

Solvay adds new data for Amodel® PPA, Ryton® PPS and KetaSpire® PEEK grades to Digimat-MX material database

Bollate, Italy, Oct. 4, 2017 – Solvay, a leading global supplier of specialty polymers, has added data relative to new advanced Amodel® polyphthalamide (PPA), Ryton® polyphenylene sulfide (PPS), and KetaSpire® polyetheretherketone (PEEK) polymer grades to the Digimat-MX database tool of Digimat software from e-Xstream engineering, an MSC Software Company, to store anisotropic measurements and related micromechanical models.

“As a leading innovator in plastic to metal substitution, Solvay offers advanced computer modeling to its customers and is committed to help them effectively simulate the mechanical performance of its materials when designing lightweight fiber-reinforced thermoplastic composite parts,” said Michel Dubois, global technical expertise manager for Solvay’s Specialty Polymers Global Business Unit. *“The addition of these Solvay grades to the Digimat-MX library signals an important new phase to further support design and simulation experts seeking to replace metal parts with lightweight advanced polymers and composites.”*

The array of Solvay’s materials added to Digimat-MX are:

- Three grades of Amodel® PPA - AS-4133HS, DW-1140 and DW-1150. The AS-4133HS grade, mainly for automotive applications, is 33 percent glass fiber reinforced, lubricated and heat stabilized which allows fast cycle times and moldability in hot water conditioned molds. The DW-1140 and DW-1150 grades are both approved for potable water contact in the USA, France, Germany and the UK. They are respectively 40 and 50 percent glass fiber reinforced and are designed for high strength and stiffness. They also present good hydrolytic stability and excellent dimensional stability due to a combination of low water absorption and low coefficient of thermal expansion.
- Three glass fiber and mineral filled Ryton® PPS grades - R7-120, R7-190 and R7-220. In addition, Ryton® PPS R-4-200BL has been updated to meet specific customer temperature properties. Solvay’s Ryton® PPS family offers a unique combination of properties and a cost/performance balance unmatched by many other engineering thermoplastics and include thermal stability, dimensional stability, chemical resistance and inherent flame retardancy.
- KetaSpire® PEEK - KT-880 CF30 - a 30 percent carbon fiber reinforced grade which provides an outstanding level of mechanical performance even at temperatures approaching 300°C and one of the lowest coefficients of thermal expansion. It also offers excellent wear resistance, fatigue resistance and chemical resistance to organics, acids and bases.

Today, all our models provided in Digimat-MX library are mainly dedicated to quasi-static applications at different temperatures (elastoplastic and thermo-elastoplastic models). In a spirit of constant innovation and in response to customer requests, Solvay’s Computer-Aided Engineering team identified the need to extend models to high speed impact simulations (up to 100 sec-1). These elasto-viscoplastic models are expected to be added to e-Xstream’s Digimat-MX library soon, as well as other material models for quasi-static applications.

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Solvay

Solvay is a multi-specialty chemical company, committed to developing chemistry that addresses key societal challenges. Solvay innovates and partners with customers in diverse global end markets. Its products and solutions are used in planes, cars, smart and medical devices, batteries, in mineral and oil extraction, among many other applications promoting sustainability. Its light weighting materials enhance cleaner mobility, its formulations optimize the use of resources and its performance chemicals improve air and water quality. Solvay is headquartered in Brussels with around 27,000 employees in 58 countries. Net sales were € 10.9 billion in 2016, with 90% from activities where Solvay ranks among the world's top 3 leaders. Solvay SA ([SOLB.BE](#)) is listed on Euronext Brussels and Paris (Bloomberg: [SOLB.BB](#) - Reuters: [SOLB.BR](#)) and in the United States its shares (SOLVY) are traded through a level-1 ADR program.

Solvay Specialty Polymers

Solvay Specialty Polymers manufactures over 1500 products across 35 brands of high-performance polymers – fluoropolymers, fluoroelastomers, fluorinated fluids, semi-aromatic polyamides, sulfone polymers, ultra-high performance aromatic polymers, and high-barrier polymers – for use in Aerospace, Alternative Energy, Automotive, Healthcare, Membranes, Oil and Gas, Packaging, Plumbing, Semiconductors, Wire & Cable, and other industries. Learn more at www.solvayspecialtypolymers.com.

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 modelling of composite materials and structures. The company helps customers, material suppliers, and material users across many industries. They aim to reduce the cost and time needed to engineer innovative materials and products using Digimat, the nonlinear multi-scale material and structure modelling platform. Since September 2012, e-Xstream engineering is a subsidiary of MSC Software Corporation.

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