

Solvay Specialty Polymers Radel® R-7159 Polyphenylsulfone (PPSU)

Category : Polymer , Thermoplastic , Polyphenylsulfone (PPSU)

Material Notes:

Radel® R-7159 polyphenylsulfone (PPSU) was developed specifically for aircraft interior applications. The product complies with the FAA regulation 14CFR Part 25 Appendix F, offering vertical burn resistance, very low smoke generation and, through the use of proprietary additives, low heat release values in the Ohio State University (OSU) rate of heat release method. It also generates low flaming-mode toxic gas emissions. Features: Detergent Resistant; Flame Retardant; Good Processing Stability; Good Toughness; High Flow; Low Smoke Emission; Low Toxicity. Uses: Aerospace Applications; Aircraft Applications; Aircraft Interiors. Additional Properties: OSU Peak Heat Release Rate - FAR 25, AppF < 55.0 kW/m²; OSU Total Heat Release - FAR 25, AppF < 20.0 kW·min/m²; Smoke Density - FAR 25, AppF < 5.0 Ds; Toxic Gas Emissions - BSS 7239/ATS 1000/ABD 0031 < 10 ppm; Toxic Gas Emissions - BSS 7239/ATS 1000/ABD 0031 < 1 ppm; Toxic Gas Emissions - BSS 7239/ATS 1000/ABD 0031 < 1 ppm; Toxic Gas Emissions - BSS 7239/ATS 1000/ABD 0031 < 1 ppm; Toxic Gas Emissions - BSS 7239/ATS 1000/ABD 0031 < 1 ppm; Toxic Gas Emissions - BSS 7239/ATS 1000/ABD 0031 < 1 ppm; Vertical Burn - 60 second - FAR 25, AppF No Drip; Vertical Burn - 60 second - FAR 25, AppF 0.0 hr; Vertical Burn - 60 second - FAR 25, AppF < 7.62 cm. Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Radel-R-7159-Polyphenylsulfone-PPSU.php

Physical Properties	Metric	English	Comments
Density	1.35 g/cc	0.0488 lb/in ³	ASTM D792
Melt Flow	22 g/10 min @Load 2.16 kg, Temperature 380 °C	22 g/10 min @Load 4.76 lb, Temperature 716 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	74.5 MPa	10800 psi	ASTM D638
Elongation at Break	30 - 50 %	30 - 50 %	ASTM D638
Tensile Modulus	2.28 GPa	331 ksi	ASTM D638
Flexural Strength	101 MPa	14600 psi	ASTM D790
Flexural Modulus	2.48 GPa	360 ksi	ASTM D790
Izod Impact, Notched	1.30 J/cm	2.44 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	200 °C	392 °F	Unannealed; ASTM D648

Processing Properties	Metric	English	Comments
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Processing Properties	Metric	English	Comments
Middle Barrel Temperature	360 - 377 Â°C	680 - 711 Â°F	
Front Barrel Temperature	366 - 382 Â°C	691 - 720 Â°F	
Nozzle Temperature	360 - 377 Â°C	680 - 711 Â°F	
Melt Temperature	366 - 388 Â°C	691 - 730 Â°F	
Mold Temperature	107 - 163 Â°C	225 - 325 Â°F	
Drying Temperature	149 - 177 Â°C	300 - 351 Â°F	
	@Time 14400 sec	@Time 4.00 hour	

Descriptive Properties	Value	Comments
Agency Ratings	FAA FAR 25.853a; FAA FAR 25.853d; OSU 55/55	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Natural	
Form	Pellets	
Injection Rate	Fast	
Processing Technique	Injection Molding	
RoHS Compliance	RoHS Compliant	
Screw Compression Ratio	2.0:1.0 to 3.0:1.0	

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