

## Solvay Specialty Polymers PrimoSpire<sup>®</sup> PR-250 Polyphenylene, Self-Reinforced (SRP)

Category : Polymer , Thermoplastic

### Material Notes:

PrimoSpire<sup>®</sup> PR-250 resin is an injection molding grade of self-reinforced polyphenylene (SRP). PrimoSpire<sup>®</sup> SRP is an ultra-high performance amorphous, melt-processable polymer. The unique properties of this material are due primarily to the inherent rigid-rod structure. PrimoSpire<sup>®</sup> SRP is differentiated from other thermoplastics by outstanding mechanical properties without fiber reinforcement, scratch resistance, excellent solvent resistance and exceptional low temperature performance. In addition, PrimoSpire<sup>®</sup> SRP has great thermal stability, is non-combustible, has higher specific strength than many of the common structural materials and machines easily. Features: Ductile; Flame Retardant; Good Chemical Resistance; High Stiffness; High Strength; Scratch Resistant Uses: Aircraft Applications; Connectors; Electrical/Electronic Applications; Film; Gears; Housings; Medical/Healthcare Applications; Semiconductor Molding Compounds Information provided by Solvay Specialty Polymers.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Solvay-Specialty-Polymers-PrimoSpire-PR-250-Polyphenylene-Self-Reinforced-SRP.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-PrimoSpire-PR-250-Polyphenylene-Self-Reinforced-SRP.php)

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/in <sup>3</sup>	ASTM D792
Water Absorption	0.10 % @Time 86400 sec	0.10 % @Time 24.0 hour	ISO 62
Melt Flow	8.0 g/10 min @Load 5.00 kg, Temperature 380 °C	8.0 g/10 min @Load 11.0 lb, Temperature 716 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength	152 MPa	22000 psi	ASTM D638
Elongation at Break	10 %	10 %	ASTM D638
Tensile Modulus	5.52 GPa	801 ksi	ASTM D638
Flexural Strength	234 MPa	33900 psi	ASTM D790
Flexural Modulus	6.00 GPa	870 ksi	ASTM D790
Izod Impact, Notched	0.590 J/cm	1.11 ft-lb/in	ASTM D256
Izod Impact, Unnotched	16.0 J/cm	30.0 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	31.0 µm/m-°C	17.2 µin/in-°F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (104 psi)	151 Â°C	304 Â°F	Unannealed; ASTM D648
Glass Transition Temp, Tg	168 Â°C	334 Â°F	ASTM E1356
Oxygen Index	55 %	55 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 7.00e+15 ohm-cm	>= 7.00e+15 ohm-cm	ASTM D257
Dielectric Constant	3.01	3.01	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.11	3.11	
	@Frequency 1000 Hz	@Frequency 1000 Hz	ASTM D150
	3.12	3.12	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Dielectric Strength	20.0 kV/mm	508 kV/in	ASTM D149
Dissipation Factor	0.0070	0.0070	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
	0.0070	0.0070	
	@Frequency 1000 Hz	@Frequency 1000 Hz	ASTM D150
	0.0070	0.0070	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	310 Â°C	590 Â°F	
Middle Barrel Temperature	324 Â°C	615 Â°F	
Front Barrel Temperature	335 Â°C	635 Â°F	
Nozzle Temperature	341 Â°C	646 Â°F	
Melt Temperature	343 - 349 Â°C	649 - 660 Â°F	
Mold Temperature	129 - 146 Â°C	264 - 295 Â°F	
Drying Temperature	149 Â°C	300 Â°F	
	@Time 10800 sec	@Time 3.00 hour	

Descriptive Properties	Value	Comments
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Black; Natural	
Form	Pellets; Powder	
Injection Rate	Slow-Moderate	
Processing Technique	Compression Molding; Film Extrusion; Injection Molding	
	Machining; Profile Extrusion; Wire & Cable Extrusion	
RoHS Compliance	RoHS Compliant	

## Contact Songhan Plastic Technology Co.,Ltd.

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