Thermoplastic Composites Market Research Report- Forecast to 2023

Global Thermoplastic Composite Market by Product Type (Short Fiber Reinforced Thermoplastic (SFRT), Long Fiber Reinforced Thermoplastic (LFRT), Continuous Fiber Reinforced Thermoplastic (CFRT), and Glass Mat Thermoplastics (GMT)), by Fiber Type (Fiberglass and Carbon Fiber), End Use Industries (Aerospace & Defense, Wind Energy, Automotive, Building & Construction, Sports, Electrical & Electronics and others), and by Region- Forecast till 2023

Thermoplastic, also known as thermo-softening plastic, is a polymer that becomes moldable or pliable at specific high temperature and solidifies upon cooling. In other words, thermoplastic is an organic material that melts on heating and gets hardened on cooling. Depending upon their chemistry, they are similar like rubber and can be as hard as aluminum. In addition to this they are light weight, abrasion resistant and can withstand temperature up to 600°F. Composite material or composite is material synthesized by combination of two or more constituent material with substantially different physical or chemical properties. This produces a material having characteristics different form that of constituent materials. At the same time the composite material so formed is stronger, lighter and less expensive. Thermoplastic composites provide many advantages over metal including, good insulation properties, and low processing and manufacturing cost. Moreover they possess better fatigue properties over metal and tolerate larger deflections without deformation. Thermoplastic composites find their major applications in aerospace & defense and wind energy, wherein there is need of stronger, light weight, and heat & weather resistant materials. The strength-to-weight ratio of such composites is higher than that of traditional materials, which makes it applicable in aircraft engine, blades of wind turbine, pipes & tanks, and in other marine usage. Apart from this, thermoplastic composites are used in industrial tooling applications such as molds and master molds. This is replacing the traditional tooling materials such as metals and wood.

The global aerospace & defense market was growing at highest CAGR on account of increasing demand for both commercial and fighter jets around the world. This is expected to continue throughout the forecast period to propel growth of the global thermoplastic composites market. Wind Energy is being adopted as an important source of green energy by many developing countries. In recent times, the trend is followed by developing countries as well owing to an increasing environmental concerns. The heat weather resistant nature of thermoplastic composites is favoring the growth of its demand in spacecraft. The global composite market is estimated to reach ~ USD 110 billion during the forecast period on account of the growing demand from major end use industries. This, in turn is anticipated to help push the growth of the global thermoplastic composites market. Major players manufacturing the product are heavily investing in production of thermoplastic composites to meet increasing demand from diverse end use industries. However, the cost intensive nature of thermoplastic composite may pose as a bottleneck in growth of its global market. Thermoplastic composite is more expensive than its polyester and vinyl ester based counterparts.

Global Thermoplastic Composite Market Share, by End Use Industry 2016 (%)

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Regional Analysis:

There are five key regions the global thermoplastic composite market is segmented across. It includes Asia Pacific, North America, Europe, Latin America, and Middle East & Africa. Asia Pacific is the largest market owing to the growth of aerospace & defense and wind industry. India, Japan and China are the major markets in this region on accounts of an increasing investment in aerospace & defense sectors.

North America is a substantial region in the global thermoplastic composite market, after Asia Pacific. U.S. is the largest market in this region owing to the presence of well-established end use industries such as aerospace & defense, along with sports industry. U.S. is constantly increasing its military power to lead in the list of major military powers. This in turn is expected favor market of thermoplastic composite in this region.

Europe is following North America in the global thermoplastic composite market. Major contributors to the regional market in this region are U.K, France, Germany and Italy. Aerospace and automotive industries in Europe are the major consumers of thermoplastic composites in this region, which is driving the growth of regional market. Latin America is witnessing a steady growth of end use industries in countries namely Brazil and Argentina. The marine industry in Brazil is estimated to gain substantial momentum during the forecast period to push growth of the regional thermoplastic composite market. In coming years the opportunities for composite and core material are growing in the Middle East & Africa due to rising end use industries namely building & construction and sports, which would help propel the growth of the regional market.

Segmentation:

The global thermoplastic composites market is segmented on the basis of product type, fiber type, end use industry, and region. Based on product type the market is divided into short fiber reinforced thermoplastic (SFRT), long fiber reinforced thermoplastic (LFRT), continuous fiber reinforced thermoplastic (CFRT), and glass mat thermoplastics (GMT). On the basis of fiber type the market is divided into fiberglass and carbon fiber, in which fiberglass or glass fiber based thermoplastic composite material is holding major share of overall demand of thermoplastic composite. Based on end use industry the global thermoplastic composite market is segmented onto aerospace & defense, wind energy, automotive, building & construction, sports, and others. Among them aerospace & defense industry is installing maximum usage of thermoplastic composites. Geographically, the markets is divided into five key regions namely Asia Pacific, North America, Europe, Latin America and Middle East & Africa.

Key Players:

The prominent players in the global thermoplastic composite market are DuPont (U.S.), Arkema Group (France), SGL Carbon SE (Germany), Celanese Corporation (U.S.), DSM N.V. (Netherlands), Koninklijke Ten Cate bv. (Netherlands), SABIC (Saudi Aarbia), TEIJIN LIMITED (Japan), LANXESS (Germany), BASF SE (Germany), and others.

Intended Audience:

- Thermoplastic composites Manufacturers
- Traders and distributors of thermoplastic composites
- Research and development institutes
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