Veradel® 3000RP

Polyethersulfone

Solvay Specialty Polymers

Message:

Veradel® 3000RP hydroxyl-functionalized polyethersulfones (r-PESU) is an amorphous, high-temperature sulfone polymer featuring reactive end groups to enhance solubility for dissolving or dispersing into solutions and to improve adhesion to substrates when used as a coating.

Veradel® 3000RP r-PESU offers excellent toughness and outstanding hydrolytic resistance. It resists attack from steam, boiling water and mineral acids. Cast films or coatings of r-PESU are transparent and have additional desirable properties, including long term thermal stability, excellent metal adhesion and formability and inherent flame resistance.

Veradel [®] r-PESU polymers are available in two molecular weight regimes. Veradel [®] 3000RP is a high molecular weight sulfone polymer with a relatively low level of functionality while Veradel [®] 3600RP has a lower molecular weight sulfone polymer (approximately half the molecular weight of the Veradel [®] 3000RP) with roughly 3-5 times higher level of functionality. The differences in molecular weight results in highly varied levels of viscosity, when measured under similar conditions.

Typical applications include high-temperature coating formulations and specialty adhesives.

All Veradel® r-PESU polymers are produced at Solvay's state-of-the-art, world-scale facility in Panoli, India under ISO 9001:2000 and ISO 14001:2004 certified quality management systems.

General Information	
Features	Acid Resistant
	Flame Retardant
	Food Contact Acceptable
	Good Adhesion
	Good Chemical Resistance
	Good Creep Resistance
	Good Dimensional Stability
	Good Thermal Stability
	Good Toughness
	High Heat Resistance
	High Molecular Weight
	High Tensile Strength
	Hydrolysis Resistant
	Low Flow
	Medium Rigidity
Uses	Adhesives
	Cast Film
	Coating Applications
RoHS Compliance	Contact Manufacturer
Appearance	Transparent - Slight Yellow
Forms	Granules
	Powder
Processing Method	Cast Film

Coating

Solution Processing

Spraying

Physical	Nominal Value	Unit	Test Method
Solution Viscosity			Internal Method
1	700	mPa·s	
²	5000	mPa·s	
Moisture Content - Measured at time of			
packing	1.5	%	Internal Method
OH End Groups - Titration	50	µeq/g	Internal Method
Particle Size - D50 Sieve measurement	250	μm	Internal Method
Residual Solvent - Gas Chromatography	1.5	%	Internal Method
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2700	MPa	ASTM D638
Tensile Strength	90.0	MPa	ASTM D638
Tensile Elongation (Yield)	6.5	%	ASTM D638
Flexural Modulus	2600	MPa	ASTM D790
Flexural Strength	2.60	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	53	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	220	°C	DSC
NOTE			
	25% solution in DMAc at 40°C		
1.	(measured at 25% solids)		
	35% solution in DMAc at 40°C		
2.	(measured at 25% solids)		

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