

SGL Group launches unidirectional tapes and long-fiber-reinforced thermoplastics

- New products: thermoplastic carbon fiber tapes and long-fiber-reinforced thermoplastics based on glass and carbon fibers
- Opportunity to open up new applications in the industrial field, automotive and sports goods industries, as well as aerospace

Wiesbaden, October 5, 2015. Back in April, SGL Group – The Carbon Company – presented a new product in the form of thermoplastic organic sheets based on carbon and glass fibers. At this year’s Composites Europe trade show in Stuttgart, the company presented for the first time long-fiber-reinforced thermoplastics (LFRTs) and their application, using the example of a front end. In follow-up to the trade show, SGL Group started the commercialization of unidirectional tapes and the presented LFRTs.

UD tapes are composite materials based on unidirectional carbon fibers. The UD tapes can be manufactured using various thermoplastics according to customer requests. For example, a 50k carbon fiber (“SIGRAFIL® C T50-4.0/240-T140”) developed especially for this application is used as a reinforcing fiber. Appropriate sizing of these fibers ensures optimal bonding to the plastic, which leads to outstanding mechanical properties.

The LFRT materials are long-fiber-reinforced thermoplastic granules, such as those based on polyamides (PA) or polyphthalamide (PPA). Various glass fibers are used as reinforcing fibers, customized for each customer applications. 24k fibers (“SIGRAFIL® C T24-4.8/240-T140”) and 50k fibers (“SIGRAFIL® C T50-4.0/240-T140”) developed especially for this application are used as carbon-fiber reinforcement.

Product innovations for various industries

The benefits of the two materials lie in their high strength and rigidity coupled with low density. They also exhibit limited creep tendencies and excellent chemical resistance.

According to Andreas Wüllner, Head of the Composite Fibers and Materials Business Unit, “The new products are the ideal additions to our range of thermoplastic materials. The thermoplastics material set of SGL Group gives us the opportunity to work together with our customers in opening up new applications in the industrial field, the automotive and sports goods industries and aerospace.”

SGL Group – The Carbon Company

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Implementation of lightweight structures by means of material combinations

At the Composites Europe trade show, the application of the two new products has been demonstrated using the example of a front end. This component from the automotive industry was manufactured in an injection-molding process with the aid of the LFRT materials. In this procedure, areas under significant local stress are provided with targeted reinforcement by means of UD tapes. Both materials are machined together in a single process step.

Dr. Andreas Erber, responsible for thermoplastic materials at SGL Group, comments: “The combination of the different materials makes it possible to use the right structural design and the appropriate manufacturing process to implement structural elements at optimal lightweight costs.”

SGL Group supports its customers both in engineering and in choosing the materials and production processes for realizing additional fiber composite applications in large-scale production.

About SGL Group – The Carbon Company

SGL Group is one of the world’s leading manufacturers of carbon-based products and materials. It has a comprehensive portfolio ranging from carbon and graphite products to carbon fibers and composites. SGL Group’s core competencies are its expertise in high-temperature technology as well as its applications and engineering know-how gained over many years. These competencies enable the Company to make full use of its broad material base. SGL Group’s carbon-based materials combine several unique properties such as very good electrical and thermal conductivity, heat and corrosion resistance as well as high mechanical strength combined with low weight. Due to industrialization in the growth regions of Asia and Latin America and increased substitution of traditional with innovative materials, there is a growing demand for SGL Group’s high-performance materials and products. Products from SGL Group are used predominantly in the steel, aluminum, automotive and chemical industries as well as in the semiconductor, solar and LED sectors and in lithium-ion batteries. Carbon-based materials and products are also being used increasingly in the wind power, aerospace and defense industries.

With 42 production sites in Europe, North America and Asia as well as a service network covering more than 100 countries, SGL Group is a company with a global presence. In 2014, the Company’s workforce of around 6,300 employees generated sales of €1,336 million. The Company’s head office is located in Wiesbaden.

Further information on SGL Group can be found in SGL Group’s newsroom at www.sglgroup.com/press or at www.sglgroup.com.

Important note:

This press release may contain forward-looking statements based on the information currently available to us and on our current projections and assumptions. By nature, forward-looking statements involve known and unknown risks and uncertainties, as a consequence of which actual developments and results can deviate significantly from these forward-looking statements. Forward-looking statements are not to be understood as guarantees. Rather, future developments and results depend on a number of factors; they entail various risks and unanticipated circumstances and are based on assumptions which may prove to be inaccurate. These risks and uncertainties include, for example, unforeseeable changes in political, economic, legal, and business conditions, particularly relating to our main customer industries, such as electric steel production, to the competitive environment, to interest rate and exchange rate fluctuations, to technological developments, and to other risks and unanticipated circumstances. Other risks that in our opinion may arise include price developments, unexpected developments connected with

acquisitions and subsidiaries, and unforeseen risks associated with ongoing cost savings programs. SGL Group does not intend or assume any responsibility to revise or otherwise update these forward-looking statements.

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