

Solvay Specialty Polymers Parmax® 1200 Self-Reinforcing Polyethersulfone (discontinued **)

Category : Polymer , Thermoplastic , Polyethersulfone (PES)

Material Notes:

PARMAX 1200 self-reinforcing polymer (SRP) is an ultra-high performance amorphous, melt-processable engineering thermoplastic. The unique properties of this material are due primarily to the inherent rigid-rod structure. PARMAX SRP is differentiated from other thermoplastics by outstanding mechanical properties without fiber reinforcement, scratch resistance, great friction and wear properties, excellent solvent resistance, and exceptional low temperature performance. PARMAX 1200 SRP has great thermal and thermal-oxidative stability and it is noncombustible. The specific strength of PARMAX 1200 SRP exceeds many of the materials commonly encountered in structural applications. The resin also possesses excellent machinability permitting fabrication of parts such as fasteners to tolerances of less than one mil (0.025 mm). The excellent mechanical, chemical, thermal, and physical properties of PARMAX 1200 SRP make it the material of choice for a variety of applications including aircraft substructures, semiconductor components, bushings, bearings, and gears, light-weight vehicle suspensions systems, and medical tubing and other devices. PARMAX 1200 resin comes in natural or black pellets as extrusion grade – PARMAX 1200 EP (NT-001 and BK-002) and as Krum for compression molding – PARMAX 1200 CK (NT-001 and BK-002). Information provided by Solvay Advanced Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Parmax-1200-Self-Reinforcing-Polyethersulfone-nbspdiscontinued.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.21 g/cc	1.21 g/cc	ASTM D792
Water Absorption	0.20 %	0.20 %	Moisture Absorption at 24 hours; ASTM D570
Moisture Absorption at Equilibrium	0.70 %	0.70 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	64	64	ASTM D785
Tensile Strength at Break	207 MPa	30000 psi	ASTM D638
Tensile Modulus	8.27 GPa	1200 ksi	ASTM D638
Flexural Strength	310 MPa	45000 psi	ASTM D790
Flexural Modulus	8.27 GPa	1200 ksi	ASTM D790
Compressive Yield Strength	241 MPa	35000 psi	ASTM D695
Izod Impact, Notched	0.427 J/cm	0.800 ft-lb/in	ASTM D256
Izod Impact, Unnotched	10.7 J/cm	20.0 ft-lb/in	ASTM D4812

Thermal Properties	Metric	English	Comments
CTE, linear	30.6 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	17.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM E 831
	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	160 $^{\circ}\text{C}$	320 $^{\circ}\text{F}$	ASTM D648
Glass Transition Temp, Tg	158 $^{\circ}\text{C}$	316 $^{\circ}\text{F}$	ASTM E 1356
Flammability, UL94	V-0	V-0	0.01 in.
Oxygen Index	49 %	49 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.1	3.1	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

Descriptive Properties	Value	Comments
Pencil Hardness	7H	ASTM D3363
Smoke Emission, Ds	Max 1 at 1.5 min	ASTM E662
	Max 1 at 4 min	ASTM E662

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