

Solvay Ultra Polymers Promote Reliable Performance for New Cutting-Edge Optical Fibers and Cables from Optacore

Alpharetta, Ga., Apr. 4, 2016 – Solvay Specialty Polymers, a leading global supplier of high-performance thermoplastics, announced today that Optacore, a world-class supplier of advanced cabling, chose Solvay's KetaSpire® KT-851 NT polyetheretherketone (PEEK) and AvaSpire® AV-630 NT polyaryletherketone (PAEK) to coat two new OptaGuide HT™ optical fiber systems for high-speed data networking and demanding sensor applications in construction, oil and gas, and other extreme end-use environments. Both of Solvay's ultra-high performance, aromatic polyketones enabled Optacore to fabricate very thin coating layers without compromising the performance or reliability of its new fibers, thereby helping to lower manufacturing costs.

"The challenging end-use environments of the applications we've targeted for these advanced optical cabling systems require coating materials that are able to deliver uncompromising performance," said Igor Strekar, head of the Cable Division at Optacore. "After testing advanced polymers from several suppliers, Solvay's PEEK and PAEK aromatic polyketones stood out as the only materials that could help us provide the most tailored solutions meeting both the stringent performance and cost requirements needed for our applications."

Optacore's two specialty optical fiber mini cable designs are comprised of an outer coating of either KetaSpire® PEEK or AvaSpire® PAEK that covers a primary coating consisting of a polyimide, silicone, metal or carbon layer. Both Solvay materials provide excellent melt strength and the ability to be extruded into very thin 0.025-mm (0.001-in) coatings. In cable coating applications, Solvay's PEEK and PAEK impart superior resistance to fatigue, stress cracking and abrasion, as well as excellent strength and toughness. However, slight differences in each material's properties allow Optacore to offer customers more flexibility to meet specific cost and performance requirements.

Optacore has specified KetaSpire® KT-851 NT PEEK for their most demanding fiber coating applications where exceptional resistance to high stress and water is critical. Coatings made with Solvay's KetaSpire® PEEK provide reliable long-term performance up to 240° C (464° F) and excellent tolerance to occasional heat spikes up to 260° C (500° F).

By comparison, AvaSpire® AV-630 NT PAEK offers improved ductility and a very good combination of chemical resistance and long-term performance up to 200° C (392° F). This unique combination of properties enables coating designs that preserve fiber strength, improve shock absorbance and provide extra protection. Further, Optacore has leveraged AvaSpire® AV-630 NT PAEK to produce a tight buffer construction which permits smaller, lighter weight designs and a more flexible, crush-resistant cable.

The consistently high lot-to-lot purity and processing stability of KetaSpire® PEEK and AvaSpire® PAEK helped Optacore to minimize physical defects in its fiber cable, thereby lowering optical signal losses and improving overall performance in the end product. Both KetaSpire® and AvaSpire® aromatic polyketones deliver excellent performance at low and cryogenic temperatures and are easily extruded using standard equipment and processing conditions suitable for semi-crystalline materials.

“It was inevitable that a technology as versatile as optical fiber would eventually find applications in extreme environments, such as those that Optacore is targeting with its two new cutting-edge cable systems,” said Art Tigera, product manager for Ultra Polymers at Solvay Specialty Polymers. “Our ability to supply materials that enable this new level of performance helps innovative customers like Optacore to achieve even their most ambitious design goals.”

Performance tests of both Solvay grades prompted Optacore to specify KetaSpire® PEEK and AvaSpire® PAEK for other highly demanding optical fiber applications in medical, rail, aerospace, defense, nuclear and offshore applications.

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About Optacore

Optacore was established in Ljubljana, Slovenia in 2001 to offer broad expertise in optical fiber fabrication processes, especially in preform production. In the last decade Optacore has helped develop, produce, install and start up a wide range of fiber manufacturing lines in factories across the world.

Optacore is committed to further developing fiber fabrication technology with an emphasis on special fiber coatings and preform fabrication through specialized glass deposition processes. It is a private, limited liability company with most financing coming from sales and private investment. Optacore is independently owned and run and has several partnerships with R&D institutions and industry alike. In 2014, Optacore’s staff numbered 30 employees. Learn more at www.optacore.si.

About Solvay

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.

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 percent made from activities where it ranks among the world’s top 3 players. Solvay SA ([SOLB.BE](#)) is listed on Euronext in Brussels and Paris (Bloomberg: [SOLB.BB](#) - Reuters: [SOLB.BR](#)).

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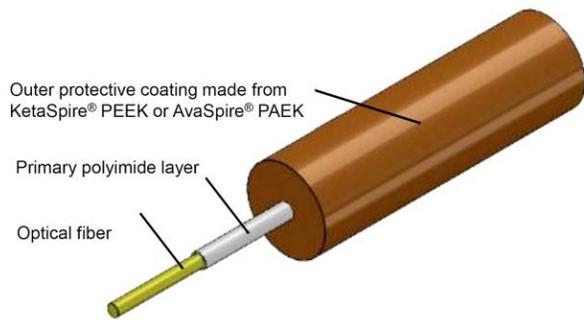
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Optacore chose two Solvay Ultra Polymers, KetaSpire® PEEK and AvaSpire® PAEK, to coat two new optical fiber systems for demanding applications in construction, oil and gas, and other extreme environments. Both Solvay materials enabled Optacore to fabricate very thin coating layers without compromising the performance or reliability of its new fibers. Photo courtesy of Solvay Specialty Polymers.