



SOLVAY

asking more from chemistry®



High-Performance Materials for
Composites

**SPECIALTY
POLYMERS**

Solvay Specialty Polymers offers a broad portfolio of high-performance products for use in the composites industry.

Thermoset Tougheners

Virantage® polyethersulfone (PESU) is a tough, high-temperature additive that enhances open-hole and after-impact compression in thermoset composites. Functionalized and non-functionalized micropowders are available.

Thermoplastic Matrix Resins

KetaSpire® polyetheretherketone (PEEK) combines outstanding chemical resistance and long-term thermal and mechanical stability with excellent strength, stiffness, and fatigue resistance.

AvaSpire® polyaryletherketone (PAEK) is a versatile family of polymers tailored to provide new and unique combinations of thermal, mechanical and chemical performance.

Torlon® polyamide-imide (PAI) offers the highest strength and stiffness of any thermoplastic up to 275 °C (527 °F). It has outstanding resistance to wear, creep, and chemicals – including strong acids and most organics – and is ideally suited for severe service environments.

Solef® polyvinylidene difluoride (PVDF) offers excellent toughness and resiliency up to 120 °C (248 °F) along with the characteristic stability of fluoropolymers when exposed to harsh thermal, chemical and UV environments.

Radel® polyphenylsulfone (PPSU) is an exceptionally damage-tolerant thermoplastic with a long history of success in structural and decorative aircraft cabin interior applications.

Amodel® polyphthalamide (PPA) is a high-temperature polyamide that offers higher thermal capabilities, better chemical resistance and lower moisture absorption than standard polyamides.

Ixef® polyarylamide (PARA) is a specialty polyamide that combines low and slow moisture uptake with high strength and stiffness and a smooth, resin-free surface.

Ryton® polyphenylene sulfide (PPS) offers exceptional chemical resistance at elevated temperatures, comparable to PEEK and fluoropolymers, along with excellent thermal properties for long-term (over 200 °C /392 °F) and short-term use (up to 260 °C/500 °F). It is inherently flame retardant and exhibits excellent dimensional stability under most environmental conditions.

Films

Ajedium™ Films made from fluoropolymers, engineering polymers and high-performance polymers are available in widths up to 1.5 meters (60 inches) with thickness capabilities from 6 microns to 60 mils (1.5 mm). Films made using PMP, PVDF, ECTFE and PEEK provide uniform release from composites and other substrates under pressure, heat or other demanding conditions. Adhesive films made from PSU, PPSU and PEI are also available.

Foams

Tegracore™ PPSU foams are super-tough cores with excellent mechanical and insulative properties, making them uniquely suited to replace honeycomb technology in structural and interior applications. They can be thermoformed into complex 3-D shapes that exhibit excellent FST performance, very low moisture and resin absorption, excellent resistance to aerospace fluids and mechanical properties to 200 °C (392 °F).

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