Arkema Presents Its Expanded Range of High-Performance Materials for Composites at JEC World 2020

From March 3 to 5 (Paris—Villepinte) at JEC World 2020, the Arkema group will showcase its offer of advanced materials and new solutions for increasingly effective composites. These innovations were developed through strategic partnerships to meet changing 3D production technologies and keep up with increasing demand for advanced composites in the construction, transportation, wind and sport sectors.

Rapid digital development is substantially changing the way in which products are designed and manufactured in many sectors. Always on the cutting edge of innovation, Arkema works with partners who are leaders in 3D creation and design to enrich its offer of high-performance materials, 3D Printing Solutions by Arkema, and develop new supply chains.

Structural Partnerships to Develop 3D Printing Composites

Arkema recently announced two new partnerships and is contributing to the development of completely integrated digital manufacturing platforms, thanks to strengthened collaboration around cutting-edge materials and innovative solutions:

- The partnership between Continuous Composites and Sartomer, a subsidiary of Arkema, aims to combine Continuous Composites’ patented Continuous Fiber 3D Printing (CF3D®) technology with Sartomer’s N3xDimension® photocure resins. Two conferences to present this new generation of composites will take place at the Arkema booth on March 3 at 2:00 p.m. and March 4 at 11:00 a.m.

- With its high-performance PEKK Kepstan® polymer, Arkema has partnered with 9T Labs (Zurich), a start-up specializing in 3D printing of thermoplastic composites. 9T Labs developed a technology that automates the manufacture of composites using additive manufacturing (AM), as well as advanced software algorithms. Two conferences to present this automated production technology will take place at the Arkema booth on March 3 at 3:00 p.m. and March 5 at 10:00 a.m.

Arkema: A Major Player in the Composites Market, a Unique Offering of Advanced Materials

Thanks to its expertise in the materials field, Arkema offers a unique range of thermoplastic matrices and photocure resins with exceptional properties that accelerate composite development. The Group also has additives to improve the performance of thermoset composites and adhesives for composite part assembly.
The flagship product from its range of thermoplastic matrices, *Elium*® resin—a liquid thermoplastic resin for making recyclable composite parts—uses the same conventional thermosetting resin transformation technologies with one major advantage: It can be transformed at room temperature. The mechanical properties of the parts obtained are comparable to thermosets.

**INNOVATION**

At JEC World 2020, Arkema is launching its new *Elium*® C445 resin for solid-surface applications. It is a liquid acrylic resin specifically adapted for room temperature casting of large objects. It is perfectly formulated to receive high mineral filler rates while maintaining high water, thermal shock and scratch resistance. The first achievements will be presented at our booth.

**Other Products:**
- Sartomer’s *Sarbio*® acrylate- and methacrylate-based advanced photocure and biosourced liquid resins
- Sartomer’s *M Cure*® products, reactive diluents and crosslinkers for 2K epoxy/amine systems

Arkema’s offer also includes a range of semi-finished products in the form of high-performance PEKK *Kepstan*®, PVDF *Kynar*® and PA 11 *Rilsan*® thermoplastic-resin-coated carbon-fiber unidirectional tapes (*Rilsan*® Matrix tapes):
- PVDF *Kynar*® thermoplastic resin has excellent mechanical properties, as well as strong corrosion and fire resistance;
- PEKK *Kepstan*® has exceptional impact, heat and aggressive chemical product resistance;
- *Rilsan*® biosourced high-performance polyamide provides durability, flexibility, and chemical- and mechanical-resistant solutions.

Additives and adhesives round out Arkema’s offer for the composite market, including:
- *Clearstrength*® impact modifiers
- *Nanostrength*® acrylic block copolymers
- *Graphistrength*® carbon nanotubes
- Ultra-fine *Orgasol*® polyamide powders
- *Luperox*® organic peroxides

**INNOVATIONS**
- New range of *Luperox*® Z390 and *Luperox*® Z350 peroxide for rapid polymerization in continuous processes.
- New range of *Retic*® products for chemical and solvent-free phthalate-based anchoring.

**Bostik’s structural adhesives:**
- **INNOVATIONS**
  - New range of *FIT* brand methacrylate structural adhesives
  - New range of *Born2Bond™* instant adhesives designed for precision bonding

To learn more about our offering of composite materials, please speak with the experts at our booth (V39 Hall 5A) and register online for a visitor badge:

A designer of materials and innovative solutions, Arkema shapes materials and creates new uses that accelerate customer performance. Our balanced business portfolio spans high-performance materials, industrial specialties and coating solutions. Our globally recognized brands are ranked among the leaders in the markets we serve. Reporting annual sales of €8.8 billion in 2018, we employ approximately 20,000 people worldwide and operate in close to 55 countries. We are committed to active engagement with all our stakeholders. Our research centers in North America, France and Asia concentrate on advances in bio-based products, new energies, water management, electronic solutions, lightweight materials and design, home efficiency and insulation. www.arkema.com

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