

Global TPU market expected to grow by 5.2 % annually

IAL publishes 6th edition of TPU market study

Amaplast has completed its year-end balance sheet for 2018, incorporating foreign trade data IAL Consultants has recently published the 6th edition of its report "Global Overview of the Thermoplastic Polyurethane Market. This report examines the national, regional and global markets for thermoplastic polyurethanes for 2018. It explores the market trends driving TPU production and subsequent demand, provides an indication of raw material consumption, and also presents future growth opportunities in the TPU market. Five-year market forecasts to 2023 are also included. The main findings with special focus on the APAC region are summarised below.

TPU enjoys one of the fastest growth rates within the polyurethane sector and is expected to retain its strong development over the forecast period. The raw material shortage of MDI and 1,6-hexanediol and the correlative price increase has influenced the production and demand, but growth has been dampened less significantly compared to other polyurethane materials.

The total global production of thermoplastic polyurethane (TPU) is estimated at nearly 720,000 t in 2018, with over 65 % of production taking place in APAC alone. The market is expected to grow by 5.2 % annually over the next five years, with most growth present in Asia (fig. 1).

The market has matured over the past years but is still relatively dynamic. The material has increasingly replaced PVCs and other competing materials in a wide variety of end uses, because it offers superior physical properties such as better flexibility, abrasion resistance, workability at low temperatures, and cleanability.

The future growth of TPUs is highly dependent on innovation. Industry experts believe that investment in research and development will be key to strengthening the companies' relative positioning. Many converters are expanding their product portfolios and more specialised grades are needed to offer high quality solutions. 3D printing applications, for example, show high growth rates, but grades for these applications are still niche and 3D printing companies still

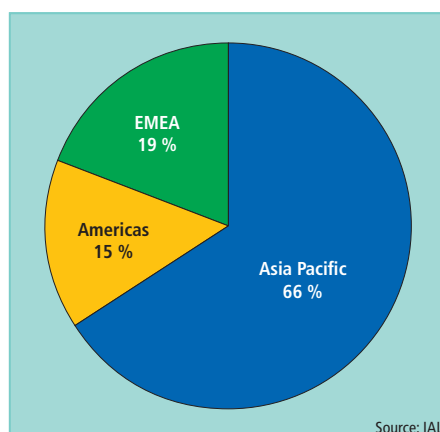
use extrusion grades because of a lack of tailored materials on the market.

EMEA

The production and demand for TPU in EMEA has increased faster than most other elastomer products and the sector is expected to continue performing well over the forecast period. The production in Europe continues to be largely dominated by a limited number of globally active multinational players. Turkey and Russia are something of an exception because local producers are still active in these countries.

European producers are still focusing on high-value, high-performance products and specialty TPUs, an area where Asian producers have achieved little success so far. Chinese companies are working on the development of high-quality products, however, and

Fig. 1: Global TPU production by region, 2018 in % (Total 720,000 t)



will soon be able to compete with European qualities.

Americas

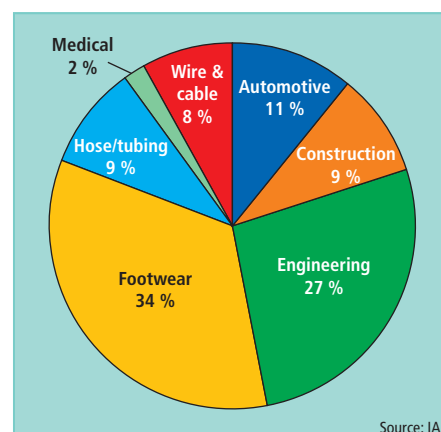
The TPU market in North America is still very dynamic and driven by innovation rather than price. Like Europe, global multinational companies account for most of the production. The demand is also growing, which is partly attributable to the revival of the local manufacturing industry.

The South American market is dynamic and still has good potential to grow in the future. The demand in most countries is growing strongly, apart from Brazil. The Brazilian demand has been affected by the slowdown of the economy, which has stifled growth and investment. The economic performance began to improve in 2017; however, political uncertainty hindered further growth in 2018. The forecast for Brazil is uncertain and could vary depending on future developments.

