

PRL PPX-FR3

Polyphenylene Ether + PS

Polymer Resources Ltd.

Message:

PRL PPX-FR3 is a Polyphenylene Ether + PS (PPE+PS) product. It can be processed by injection molding and is available in North America.

Characteristics include:

Flame Rated

RoHS Compliant

Flame Retardant

Halogen Free

Heat Resistant

General Information			
UL YellowCard	E113219-219255		
Additive	Flame Retardant		
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	Medium Heat Resistance		
	Self Extinguishing		
RoHS Compliance	RoHS Compliant		
UL File Number	E113219		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.06	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (250°C/11.6 kg)	4.0 to 9.0	g/10 min	ASTM D1238
Molding Shrinkage			ASTM D955
Flow : 3.18 mm	0.50 to 0.70	%	
Across Flow : 3.18 mm	0.50 to 0.70	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield, 3.18 mm	64.1	MPa	
Break, 3.18 mm	62.1	MPa	
Tensile Elongation			ASTM D638
Yield, 3.18 mm	5.0	%	
Break, 3.18 mm	25	%	
Flexural Modulus (3.18 mm)	2410	MPa	ASTM D790
Flexural Strength (3.18 mm)	89.6	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method

Charpy Notched Impact Strength (23°C)	15	kJ/m ²	ISO 179/1
Notched Izod Impact			
-30°C, 3.18 mm	110	J/m	ASTM D256
23°C, 3.18 mm	210	J/m	ASTM D256
23°C	15	kJ/m ²	ISO 180/1A
Gardner Impact (3.18 mm)	16.9	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.18 mm	129	°C	
1.8 MPa, Unannealed, 3.18 mm	121	°C	
Vicat Softening Temperature	135	°C	ASTM D1525 ¹
RTI Elec			UL 746
0.750 mm	65.0	°C	
1.50 mm	110	°C	
1.70 mm	110	°C	
3.00 mm	110	°C	
RTI Imp			UL 746
0.750 mm	65.0	°C	
1.50 mm	105	°C	
1.70 mm	105	°C	
3.00 mm	105	°C	
RTI Str			UL 746
0.750 mm	65.0	°C	
1.50 mm	110	°C	
1.70 mm	110	°C	
3.00 mm	110	°C	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+17	ohms · cm	ASTM D257
Dielectric Strength (3.00 mm)	24	kV/mm	ASTM D149
Comparative Tracking Index (CTI) (0.750 mm)	PLC 2		UL 746
High Amp Arc Ignition (HAI)			UL 746
1.50 mm	PLC 1		
1.70 mm	PLC 1		
3.00 mm	PLC 1		
High Voltage Arc Tracking Rate (HVTR) (0.750 mm)	PLC 3		UL 746
Hot-wire Ignition (HWI)			UL 746
1.50 mm	PLC 0		
1.70 mm	PLC 0		
3.00 mm	PLC 0		
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94

0.750 mm, BK	V-2
1.50 mm, ALL	V-1
1.70 mm, ALL	V-1
3.00 mm, ALL	V-1

Injection	Nominal Value	Unit
Drying Temperature	104 to 110	°C
Drying Time	3.0 to 4.0	hr
Drying Time, Maximum	8.0	hr
Rear Temperature	249 to 299	°C
Middle Temperature	260 to 304	°C
Front Temperature	271 to 310	°C
Processing (Melt) Temp	288 to 316	°C
Mold Temperature	71.1 to 98.9	°C

NOTE

1. Rate B (120°C/h), Loading 2 (50 N)

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