

Solvay's high-performance Ryton® PPS proves compatible with Ford's ULV 25 automatic transmission fluid

Alpharetta, Ga., May 16, 2017 – Solvay, a leading global supplier of specialty polymers, announced this week at the International CTI Symposium in Novi, Mich., that recent research confirms several grades of its Ryton® polyphenylene sulfide (PPS) polymer demonstrate strong compatibility with Ford's ultra-low viscosity ULV 25 automatic transmission fluid (ATF). The study builds on Solvay's continuing research aimed at demonstrating a growing number of its high-performance polymers are compatible with ATFs commonly used by industry-leading automakers.

In its latest study, Solvay focused on Ford's ATF ULV 25 (specification #WSS-M2C949-A), which is a free-flowing fluid that enables automatic transmissions to operate more efficiently. Four grades of Solvay's Ryton® PPS were evaluated under ISO and ASTM test methods to measure changes in mechanical properties after controlled exposure to Ford's ULV 25 ATF. The PPS grades tested were:

- **Ryton® R-4-200BL:** 40 percent glass fiber-reinforced compound providing enhanced strength and toughness
- **Ryton® XE-5030:** 30 percent glass fiber-reinforced compound offering high impact strength, high flow and excellent thermal stability
- **Ryton® XK-2340:** 40 percent glass fiber-reinforced compound delivering high strength and high flow for precision molding
- **Ryton® R-7-190:** Glass fiber and mineral filled compound providing enhanced strength and low mold maintenance.

Samples of Ryton® R-4-200BL, XE-5030 and XK2340 PPS were tested after set periods of exposure to ATF ULV 25 at 150°C (302°F) that extended as long as 3,000 hours. Samples of Ryton® R-7-190 PPS were tested after the same durations of exposure to Ford's ATF and at the same temperature, with the maximum exposure time reaching 1,500 hours.

In all cases, the materials categorically exhibited excellent resistance to Ford's ATF ULV 25, with minimal changes to tensile strength, tensile elongation at break or impact strength.

"Solvay offers the automotive industry an unmatched portfolio of specialty polymers and advanced lightweighting solutions to help automakers improve the efficiency of their transmissions and explore new possibilities for electrification of the drivetrain," said Brian Baleno, global automotive business manager for Solvay's Specialty Polymers business unit. *"This latest study shows that the strong chemical resistance of these four grades of Ryton® PPS qualifies them to join our growing portfolio of solutions for underhood applications that demand compatibility with a leading ultra-low viscosity ATF."*

Ryton® PPS is an ideal choice for automotive parts exposed to high temperatures, automotive fluids and mechanical stress. Potential applications in the electrified powertrain include transmission sensors, automatic control pistons, traction motor bobbins and solenoids among others. Ryton® PPS is also used in brake system components, as well as electrical/electronic devices that require high heat resistance, high dimensional stability, and corrosion resistance. Ryton® PPS is a lightweight alternative to metal and is resistant to corrosion by salts and all automotive fluids. Its ability to be molded into complex parts with tight tolerances and insert molding capability accommodates multi-component integration.

As the first PPS to be industrially commercialized over 40 years ago, Solvay's Ryton® PPS has long and proven history in the automotive industry. Today, the company's portfolio offers one of the broadest offerings of both linear and non-linear PPS materials in the world and Solvay specializes in helping customers understand which grade is best suited for their application.

® Ryton is a registered trademark of Solvay

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About 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, aromatic ultra-high performance polymers, high-barrier polymers and cross-linked high-performance compounds – 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 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.

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