х	х	х	х	х	X% p.a.
North America	х	х	х	х	х	х	х	х	х	X% p.a.
South America	х	х	х	х	х	х	х	х	Х	р.а. р.а.
Asia-Pacific	х	х	х	х	х	х	х	х	х	X%
Middle East	х	х	х	х	х	х	х	х	х	р.а. X%
Africa	х	x	x	x	x	х	x	х	х	р.а. X%
		x x		x	x	x				p.a. X%
Total	х		х							p.a.

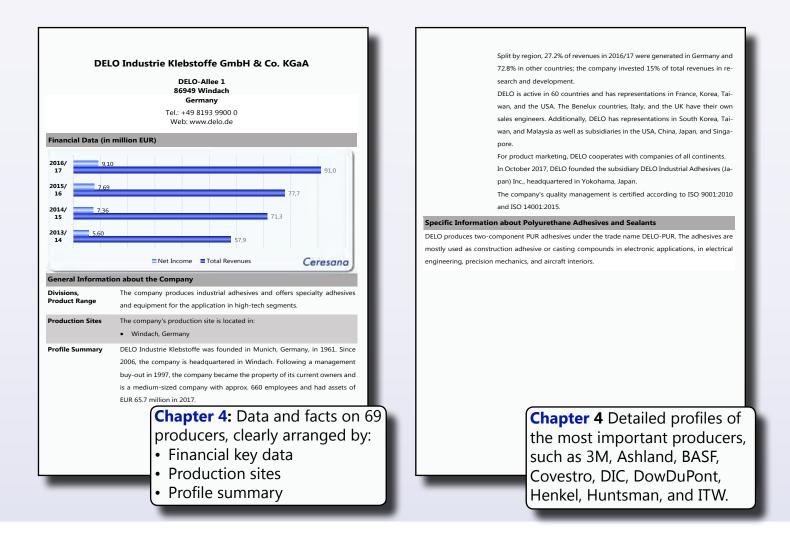
Table: Global demand for adhesives and sealants in the segment transportation from 2008 to 2024 – split by regions

3.1.3 Packaging

In 2016, about X tonnes of adhesives and sealants were utilized for the segment packaging worldwide. Thus, demand in this segment rose at an average rate of X% p.a. since 2008. We forecast global demand to increase by X% p.a. to approx. X million tonnes between 2016 and 2024.

Polyurethane adhesives play a major role in flexible packaging applications in particular. Flexible packaging is made of a variety of film types and materials (plastics, paper, metal). Technical characteristics such as tensile strength, UV light durability, adherence, and air permeability are paramount in this case.

Market Study PUR - Adhesives & Sealants: 17 Countries, 69 Producers; 310 Pages



This study is useful for:

- Manufacturers and traders of: Polyurethane (PUR), adhesives, and sealants
- Companies operating in the fields of: construction, packaging, wood processing, transportation, shoes & leather
- · Associations and institutes, investors and consultations
- Executive board, technology and production, strategic planning, corporate development, R&D, market research, marketing, sales and distribution, procurement

Place your order now:

- Market studies or
- Free reading samples

Online at <u>www.ceresana.com/en</u> or via <u>order@ceresana.com</u> quickly and easily.

Order online now!



Thank you for your confidence!

For 15 years, more than 10,000 small, mediumsized, and multinational enterprises from over 60 countries have been benefiting from our studies.

Our studies are especially useful for:

- Producers, processors, traders, suppliers, as well as engineering companies
- Associations, institutes, consultants, investors
- Executive board, finance, business development, strategic planning, market research, marketing, sales, distribution & procurement, etc.



Gain the knowledge for your corporate success now!

Ceresana Mainaustr. 34, 78464 Constance, Germany Tel: +49 7531 94293 - 0 Fax: - 27 E-Mail: <u>info@ceresana.com</u>



The list includes a selection of our current market studies. By clicking on the respective topic, you will receive further details:



Automotive Coatings - World Automotive Plastics - Europe Automotive Plastics - World Hybrid & Electric Cars - Europe Biobased Packaging - World Bioplastics - World Polylactic Acid (PLA) - World Starch Based Plastics - World

Biocides - World Carbon Black - World Chelating Agents - World Fillers - Europe Fillers - World Flame Retardants - World Pigments - World Plastic Additives - World Plasticizers - World Solvents - World Stabilizers - World Stabilizers - World Surfactants - World

Composites (CFRP & GFRP) - World Engineering Plastics - World Expandable Polystyrene (EPS) - World Masterbatches - World Plastics - Europe Plastics - World Polyethylene (HDPE) - World Polyethylene (LDPE) - World Polyethylene (LLDPE) - World Polypropylene - World Polystyrene & EPS - World Polystyrene & EPS - World Silicones - World Synthetic Rubber - World Adhesives - Europe Adhesives - World Insulation Material - Europe Insulation Material - World Paints & Coatings - Europe Paints & Coatings - World Plastic Extrusion - Europe Plastic Injection - Europe Plastic Pipes - Europe Plastic Pipes - World Plastic Windows - World Printing Inks - Europe Printing Inks - Europe

Bags, Sacks & Pouches - Europe Bags, Sacks & Pouches - World Corrugated Board & Solid Board - Europe Flexible Packaging - Europe Food Packaging - Europe Labels - Europe Plastic Caps & Closures - Europe Plastic Caps & Closures - World Plastic Containers - Europe Plastic Films - Europe Plastic Films - Europe Plastic Films - Europe Plastic Films - World Plastic Packaging for Cosmetics - Europe Rigid Metal Packaging - Europe

To our Store

Packaging

Bio-Economy