

Polymer Resources ABS-GP1-[color]-UV General Purpose ABS, UV-stabilized

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Molded

Material Notes:

General Purpose Acrylonitrile Butadiene Styrene, UV-stabilized
 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-ABS-GP1-color-UV-General-Purpose-ABS-UV-stabilized.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.05 g/cc	1.05 g/cc	ASTM D792
Linear Mold Shrinkage	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ASTM D955
Melt Flow	3.0 - 14 g/10 min @Load 3.80 kg, Temperature 230 °C	3.0 - 14 g/10 min @Load 8.38 lb, Temperature 446 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	110	110	ASTM D785
Tensile Strength at Break	39.3 MPa	5700 psi	ASTM D638
Tensile Strength, Yield	42.1 MPa	6100 psi	ASTM D638
Elongation at Break	30 %	30 %	ASTM D638
Elongation at Yield	2.0 %	2.0 %	ASTM D638
Tensile Modulus	2.62 GPa	380 ksi	ASTM D638
Flexural Strength	64.1 MPa	9300 psi	ASTM D790
Flexural Modulus	2.41 GPa	350 ksi	ASTM D790
Izod Impact, Notched	0.534 J/cm @Temperature -40.0 °C	1.00 ft-lb/in @Temperature -40.0 °F	ASTM D256
	2.14 J/cm @Temperature 22.8 °C	4.00 ft-lb/in @Temperature 73.0 °F	ASTM D256
Izod Impact, Notched (ISO)	7.35 kJ/m² @Temperature -30.0 °C	3.50 ft-lb/in² @Temperature -22.0 °F	ISO 180/1A
	16.4 kJ/m² @Temperature 22.8 °C	7.80 ft-lb/in² @Temperature 73.0 °F	ISO 180/1A

Mechanical Properties	1.89 J/cm² Metric	9.00 ft-lb/in² English	Comments
	@Temperature 22.8 °C	@Temperature 73.0 °F	
Gardner Impact	22.6 J	16.7 ft-lb	ASTM D3029

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	87.8 °C	190 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	82.2 °C	180 °F	ASTM D648
Vicat Softening Point	98.9 °C	210 °F	120°C/h, 50 N; ASTM D1525
UL RTI, Electrical	60.0 °C	140 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	60.0 °C	140 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	60.0 °C	140 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	60.0 °C	140 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	60.0 °C	140 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	60.0 °C	140 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	HB	HB	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	ASTM D257

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	188 - 210 °C	370 - 410 °F	
Middle Barrel Temperature	204 - 227 °C	400 - 440 °F	

Front Barrel Temperature Processing Properties	215 - 238 °C Metric	420 - 450 °F English	Comments
Melt Temperature	232 - 260 °C	450 - 500 °F	
Mold Temperature	48.9 - 71.1 °C	120 - 160 °F	
Drying Temperature	82.2 - 93.3 °C	180 - 200 °F	
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	

Descriptive Properties	Value	Comments
Vent	0.001	

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