

New Trinseo Material Grades Included in Digimat Enable Automotive Engineers to Meet Lightweighting Challenges

New material modeling data helps engineers investigate and predict behavior of composites materials

NEWPORT BEACH, CA--(August 4, 2015) – [MSC Software Corporation](#) today announced that a new version of [Digimat](#), the leading nonlinear multi-scale material and structural modelling platform from [e-Xstream engineering](#), an [MSC Software Company](#), features added grades from Trinseo (former Styron), a global materials company and manufacturer of plastics, latex and rubber. The material modelling data stored in the database helps engineers investigate and predict the behavior of composite materials. These are used, for example, to replace metal parts. Digimat now offers data on Trinseo grades PULSE™ 630GF, PULSE™ 979, VELVEX™ 5250 and the ENLITE™ PP LGF 6002 and ENLITE™ ABS Alloy LGF 6001 structural polymers.

“Digimat enables engineers to accurately predict mechanical behavior of parts made of our fibre filled thermoplastics as it takes the anisotropy due to the fibre orientation and the fibre length distribution into account. Therefore we have decided to characterise our fibre filled thermo plastics and make them available in the [Digimat-MX](#) database. Besides our short glass filled PULSE™ PC/ABS grades and our reinforced elastomeric resin VELVEX™, we have also added our recently launched ENLITE™ structural polymers. The latter are long glass fibre filled PP and ABS concentrates which can be diluted to a wide range of glass level in the end product. Especially when it comes to saving weight in modern vehicles, these materials play a key role in the replacement of metals,” said Gerhard Slik, Sr. Development Specialist, Application Engineering and Design Centre, Trinseo.

Due to the inherent relationship between vehicle mass and its fuel consumption, weight reduction of cars is a key area to address in order to meet the efficiency requirements. To overcome these challenges, design engineers need to have quick access to material information regarding performance at various strain rates, temperatures, and other key property measurements.

“[Digimat-MX](#) now contains information on Trinseo grades to address engineering and end-user composite modelling needs while minimizing component weight, cost, and time-to-market,” said Guillaume Boisot, Business Development Manager, e-Xstream engineering.

Description of grades:

- PULSE™ 630GF is a 13% short glass filled PC/ABS resin. It combines very high stiffness, low CLTE, excellent processability, good foam adhesion and long term heat stability. Its thermal resistance allows parts to meet the most severe sun load and temperature conditions in car interiors. The resin also allows for excellent post operations like stamping, transportation and stacking. Scrap generation during post processing is significantly below the levels obtained with glass filled SMA. To ensure low carbon emission characteristics and high thermal stability this product is based on Trinseo's unique

mass ABS technology. It is especially suitable for instrument panel retainers which are to be foamed, air ducts, etc.

- PULSE™ 979 is a high performance 10% glass filled PC/ABS resin. The high stiffness and easy processability makes it ideal for complicated parts which require a high dimensional stability. Typical applications are automotive instrument panels.
- VELVEX™ 5250 is a 25% short glass fibre filled elastomer/PP compound which provides a unique property balance of good stiffness, impact and high heat resistance in combination with pleasant soft touch, low CLTE and easy processing. Very uniform low gloss is achieved in combination with outstanding scratch and mar resistance. It is typically used in soft touch applications in automotive vehicle interiors like instrument panels, pillars and general trim components.
- ENLITE™ PP LGF 6002 is a 60% long glass fibre filled polypropylene concentrate. It can be diluted with PP in order to come to the required glass level in the end product. This material has proven to be an effective weight saver when it comes to metal replacement in automotive. Typical applications are instrument panel carriers, front end carriers, semi-structural parts like in thermo-plastic lift-gates, etc. This material exhibits a better impact behavior and better dimensional stability than short glass fibre reinforced PP thanks to the long-fibre technology.
- ENLITE™ ABS Alloy LGF 6001 is a 60% long glass fibre concentrate which is diluted with ABS to come to the required glass fibre content in the end product. It is meant for semi structural automotive parts. At temperatures higher than room temperature load requirements can be met more easily than with PP-LGF and therefore can give extra weight reduction to the component. Also it has better creep performance, heat stability and low CLTE. Besides metals it can also cost effectively replace glass filled Polyamide as moisture absorption is insignificant.

About e-Xstream engineering

Founded in 2003, [e-Xstream engineering](#), an MSC Software Company, 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 Corporation.

About Trinseo

Trinseo is a leading global materials company and manufacturer of plastics, latex and rubber, dedicated to collaborating with customers to deliver innovative and sustainable solutions. Trinseo's technology is used by customers in industries such as home appliances, automotive, building & construction, carpet, consumer electronics, consumer goods, electrical & lighting, medical, packaging, paper & paperboard, rubber goods and tires. Trinseo had approximately \$5.1 billion in revenue in 2014, with 19 manufacturing sites around the world, and approximately 2,100 employees. Formerly known as Styron, Trinseo completed its renaming process in the first quarter of 2015. More information can be found on www.trinseo.com

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