Asia Pacific

The surge in interest in TPU products in the APAC region has continued, and the sector has maintained growth, promoting the need for further capacity expansions. However, in the last few years, the production of many PU elastomer products in China has slowed down slightly, and the vast growth rates experienced in the past decade have been reduced. The industry is certainly optimistic that APAC will continue to experience fast growth rates in the demand for different TPU grades, as even the slower growth rates are

Fig. 2: TPU consumption by end-use, 2018 in % (Total 670,000 t)



still higher than those encountered in other regions. At the same time as TPU production capacity expands and competition increases, Asian customers are becoming increasingly more sophisticated and demanding.

The Asia Pacific region, and China in particular, has been subject to constant investment in TPU capacity expansions, many of which are still ongoing. China has continued to strengthen its position as the largest TPU producer in Asia and globally, and there have been a number of reported capacity expansions taking place in China.

In recent years, the Chinese manufacturing industry has been subject to tightening environmental regulations and implementation of stricter environmental standards. Consequently, following environmental inspections that are still ongoing, many Chinese manufacturers have faced hefty fines for not meeting the expected standards, and many, in particular smaller companies, have also closed down as a result. Production volume in China exceeds the domestic demand by nearly 60,000 t and more than 15 % of the domestic production is being exported. The main markets are within Asia, but exports to America and Europe are also substantial, especially for injection grades.

Taiwan is the second largest TPU producer in Asia-Pacific, due to its long history of production and mature technology. Most of the Taiwanese TPU producers have relocated to mainland China due to the shifting of the domestic end-user industries. TPUs produced in Taiwan are mainly TPU films used in tubes, footwear, adhesives and sealants.

Applications

A number of new, smaller applications are arising for TPUs within the automotive industry, as their use can result in lowering the vehicle's weight, thereby contributing to decreasing fuel consumption and, in turn, CO₂ emissions. The increased popularity of electric cars is seen as a chance to establish TPUs in new end-use segments within the automotive industry (fig. 2).

TPUs are gaining market share in end uses such as electronics and mobile, as well as netbooks, tablets and consoles. End-use applications in the medical sector are also interesting areas for TPUs in the upcoming years.

The demand for TPUs in footwear and textiles is driven by population growth as well as an increase of disposable income in

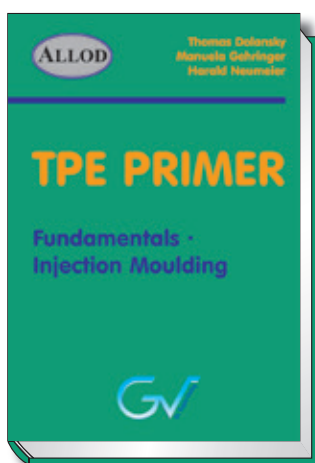
emerging countries. These markets are very price sensitive and production has shifted gradually towards Asia in the last ten years. European and North American footwear and textiles producers have shifted their focus to high-priced goods as well as protective footwear and clothing for industrial use.

The consumption of TPUs in the oil and gas segments has been stagnant in recent years; however, investment is expected to pick up again once the oil price increases. Large projects will boost the usage of TPUs, mostly from Europe and North America.

Overall, the production levels of thermoplastic polyurethanes are being sustained thanks to the demand for lightweight materials and their excellent physical properties. The main growth areas in upcoming years will be product replacement as well as new end-use applications.

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The 6th edition of the report Global Overview of the Thermoplastic Polyurethane Market is now available from IAL Consultants. The price is EUR 3,950.



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TPE Primer
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Thermoplastic elastomers as a class of materials have been growing at high rates over the period of past several years. Because of their unique property profile they have not only replaced conventional rubber in many areas but also found a host of totally new applications.

The TPE PRIMER, published by TPE specialist ALLOD, is an application oriented and hands-on overview on TPE, well-suited for newcomers and beginners in the field. The TPE PRIMER is intended to be useful to industrial practitioners and students of engineering. A glossary and other helpful pieces of information are added in the appendix.

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Dr. Gupta Verlags GmbH
Tel. +49 2102 9345-0
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