PRL ABS-FR-UV-(f2)

Acrylonitrile Butadiene Styrene

Polymer Resources Ltd.

UL IDES | Prospector

General			
Material Status	• Commercial: Active		
Availability	• North America		
Additive	• Flame Retardant	• UV Stabilizer	
Features	• Flame Retardant	• Good UV Resistance	• Self Extinguishing
RoHS Compliance	• RoHS Compliant		
UL File Number	• E113219		
Forms	• Pellets		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Specific Gravity	1.22	1.22 g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	4.0 to 16 g/10 min	4.0 to 16 g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.125 in (3.18 mm))	0.0050 to 0.0070 in/in	0.50 to 0.70 %	ASTM D955
Outdoor Suitability (All Colors)	f2	f2	UL 746C
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus (0.125 in (3.18 mm))	330000 psi	2280 MPa	ASTM D638
Tensile Strength			ASTM D638
Yield, 0.125 in (3.18 mm)	5900 psi	40.7 MPa	
Break, 0.125 in (3.18 mm)	5500 psi	37.9 MPa	
Tensile Elongation			ASTM D638
Yield, 0.125 in (3.18 mm)	2.2 %	2.2 %	
Break, 0.125 in (3.18 mm)	10 %	10 %	
Flexural Modulus (0.125 in (3.18 mm))	345000 psi	2380 MPa	ASTM D790
Flexural Strength (0.125 in (3.18 mm))	9000 psi	62.1 MPa	ASTM D790
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength (73°F (23°C))	9.0 ft·lb/in²	19 kJ/m²	ISO 179/1eA
Notched Izod Impact			
73°F (23°C), 0.125 in (3.18 mm)	4.0 ft·lb/in	210 J/m	ASTM D256
-22°F (-30°C)	3.0 ft·lb/in²	6.3 kJ/m²	ISO 180/1A
73°F (23°C)	9.0 ft·lb/in²	19 kJ/m²	ISO 180/1A
Gardner Impact (0.125 in (3.18 mm))	150 in·lb	16.9 J	ASTM D3029
Hardness	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Rockwell Hardness (R-Scale)	100	100	ASTM D785
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed, 0.125 in (3.18 mm)	190 °F	87.8 °C	
264 psi (1.8 MPa), Unannealed, 0.125 in (3.18 mm)	180 °F	82.2 °C	
Vicat Softening Temperature	195 °F	90.6 °C	ASTM D1525 [2]
RTI Elec			UL 746
0.0591 in (1.50 mm)	140 °F	60.0 °C	
0.118 in (3.00 mm)	140 °F	60.0 °C	
RTI Imp			UL 746
0.0591 in (1.50 mm)	140 °F	60.0 °C	
0.118 in (3.00 mm)	140 °F	60.0 °C	
RTI Str			UL 746
0.0591 in (1.50 mm)	140 °F	60.0 °C	
0.118 in (3.00 mm)	140 °F	60.0 °C	
Electrical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Volume Resistivity	1.0E+16 ohm·cm	1.0E+16 ohm·cm	ASTM D257

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The information presented on this datasheet was acquired by UL IDES from the producer of the material. UL IDES makes substantial efforts to assure the accuracy of this data. However, UL IDES assumes no responsibility for the data values and strongly encourages that upon final material selection, data points are validated with the material supplier.

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Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating			UL 94
0.0591 in (1.50 mm), ALL	V-0	V-0	
0.118 in (3.00 mm), ALL	• V-0 • 5VA	• V-0 • 5VA	

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	180 to 200 °F	82.2 to 93.3 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Drying Time, Maximum	8.0 hr	8.0 hr
Rear Temperature	340 to 360 °F	171 to 182 °C
Middle Temperature	390 to 410 °F	199 to 210 °C
Front Temperature	410 to 430 °F	210 to 221 °C
Processing (Melt) Temp	400 to 450 °F	204 to 232 °C
Mold Temperature	120 to 160 °F	48.9 to 71.1 °C

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] Rate B (120°C/h), Loading 2 (50 N)

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