

NFD EXPANDS HYBRID LONG GLASS+CARBON FIBER THERMOPLASTIC COMPOSITE MATERIALS LINE

SHANGHAI, CHINA – NFD, Inc., a global leader in long fiber thermoplastic (LFT) materials and technologies, announced that it has commercialized its innovative Hybrid long glass+carbon fiber composites in two additional thermoplastic polymer matrices. Their hybrid products, which combine long glass fiber and long carbon fiber together in a single, affordable ready-to-mold composite pellet, are now available in polypropylene (PP) and engineered thermoplastic polyurethane (ETPU), last year they were initially introduced in nylon 66 (PA 66).

Hybrid Long Glass+Carbon Fiber Thermoplastic Composites “NFD’s hybrid long glass+carbon fiber products nicely fill the performance and price gap that exists between long glass fiber and long carbon fiber reinforced thermoplastic composites,” said CEO of NFD. “Carbon fiber’s higher cost is the only real disadvantage preventing its wider use. By offering long glass and carbon fiber combinations we are able to significantly lower carbon fiber’s cost to entry barrier without compromising its high performance benefits.”

“After NFD introduced our nylon 66 long fiber hybrids last year we were able to quickly commercialize them in a sporting goods application,” said the CEO. “Long glass fiber couldn’t provide enough stiffness to eliminate a metal insert and long carbon fiber options were cost prohibitive. When they trialed one of our long glass+carbon fiber hybrids it was an instant success, it met their stiffness requirements at a price point that allowed them to take an all-composite version of their product to market.”

The performance spectrum achievable with long glass+carbon fiber hybrids is virtually infinite according to Ming Wang, technical director at NFD. “If durability is a concern we can formulate a product that has more long glass fiber to improve impact resistance, if higher load carrying ability is needed then we move to products that include additional long carbon fiber to increase stiffness and strength,” said him. “Hybrids really provide a lot more material options for product designers and engineers to better balance performance versus cost instead of having just all-glass or all-carbon reinforcement choices.

“The automotive sector has been adopting long glass fiber polypropylene for a couple of decades because it offers a significant weight reduction compared to traditional metal components,” said Ming Wang. “To meet increasing fuel economy regulations they still need to go lighter, but LFT-PP can’t get any stronger and jumping straight to carbon fiber is a bold economic step for a price-sensitive industry. Using our long glass+carbon hybrids we can incorporate carbon fiber in small increments to achieve the performance boost needed to switch more components from metal to plastic while keeping material costs reasonable.”

“In consumer and sporting goods markets carbon fiber has become synonymous with “high tech” and its use adds perceived value to products enabling many to demand a price premium,” said Ming Wang. “Including low levels of carbon fiber creates a legitimate “carbon fiber composite” and can be used to upsell products or differentiate them from competitors whose products might not be seen as high quality because they are made from lower performing materials.”

The addition of polypropylene and polyurethane grades gives NFD’s hybrid long glass+carbon fiber product line broader appeal and is further extendable to other engineering polymers as market demand develops. NFD’s single pellet solution for combining long glass and carbon fiber provides better fiber dispersion, which minimizes performance reductions due to fiber attrition during processing, than post-blending separate glass and carbon fiber pellets.

Ming Wang will deliver a presentation, “Hybrid Long Fiber Thermoplastic Composites A Perfect Blend of Performance and Cost,” during the advances in thermoplastic composites session at the upcoming Society of Plastics Engineers’ Automotive Composites Conference & Exhibition taking place in Novi, Mich. from Sept. 9-11, 2015.

As a fully integrated long fiber compounder, NFD provides product design and performance analysis assistance when converting applications to new materials as well as partnership opportunities during OEM new product development initiatives for which NFD can customize their LFT materials to meet specific performance criteria.

For more information on NFD’s LFT products and technologies, please call +86 021-51298656,, or visit their website at www.nfdpla.com.