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20. May 2016

Recycled carbon fibre products make lightweight structures a cost effective reality



ELG Carbon Fibre has created the world's first and largest carbon fibre recovery plant at their UK facility. The company manages the entire recycling process starting with feedstock classification and preparation, through to carbon fibre reclamation and finally, staple carbon fibre conversion into a range of specialist products. These products are then reintroduced into the supply chain to support the use of cost effective recycled carbon fibre products in the manufacture of lightweight structures in the transport, electronic, coating and oil and gas sectors.

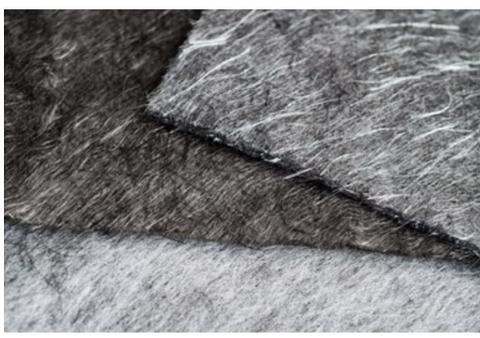
The Waste Cycle

Carbon fibre waste is generated at every stage of the supply chain from fibre manufacturing, conversion to intermediate products (weaving, prepregging) and the manufacture of finished parts. The majority of this waste originates from the Aerospace and Automotive sectors. It is critical that the industry moves towards a circular lifecycle loop for carbon fibre production and usage. By reusing carbon fibre waste, ELG Carbon Fibre is addressing a supply chain constraint that compromises many manufacturers seeking light-weighting strategies whilst delivering significant cost and environmental benefits.

**The Product Range**

Carbiso™ Milled CF comprises of milled fibres and is the highest volume market for the company. Ideally suited to thermoset and thermoplastic compounding, Carbiso™ Milled products are used extensively in subsea buoyancy applications for oil and gas exploration. The fibres are very conductive and provide antistatic properties in polymer compounds and coatings. Carbiso™ Chopped CF is available in standard lengths between 6-12mm and is suitable for thermoplastic compounding to provide improved strength and stiffness.

Carbiso™ Non-Woven Mats are highly drapeable fabrics that are suitable for the production of complex shapes and components. The reinforcements materials are available either as 100% carbon fibre mats (Carbiso™ M) or hybrids blended with thermoplastic fibres called Carbiso™ TM.

**The Future**

ELG Carbon Fibre views high volume transportation applications as the key emerging market that could best benefit from the company's products and services. If the vehicles of the future are manufactured from increased quantities of recycled carbon fibres, these lightweight structures will be more cost effective and in turn reduce CO2 emissions, increase compliance with fuel economy regulations and also support the European Union (EU) end-of-life-vehicle (ELV) directive.



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