

Idemitsu Kosan TARFLON™ G1910

Glass fiber reinforced

Polycarbonate is known for its high impact resistance, good transparency and heat resistance, and superb precision and electrical properties.

Physical Properties	Metric	English	Comments
Density	1.27 g/cc	0.0459 lb/in ³	ISO 1183(JIS K7112)
Moisture Absorption	0.150 % @Time 86400 sec	0.150 % @Time 24.0 hour	50% RH; ISO 62(JIS K7209)
Linear Mold Shrinkage, Flow	0.0040 cm/cm @Thickness 2.00 mm	0.0040 in/in @Thickness 0.0787 in	Idemitsu Method
Linear Mold Shrinkage, Transverse	0.0060 cm/cm	0.0060 in/in	Idemitsu Method
Spiral Flow	21.0 cm @Thickness 2.00 mm	8.27 in @Thickness 0.0787 in	Width:10mm. Cylinder: 240°C/Mold: 40°C. Inj.Pressure: 125 MPa.; Idemitsu Method
Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	65	65	ISO 2039-2 (JIS K7202-2)
Tensile Strength, Yield	80.0 MPa	11600 psi	ISO 527-1,2 (JIS K7161, 7162)
Elongation at Break	5.0 %	5.0 %	Nominal; ISO 527-1,2 (JIS K7161, 7162)
Flexural Strength	120 MPa	17400 psi	ISO 178 (JIS K7171)
Flexural Modulus	3.50 GPa	508 ksi	ISO 178 (JIS K7171)
Charpy Impact, Notched	0.800 J/cm ² @Temperature 23.0 °C	3.81 ft-lb/in ² @Temperature 73.4 °F	ISO 179-1(JIS K7111)
Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+16 ohm-cm	>= 1.00e+16 ohm-cm	ASTM D257

Dielectric Constant	2.95 @Frequency 1e+6 Hz	2.95 @Frequency 1e+6 Hz	IEC 60250
Dielectric Strength	>= 22.0 kV/mm	>= 559 kV/in	IEC 60243-1 (JIS C2110)
Dissipation Factor	0.0090 @Frequency 1e+6 Hz	0.0090 @Frequency 1e+6 Hz	IEC 60250

Thermal Properties	Metric	English	Comments
CTE, linear	45.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	25.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-2

Deflection Temperature at 1.8 MPa (264 psi) 142 $^\circ\text{C}$ 288 $^\circ\text{F}$ ISO 75-1,2 (JIS K7191-1,2)

Flammability, UL94	HB @Thickness 0.700 mm	HB @Thickness 0.0276 in	
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Processing Properties	Metric	English	Comments
Melt Temperature	260 - 300 $^\circ\text{C}$	500 - 572 $^\circ\text{F}$	Cylinder Temperature
	<= 320 $^\circ\text{C}$	<= 608 $^\circ\text{F}$	Max Cylinder Temperature
Mold Temperature	80.0 - 120 $^\circ\text{C}$	176 - 248 $^\circ\text{F}$	
Drying Temperature	120 $^\circ\text{C}$ @Time 18000 - 28800 sec	248 $^\circ\text{F}$ @Time 5.00 - 8.00 hour	