

Westlake Plastics Radel® R 4400 Polyphenylsulfone For Medical Applications

Category : Polymer , Thermoplastic , Polyphenylsulfone (PPSU)

Material Notes:

Medical grade Radel R4400 resin offers exceptional hydrolytic stability, toughness, heat deflection temperature and resistance to stress cracking. This polymer also has excellent thermal stability, and impact strength over a wide temperature range. Recommended sterilization techniques for Radel R4400 include EtO gas, radiation, steam autoclaving, dry heat and cold sterilization. Radel® is a trade name of Solvay Advanced Polymers. Information provided by Westlake Plastics.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Westlake-Plastics-Radel-R-4400-Polyphenylsulfone-For-Medical-Applications.php

Physical Properties	Metric	English	Comments
Density	1.28 g/cc	0.0462 lb/in ³	ASTM D792
Water Absorption	0.35 %	0.35 %	ASTM D570; 24 hrs.

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	69.6 MPa	10100 psi	ASTM D638
Elongation at Break	60 %	60 %	ASTM D638
Elongation at Yield	7.2 %	7.2 %	ASTM D638
Tensile Modulus	2.34 GPa	340 ksi	ASTM D638
Flexural Yield Strength	97.2 MPa	14100 psi	ASTM D790
Flexural Modulus	2.54 GPa	368 ksi	ASTM D790
Compressive Yield Strength	97.97 MPa	14210 psi	ASTM D695
Compressive Modulus	1.99 GPa	288 ksi	ASTM D695
Izod Impact, Notched	2.67 J/cm	5.00 ft-lb/in	ASTM D256; Depends on pigment
Izod Impact, Unnotched	NB	NB	ASTM D256
Tensile Impact Strength	367 kJ/m ²	175 ft-lb/in ²	ASTM D1822

Thermal Properties	Metric	English	Comments
CTE, linear	55.8 µm/m-°C	31.0 µin/in-°F	ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Thermal Conductivity	0.349 W/m-K	2.42 BTU-in/hr-ft ² -°F	ASTM C177
Deflection Temperature at 1.8 MPa (264 psi)	190 °C	374 °F	ASTM D648

Thermal Properties	Metric	English	Comments
Flammability, UL94	@Thickness 0.787 mm	@Thickness 0.0310 in	

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