

Polymer Resources



Classic® Engineering Plastic Compounds

Wednesday, August 30, 2023

PRL ABS-GP-HH

Polymer Resources Ltd. - Acrylonitrile Butadiene Styrene

Units English

Action

Legend (Open)



General Information

General

Material Status	<ul style="list-style-type: none"> Commercial: Active
Availability	<ul style="list-style-type: none"> North America
Features	<ul style="list-style-type: none"> General Purpose High Heat Resistance
RoHS Compliance	<ul style="list-style-type: none"> RoHS Compliant
Forms	<ul style="list-style-type: none"> Pellets
Processing Method	<ul style="list-style-type: none"> 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)	1.0 to 5.0	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)	320000	psi	ASTM D638
Tensile Strength (Yield, 0.125 in)	6500	psi	ASTM D638
Tensile Strength (Break, 0.125 in)	6100	psi	ASTM D638
Tensile Elongation (Yield, 0.125 in)	4.5	%	ASTM D638
Tensile Elongation (Break, 0.125 in)	25	%	ASTM D638
Flexural Modulus (0.125 in)	360000	psi	ASTM D790
Flexural Strength (0.125 in)	11500	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	5.0	ft-lb/in ²	ISO 179
Notched Izod Impact			ASTM D256
-40°F, 0.125 in	1.0	ft-lb/in	
73°F, 0.125 in	3.5	ft-lb/in	
Notched Izod Impact Strength			ISO 180/1A
-40°F	3.0	ft-lb/in ²	
73°F	6.2	ft-lb/in ²	
Gardner Impact (0.125 in)	200	in-lb	ASTM D3029
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	112		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed, 0.125 in)	215	°F	ASTM D648
Deflection Temperature Under Load (264 psi, Unannealed, 0.125 in)	195	°F	ASTM D648
Vicat Softening Temperature	240	°F	ASTM D1525 ²

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	180 to 200	°F
Drying Time	2.0 to 5.0	hr
Drying Time, Maximum	8.0	hr
Rear Temperature	380 to 410	°F
Middle Temperature	420 to 460	°F
Front Temperature	440 to 490	°F
Processing (Melt) Temp	450 to 525	°F
Mold Temperature	120 to 180	°F

Notes

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

2 Rate B (120°C/h), Loading 1 (10 N)

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