

Global PEEK market forecast to cross US\$1 bln by 2020 (26-3-2015)

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The global PEEK market is projected to grow at a CAGR of 8 to 10% between 2014 and 2020, surpassing US\$ 1 bln by 2020, as per Future Market Insights. Europe is largest market for PEEK in terms of value and volume. The largest consumer of aromatic ketone polymers is Western Europe and the U.S., followed by Japan. China and Western European countries are expected to record the highest growth rate collectively during this period. The key players in the global aromatic ketone polymers market include Lions Apparel, Inc., ASTM International, Perfect Polymers, ISMAT, Gharda Chemicals Limited, Solvay Specialty Polymers, Panjin Zhongrun High performance Polymers, JIDA-Evonik High Performance Polymers, Tri Town Precision Plastics, Inc., Caledonian Ferguson Timpson Ltd., Prototype & Plastic Mold Company, Darter Plastics, Inc. and Victrex Polymer Solutions.. By type, the PEEK market is segmented into three : unfilled, carbon filled and glass filled.

Aromatic ketone polymers belong to the family of aromatic hydrocarbons and are also known as Poly Aryl Ether Ketones; abbreviated as PAEKs. PAEKs are thermoplastics that are crystalline in nature and are characterized by good mechanical properties, thermal stability, chemical and solvent resistance, temperature and fire resistance and excellent electrical performance. PAEKs are a group of three aromatic polymers that include – Poly Ether Ether Ketone (PEEK), Poly Ether Ketone (PEK) and Poly Ether Ketone Ketone (PEKK). Aromatic ketone polymers are one of the highest valued high-performance polymers used across several industries. Their high cost is due to their exceptional characteristics, which justify their higher prices. The key driver of the aromatic ketone polymers market is fuel efficiency and affordable manufacturing. Aromatic ketone polymers are compatible with the oils and chemicals with which they are used. They also resist the severe chemical environments of their application areas. PEEK is used engineering applications such as in the fabrication of pistons, pumps, high-performance liquid chromatography (HPLC) columns, valves, compressors and insulators, owing to its sturdiness.

PEEK is fully recyclable, melts at 343°C and is one of the few plastics compatible with ultra-high vacuum applications. PEEK is finding use in the medical sector for relatively small, yet remarkable applications. It is used as a biomaterial in medical implants such as spinal fusion devices and reinforcing rods. Another major application is in thermal insulation due to its capacity to withstand elevated temperatures. Presently, conventional metal material is being replaced by plastics and with a material such as aromatic ketone polymers, the shift to plastics is bound to happen. In the engineering industry, the demand for high performance polymers, the need for miniaturization as well as innovation is increasing exponentially.

For example, cellphone customers currently want a slim mobile phone that is extremely tough, durable and comes installed with excellent software and numerous applications. While plastic delivers a light, supple and cost-effective and easily adaptable material to the cell phone industry, the software and applications are entirely a different market.

PEEK is the principal type of aromatic ketone polymer that accounts for over 80% of the global aromatic ketone polymer production. PEEK finds application in automotive, aerospace, medical, electronics, electrical and industrial sectors.

Carbon fibre-reinforced (CFR-PEEK) composites are used in the manufacture of components used in hip replacement and joint replacement procedures. The scope of application areas for CFR-PEEK is anticipated to widen in the future. Aromatic ketone polymers are creating newer opportunities and will grow in popularity due to the ability of the materials to solve numerous challenging engineering-related problems.

SOURCE Plastemart