Performance and safety

Based in Columbus, Ohio, Hexion Inc. is a global leader in thermoset resins, serving the global wood and industrial markets through a broad range of thermoset technologies, specialty products and technical support for customers in a diverse range of applications and industries. The company notably is a leading player in the global phenolic resin market, boasting industry recognition not just for the performance of its products but also for its efforts in Health and Safety. It recently received the Health and Safety Award from the Composites UK Trade Association at the Association's Advanced Engineering Show in Birmingham for a new resin. "At Hexion, we understand that excellence in Environmental, Health and Safety performance is an integral part of our business and is essential for our long-term business success," says J.P. Aucoin, Vice President and General Manager, Phenolic Specialty Resins.

Hexion was formed in 2005 through the merger of Borden Chemical, Inc., Resolution Performance Products LLC (RPP) and Resolution Specialty Materials LLC (RSM), and the acquisition of Bakelite AG. The company has since continued to grow both organically and through acquisitions, including the purchasing of a joint venture that constructed a phenolic specialty resins manufacturing facility in China, which became operational in late 2014, the wax business of Rohm and Haas, the adhesives and resins business of Orica Ltd., and the resins and formaldehyde business of Arkema GmbH.

JP joined Borden Chemical, in 1997, as a Technical Sales Representative and has taken on progressively more responsibilities in positions at Hexion locations worldwide. After spells in Australia and the Netherlands, he relocated to Columbus in 2013 to assume a global leadership role overseeing Hexion's PSR (Phenolic Specialty Resins) business.

Phenolic resins are a type of synthetic thermosetting resin invented by Dr. Leo Baekeland in 1907; the material rose to fame under the Bakelite name, and was effectively the first plastic to go on sale. It continues to be broadly seen as the most versatile polymer yet invented, and whilst it was at the very start of the Age of Polymers, companies such as Hexion continue to

develop it into more and more applications, ranging from commodity construction materials to high technology applications in electronics and aerospace.

JP highlights their Cellobond™ FRP system of phenolic resins, catalysts and ancillaries, which is designed for the cost-effective manufacture of composites by conventional processes where high degree of fire safety, excellent mechanical properties or resistance to high temperatures is required. As such, they are particularly suited to structural and decorative applications in the mass transit, marine, offshore and construction industries. Where aesthetics are important, Hexion makes available an in-mould phenolic surface paste primer for post painting operations; additionally, decorative films or modified gel coat systems can be used.

There are various other global players in the market for phenolic resins, but JP believes Hexion stands out among them: "Unlike alternative composite systems, Hexion's phenolic resins are inherently flame retardant and do not require fillers, making them easier to process and lower in weight." He adds: "With more than 100 years of expertise and manufacturing facilities spanning five continents, Hexion can assure customers of a ready supply of high-quality phenolic specialty resins. All of our products are made to the same exacting standards worldwide. We also pride ourselves in operating in an ethical, safe, and environmentally responsible manner that protects our associates, customers, and communities while benefiting society, the economy, and the environment."

Hexion recently won a Health and Safety Award from the Composites UK Trade Association for its new series of ULEF (ultra-low emitting formaldehyde – less than 0.1%) phenolic resins. First introduced at the JEC World 2017 International Composites Event in Paris, these new resins are marketed under the Cellobond™ brand to the composite industry. The new resins achieve reduced emissions during composite manufacturing, particularly during open-mould processes such as hand lay-up while maintaining the reliable performance of phenolic resins. "In addition, it has 10 times less free formaldehyde than before," JP points out. "In fact, the level is below the threshold that would require it to be mentioned in the Material Safety Data Sheet. While our customers were already in compliance with regulations with the standard resin, we developed this resin to address possible negative perceptions in the market about PF resins and get ahead of the curve. This award is a validation of our promise to advance technologies and chemistries for the future by developing innovative, high-performing products that help our customers deliver efficient, renewable, environmentally preferable end-products."

HEXION

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