



Wednesday, August 30, 2023

PRL PEI-G40

Polymer Resources Ltd. - Polyether Imide

Units

English ▼

Action	Legend (Open)

General Information

General		
Material Status	• Commercial: Active	
Availability	• North America	
Filler / Reinforcement	• Glass Fiber, 40% Filler by Weight	
Additive	• Flame Retardant	
Features	• Flame Retardant	• High Heat Resistance
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	1.60		ASTM D792
Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)	3.0 to 18	g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.125 in)	1.0E-3 to 3.0E-3	in/in	ASTM D955
Water Absorption (24 hr)	0.13	%	ASTM D570
Water Absorption (Equilibrium, 73°F)	0.90	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (0.125 in)	1.69E+6	psi	ASTM D638
Tensile Strength (Yield, 0.125 in)	25600	psi	ASTM D638
Tensile Strength (Break, 0.125 in)	25600	psi	ASTM D638
Tensile Elongation (Break, 0.125 in)	2.5	%	ASTM D638
Flexural Modulus (0.125 in)	1.69E+6	psi	ASTM D790
Flexural Strength (0.125 in)	34000	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (0.125 in)	1.8	ft·lb/in	ASTM D256
Unnotched Izod Impact (73°F, 0.125 in)	8.0	ft·lb/in	ASTM D4812
Reverse Notch Izod Impact (73°F, 0.125 in)	9.0	ft·lb/in	ASTM D256
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	114		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed, 0.125 in)	418	°F	ASTM D648
Deflection Temperature Under Load (264 psi, Unannealed, 0.125 in)	413	°F	ASTM D648
Vicat Softening Temperature	450	°F	ASTM D1525 ²
CLTE - Flow (-4 to 302°F)	8.0E-6	in/in/°F	ASTM E831
RTI Elec			UL 746B
0.06 in	221	°F	
0.12 in	221	°F	
RTI Imp			UL 746B
0.06 in	221	°F	
0.12 in	221	°F	
RTI Str			UL 746B
0.06 in	221	°F	
0.12 in	221	°F	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.5E+16	ohms·cm	ASTM D257
Dielectric Strength (0.0625 in, in Oil)	600	V/mil	ASTM D149

Dielectric Constant (1 kHz)	3.70	ASTM D150
Dissipation Factor (1 kHz)	2.0E-3	ASTM D150
Flammability	Nominal Value	Unit
Flame Rating		UL 94
0.06 in	V-0	
0.12 in	V-0	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	290 to 300	°F
Drying Time	4.0 to 6.0	hr
Drying Time, Maximum	8.0	hr
Rear Temperature	630 to 750	°F
Middle Temperature	640 to 750	°F
Front Temperature	650 to 750	°F
Processing (Melt) Temp	640 to 750	°F
Mold Temperature	225 to 350	°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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