



Wednesday, August 30, 2023

PRL ABS-GP1-(color)-EP

Units English ▼

Polymer Resources Ltd. - Acrylonitrile Butadiene Styrene

Action	Legend (Open)
 	

General Information

General			
Material Status	• Commercial: Active		
Availability	• North America		
Features	• General Purpose	• Medium Impact Resistance	• Platable
Uses	• General Purpose		
RoHS Compliance	• RoHS Compliant		
UL File Number	• E113219		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.05		ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	3.0 to 14	g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.125 in)	5.0E-3 to 7.0E-3	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (0.125 in)	380000	psi	ASTM D638
Tensile Strength (Yield, 0.125 in)	7000	psi	ASTM D638
Tensile Strength (Break, 0.125 in)	6000	psi	ASTM D638
Tensile Elongation (Yield, 0.125 in)	2.0	%	ASTM D638
Tensile Elongation (Break, 0.125 in)	30	%	ASTM D638
Flexural Modulus (0.125 in)	350000	psi	ASTM D790
Flexural Strength (0.125 in)	9300	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	9.0	ft·lb/in ²	ISO 179/1eA
Notched Izod Impact			ASTM D256
-40°F, 0.125 in	1.0	ft·lb/in	
73°F, 0.125 in	4.0	ft·lb/in	
Notched Izod Impact Strength			ISO 180/1A
-22°F	3.5	ft·lb/in ²	
73°F	7.8	ft·lb/in ²	
Gardner Impact (0.125 in)	200	in·lb	ASTM D3029
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	110		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed, 0.125 in)	190	°F	ASTM D648
Deflection Temperature Under Load (264 psi, Unannealed, 0.125 in)	180	°F	ASTM D648
Vicat Softening Temperature	210	°F	ASTM D1525 ²
RTI Elec			UL 746B
0.06 in	140	°F	
0.12 in	140	°F	
RTI Imp			UL 746B
0.06 in	140	°F	
0.12 in	140	°F	
RTI Str			UL 746B
0.06 in	140	°F	
0.12 in	140	°F	
Electrical	Nominal Value	Unit	Test Method

Volume Resistivity	1.0E+16 ohms·cm	ASTM D257
Flammability	Nominal Value	Unit
Flame Rating		Test Method
0.06 in, ALL	HB	UL 94
0.12 in, ALL	HB	

Processing Information		
Injection	Nominal Value	Unit
Drying Temperature	180 to 200	°F
Drying Time	3.0 to 4.0	hr
Drying Time, Maximum	8.0	hr
Rear Temperature	370 to 410	°F
Middle Temperature	400 to 440	°F
Front Temperature	420 to 460	°F
Processing (Melt) Temp	425 to 500	°F
Mold Temperature	120 to 160	°F

Notes
¹ Typical properties: these are not to be construed as specifications.
² Rate B (120°C/h), Loading 2 (50 N)

The information contained herein is based on our best knowledge and we believe it to be true and accurate. Please read all statements and recommendations in conjunction with our conditions of sale, which apply to all goods sold by us. Statements concerning possible uses of materials described herein are not to be construed as recommendations for use of such materials in the infringement of any patent or copyright. Lot data is available upon request. The user of this material must make their own evaluations to determine the suitability of this material from a technical as well as health, safety and environmental standpoint. This data is not intended for specification purposes.