

Polymer Resources PPX-FR3 Modified-PPO, V-1 Flame Retardant

Category : Polymer , Thermoplastic , Polyphenylene Ether/PPO , Polyphenylene Ether, Heat Resistant

Material Notes:

Modified-Polyphenylene Oxide, V-1 Flame Retardant, 265F HDT
 Features: • Bromine Free • Chlorine Free
 Process: Injection Molding
 Notes: All physical, mechanical and thermal testing conducted on 1/8-inch thick, un-pigmented, test samples.
 Information provided by Polymer Resources Corporation.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Polymer-Resources-PPX-FR3-Modified-PPO-V-1-Flame-Retardant.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.06 g/cc	1.06 g/cc	ASTM D792
Linear Mold Shrinkage	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ASTM D955
Melt Flow	4.0 - 9.0 g/10 min @Load 11.6 kg, Temperature 250 °C	4.0 - 9.0 g/10 min @Load 25.6 lb, Temperature 482 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	62.1 MPa	9000 psi	ASTM D638
Tensile Strength, Yield	64.1 MPa	9300 psi	ASTM D638
Elongation at Break	25 %	25 %	ASTM D638
Elongation at Yield	5.0 %	5.0 %	ASTM D638
Flexural Strength	89.6 MPa	13000 psi	ASTM D790
Flexural Modulus	2.41 GPa	350 ksi	ASTM D790
Izod Impact, Notched	1.07 J/cm @Temperature -30.0 °C	2.00 ft-lb/in @Temperature -22.0 °F	ASTM D256
	2.14 J/cm @Temperature 22.8 °C	4.00 ft-lb/in @Temperature 73.0 °F	ASTM D256
Charpy Impact, Notched	1.47 J/cm ² @Temperature 22.8 °C	7.00 ft-lb/in ² @Temperature 73.0 °F	ISO 179/1eA
Gardner Impact	16.9 J	12.5 ft-lb	ASTM D3029

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	129 °C	265 °F	ASTM D648

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	121 °C	250 °F	ASTM D648
Vicat Softening Point	135 °C	275 °F	120°C/h, 50 N; ASTM D1525
UL RTI, Electrical	65.0 °C	149 °F	UL 746
	@Thickness 0.749 mm	@Thickness 0.0295 in	
	110 °C	230 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	110 °C	230 °F	
	@Thickness 1.70 mm	@Thickness 0.0669 in	
UL RTI, Mechanical with Impact	110 °C	230 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
	65.0 °C	149 °F	
	@Thickness 0.749 mm	@Thickness 0.0295 in	
	110 °C	230 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical without Impact	110 °C	230 °F	UL 746
	@Thickness 1.70 mm	@Thickness 0.0669 in	
	110 °C	230 °F	
	@Thickness 3.00 mm	@Thickness 0.118 in	
	105 °C	221 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Flammability, UL94	105 °C	221 °F	UL 746
	@Thickness 1.70 mm	@Thickness 0.0669 in	
	105 °C	221 °F	
	@Thickness 3.00 mm	@Thickness 0.118 in	
	V-1	V-1	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Flammability, UL94	V-1	V-1	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 ohm-cm	1.00e+17 ohm-cm	ASTM D257
Dielectric Strength	24.0 kV/mm	610 kV/in	ASTM D149
Comparative Tracking Index	250 - 400 V	250 - 400 V	UL 746
Hot Wire Ignition, HWI	>= 120 sec	>= 120 sec	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	>= 120 sec	>= 120 sec	
	@Thickness 1.70 mm	@Thickness 0.0669 in	UL 746
	>= 120 sec	>= 120 sec	
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Amp Arc Ignition, HAI	60 - 120 arcs	60 - 120 arcs	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	60 - 120 arcs	60 - 120 arcs	
	@Thickness 1.70 mm	@Thickness 0.0669 in	UL 746
	60 - 120 arcs	60 - 120 arcs	
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Voltage Arc-Tracking Rate, HVTR	80.0 - 150 mm/min	3.15 - 5.91 in/min	UL 746

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	249 - 299 °C	480 - 570 °F	
Middle Barrel Temperature	260 - 304 °C	500 - 580 °F	
Front Barrel Temperature	271 - 310 °C	520 - 590 °F	
Melt Temperature	288 - 316 °C	550 - 600 °F	
Mold Temperature	71.1 - 98.9 °C	160 - 210 °F	
Drying Temperature	104 - 110 °C	220 - 230 °F	
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	

Descriptive Properties	Value	Comments
Vent	0.001	

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