

Solvay launches “Smart Molecule” heat performance technology Technyl® REDx

LYON, France, Oct. 19, 2016 – Solvay, a world leader in polyamide-based performance materials, launched at K 2016 Technyl® REDx, a new heat performance polyamide 6.6 (PA66) integrating a unique “smart molecule” self-reinforcement technology. This innovative material, which builds on Solvay Engineering Plastics’ proven heat performance expertise, outperforms conventional specialty polymers in demanding thermal management systems, especially in the automotive industry.

“Today, more than 12 million engines use Technyl® heat performance technologies. Our materials enable car manufacturers to overcome engine downsizing constraints, such as greatly increased temperatures and pressures,” says Dr. James Mitchell, Global Automotive Market Director for Solvay Engineering Plastics. *“There is a need for new material solutions which resist the higher continuous heat stress of new generation engines without compromising on costs and performance.”*

To address this challenge, Solvay developed Technyl® REDx, a smart molecule material including a patented self-strengthening technology present in the polymer chain without affecting its structure. This brand new technology remains inactive during injection molding of car parts, leaving the material behaving like a high-flow PA66. During the vehicle’s use, the elevated temperatures activate the smart technology, leading to rapid cross-linking that boosts the mechanical properties far beyond their initial values.

Technyl® REDx can be processed at energy-saving mold temperatures below 100°C, allowing simple and cost efficient manufacturing. Ageing tests over 3,000 hours at 220°C demonstrate very high retention property as well as tensile property gain of more than 50 percent, without degradation of elongation at break.

“By providing long-term thermal stability, superior processability and excellent surface aspect, Technyl® REDx opens up completely new possibilities for high-heat applications with lower material and manufacturing costs,” explains Antoine Guiu, Technyl® REDx Project Leader. *“Intrinsically heat-friendly, Technyl® REDx eliminates the need for heat shields that may be required when using conventional materials.”*

Solvay’s Technyl® product range helps meet growing demand for downsized engines that continue to offer lightweighting performance and power output. Its metal replacement capabilities, offering fire, thermal and chemical protection, help the automotive industry to continuously reduce vehicle’s ecological footprint and CO2 emissions.

Solvay supports customers with a complete array of technical services designed to speed the time to market of new applications, from advanced material characterization to application validation. This offering includes 3D printing of PA6-based functional prototypes in Sinterline® PA6 powders, predictive simulation with MMI® Technyl® Design¹ as well as part testing at fully equipped APT® Technyl® Validation centers.

At K 2016 (Oct. 19-26 in Düsseldorf, Germany) Solvay will showcase this innovative Technyl® REDx technology in Hall 6, Booth C61.

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¹ Powered by Digimat™ from e-Xstream, an MSC Software company

About Solvay Engineering Plastics Business Unit

Solvay Engineering Plastics Business Unit is the global specialist in polyamide-based engineering plastics, with more than 60 years of experience in the development, manufacture and marketing of a complete range of high-performance materials under the Technyl® brand for demanding applications in automotive, consumer goods and electrical markets. With a growth strategy bolstered by six production sites worldwide, the Business Unit employs its expertise and innovation capabilities in order to serve the needs of its customers more closely through a global network of technical and R&D centers. Learn more about the Technyl® brand at www.technyl.com and follow us on Twitter @Technyl.

About Solvay

An international chemical and advanced materials company, **SOLVAY** assists its customers in innovating, developing and delivering high-value, sustainable products and solutions which consume less energy and reduce CO2 emissions, optimize the use of resources and improve the quality of life. Solvay serves diversified global end markets, including automotive and aerospace, consumer goods and healthcare, energy and environment, electricity and electronics, building and construction as well as industrial applications. Solvay is headquartered in Brussels with about 30,000 employees spread across 53 countries. It generated pro forma net sales of €12.4 billion in 2015, with 90% made from activities where it ranks among the world’s top 3 players. Solvay SA (**SOLB**) is listed on Euronext in Brussels and Paris (Bloomberg: **SOLB:BB** – Reuters: **SOLB.BR**).

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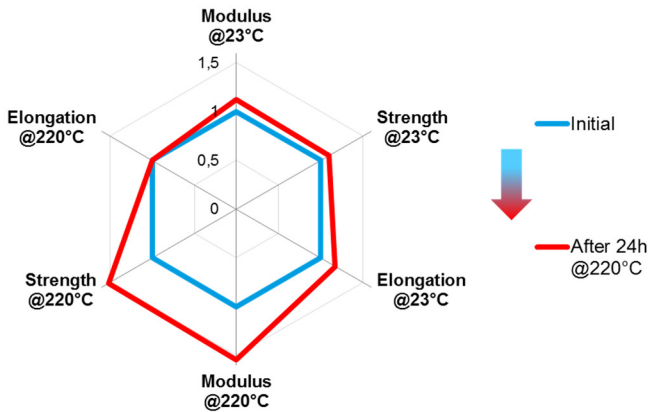
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Mechanical properties of Technyl® REDx tested after molding (initial) and after heat exposure at 220°C. (Graphic courtesy of Solvay)



‘Smart molecule’ technology makes Technyl® REDx the ideal solution for highly demanding Charge Air Coolers (Photo courtesy of Solvay)

