



Monday, October 4, 2021

PRL ABS-FRUnits English ▼

Polymer Resources Ltd. - Acrylonitrile Butadiene Styrene

Action**Legend** ([Open](#))**General Information****General**

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

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.22		ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	4.0 to 16	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)	330000	psi	ASTM D638
Tensile Strength (Yield, 0.125 in)	5900	psi	ASTM D638
Tensile Strength (Break, 0.125 in)	5500	psi	ASTM D638
Tensile Elongation (Yield, 0.125 in)	2.2	%	ASTM D638
Tensile Elongation (Break, 0.125 in)	10	%	ASTM D638
Flexural Modulus (0.125 in)	345000	psi	ASTM D790
Flexural Strength (0.125 in)	9000	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 (73°F, 0.125 in)	4.0	ft·lb/in	ASTM D256
Notched Izod Impact Strength			ISO 180/1A
-22°F	3.0	ft·lb/in ²	
73°F	9.0	ft·lb/in ²	
Gardner Impact (0.125 in)	150	in·lb	ASTM D3029
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	100		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	195	°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	Test Method
Flame Rating			UL 94

0.06 in, ALL		V-0
0.12 in, ALL	•	V-0
	•	5VA

Processing Information		
Injection	Nominal Value	Unit
Drying Temperature	180 to 200	°F
Drying Time	2.0 to 4.0	hr
Drying Time, Maximum	8.0	hr
Rear Temperature	340 to 360	°F
Middle Temperature	390 to 410	°F
Front Temperature	410 to 430	°F
Processing (Melt) Temp	400 to 450	°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)

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