

## **Victrex PEEK Material Data Now Available On Leading Modeling Database To Accelerate Application Developments**

Luxembourg – (June 17, 2014) – Three high performance thermoplastics from Victrex have been added to a leading material and modeling database called Digimat-MX to accelerate the application development process while helping to minimize component weight and costs. The material modeling data stored on the database helps engineers investigate and predict the behavior of composite materials. These are used, for example, to replace metal parts on commercial aircraft. The software suite from e-Xstream engineering, an MSC Software Company, now offers data on VICTREX® PEEK 150CA30, VICTREX PEEK 90HMF40, and VICTREX PEEK 150GL30.

Commercial aircraft manufacturers are particularly focused on finding solutions to replace metals to achieve weight reductions, greater assembly efficiencies, and lower operating and manufacturing costs. For these reasons, it is imperative that design engineers at these companies have quick access to pertinent information regarding a polymer's performance at various strains, temperatures, and other environmental conditions. Digimat, the leading nonlinear multi-scale material and structure modeling platform for the micromechanical modeling of composite materials and structures, now contains information on three Victrex grades to expedite the structural analysis and application development processes. The system is regarded as the optimal modeling platform that addresses engineering and end-user composite modeling needs while minimizing component weight, cost, and time-to-market.

### **Carbon-fiber PEEK grades: reliable metal replacement solutions**

VICTREX PEEK 150CA30 is typically used to replace metals such as aluminum, titanium and stainless steel. The 30% carbon fiber-filled material offers high stiffness and strength as well as very low flame, smoke, and toxicity (FST) emission ratings. Because it is a high flow plastic, the polymer makes processing on an injection molding machine easier which can lead to overall cost savings. The material is qualified at Boeing, Airbus, and also meets military specifications.

When looking to extend the performance envelope beyond VICTREX PEEK 150CA30, aerospace engineers have qualified VICTREX PEEK 90HMF40 to deliver higher mechanical properties. The high modulus, injection-molding material provides the highest strength and stiffness of any Victrex short fiber-filled grade available. Along with exceptional FST and chemical resistance properties, the polymer has a very high viscosity making it easier to fill complex part geometries. VICTREX PEEK 90HMF40, recently qualified by Airbus, delivers up to 100x longer fatigue life and up to 20% higher specific strength and stiffness than aluminum 7075-T6. This can result in more reliable components that require less maintenance over the lifetime of the aircraft.

**Glass-filled grade saves time, weight, and fuel**

VICTREX PEEK 150GL30 is a 30% glass fiber-filled polymer that offers a low viscosity to simplify the molding process. Besides the processing benefits, the polymer delivers a good balance between strength and ductility, is resistant to galvanic corrosion, and has excellent FST properties. The glass-filled material typically replaces polyamides, polyetherimides, and aluminum. It is qualified at Boeing and Airbus.

With weight reduction and assembly efficiency being top priorities, VICTREX PEEK 150GL30 was specified by Amphenol PCD for their clamping technologies that replace metal clamps aboard the Boeing 787 Dreamliner. Not only did a smarter design improve installation times by 30% per clamp, but a 20% weight reduction per clamp can help promote fuel efficiency gains.

**Data available for several industries**

VICTREX PEEK 150CA30, VICTREX PEEK 90HMF40, and VICTREX PEEK 150GL30 have also been specified in critical applications across various industries. The information on Digimat-MX can serve automotive, oil and gas, consumer electronics and industrial design engineers in order to speed up their development process. Victrex polymers have been qualified by industry-leaders for more than 35 years.

To learn more about the Victrex materials listed on Digimat, please visit [www.e-xstream.com](http://www.e-xstream.com) or contact a Victrex expert via [www.victrex.com](http://www.victrex.com).

**About Victrex**

Headquartered in the UK, Victrex is an innovative world leader in high performance polymer solutions such as VICTREX® PEEK, VICOTE® Coatings, APTIV® film and VICTREX Pipes™. These materials are used in a variety of markets and offer an exceptional combination of properties to help OEMs, designers and processors reach new levels of cost savings, quality, and performance. All Victrex material production comes under Victrex's ISO 9001:2008 quality registration. For its environmental management system at the British manufacturing site Victrex is certified according to ISO 14001:2004. The certificate covers the manufacture of VICTREX PAEK polymer compounded pellets consisting of polymers and fillers, from production of pellets to dispatch. VICTREX® is a registered trademark of Victrex Manufacturing Limited. VICTREX Pipes™ is a trademark of Victrex Manufacturing Limited. PEEK-ESD™, HT™, ST™ and WG™ are trademarks of Victrex plc. VICOTE® and APTIV® are registered trademarks of Victrex plc

**About e-Xstream Engineering**

Founded in 2003, [e-Xstream](http://www.e-xstream.com) is a software and engineering services company 100% focused on the multi-scale modeling of composite materials and structures. The company helps customers, material suppliers, and material users across many industries reduce the cost and time needed to engineer innovative materials and products using Digimat, the nonlinear multi-scale material and structure-modeling platform. Since September 2012, e-Xstream engineering is a wholly owned subsidiary of MSC Software. The e-Xstream engineering corporate logo and Digimat logo are trademarks or registered trademarks of e-Xstream engineering SA. More info: <http://www.e-Xstream.com>

**Press Contact:**

Mira Toth ([mira.toth@e-xstream.com](mailto:mira.toth@e-xstream.com))

[e-Xstream engineering](http://www.e-xstream.com)