

PRL PEI-GP1-TFE5

(PEI+PTFE)

Polymer Resources, Ltd.

Processing/Physical Characteristics	Value	Unit	Test Standard
ASTM Data			
Mold Shrinkage, MD	0.006	mm/mm	ASTM D 955
Mold Shrinkage, TD	0.006	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	3270	MPa	ISO 527
Flexural modulus, 23°C	3030	MPa	ISO 178
Charpy notched impact strength, +23°C	10.5	kJ/m ²	ISO 179/1eA
Izod notched impact strength, +23°C	8.83	kJ/m ²	ISO 180/1A
Izod notched impact strength	7.36	kJ/m ²	ISO 180/1A
Temperature	-30	°C	-

ASTM Data			
Tensile Modulus	3447	MPa	ASTM D 638
Tensile Strength at Yield	103	MPa	ASTM D 638
Tensile Strength at Break	103	MPa	ASTM D 638
Elongation at Yield	5	%	ASTM D 638
Elongation at Break	40	%	ASTM D 638
Flexural Modulus	3378	MPa	ASTM D 790
Flexural Strength	145	MPa	ASTM D 790
Rockwell Hardness	M110	-	ASTM D 785
Izod Impact notched, 1/8 in	53.4	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	53.4	J/m	ASTM D 256
Temperature	-30	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Vicat softening temperature, B	214	°C	ISO 306
Coeff. of linear therm. expansion, parallel	40	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	40	E-6/K	ISO 11359-1/-2
ASTM Data			
Coefficient of Thermal Expansion, MD	39.6	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	39.6	E-6/K	ASTM D 696
DTUL @ 66 psi	204	°C	ASTM D 648
DTUL @ 264 psi	196	°C	ASTM D 648
Vicat Temperature	218	°C	ASTM D 1525

Other properties	Value	Unit	Test Standard
Water absorption	1.1	%	Sim. to ISO 62
Humidity absorption	0.6	%	Sim. to ISO 62
Density	1270	kg/m ³	ISO 1183
Density	1270	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	143 - 149	°C	-
Pre-drying - Time	4 - 6	h	-
Melt temperature	338 - 399	°C	-
Mold temperature	107 - 177	°C	-
Zone 1	332 - 399	°C	-
Zone 2	338 - 399	°C	-
Zone 3	343 - 399	°C	-

Characteristics

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Processing

Injection Molding

Special Characteristics

Flame retardant, Heat stabilized or stable to heat

Delivery form

Pellets

Regional Availability

North America

Additives

Lubricants, Flame retarding agent