

Idemitsu Kosan TARFLON™ 1700

Superior mold-release. Ice color.

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	1.20 g/cc	0.0434 lb/in ³	ISO 1183(JIS K7112)
Moisture Absorption	0.230 % @Time 86400 sec	0.230 % @Time 24.0 hour	50% RH; ISO 62(JIS K7209)
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 2.00 mm	0.0050 - 0.0070 in/in @Thickness 0.0787 in	Idemitsu Method
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm @Thickness 2.00 mm	0.0050 - 0.0070 in/in @Thickness 0.0787 in	Idemitsu Method
Melt Flow	32.4 g/10 min @Load 1.20 kg, Temperature 300 °C	32.4 g/10 min @Load 2.65 lb, Temperature 572 °F	ISO 1133 (JIS K7210)

Spiral Flow	25.0 cm @Thickness 2.00 mm	9.84 in @Thickness 0.0787 in	Width:10mm. Cylinder: 240°C/Mold: 40°C. Inj.Pressure: 125 MPa.; Idemitsu Method
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Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	50	50	ISO 2039-2 (JIS K7202-2)
Hardness, Rockwell R	120	120	ISO 2039-2 (JIS K7202-2)
Tensile Strength, Yield	65.0 MPa	9430 psi	ISO 527-1,2 (JIS K7161, 7162)
Elongation at Break	95 %	95 %	Nominal; ISO 527-1,2 (JIS K7161, 7162)
Flexural Strength	90.0 MPa	13100 psi	ISO 178 (JIS K7171)
Flexural Modulus	2.30 GPa	334 ksi	ISO 178 (JIS K7171)
Charpy Impact, Notched	4.00 J/cm ²	19.0 ft-lb/in ²	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	2.85 @Frequency 1e+6 Hz	2.85 @Frequency 1e+6 Hz	IEC 60250
	2.91 @Frequency 100 Hz	2.91 @Frequency 100 Hz	IEC 60250
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1(JIS C2110)
Dissipation Factor	0.00066 @Frequency 100 Hz	0.00066 @Frequency 100 Hz	IEC 60250

	0.0092 @Frequency 1e+6 Hz	0.0092 @Frequency 1e+6 Hz	IEC 60250
Arc Resistance	60 - 120 sec	60 - 120 sec	ASTM D495
Comparative Tracking Index	250 - 400 V	250 - 400 V	UL746A

Thermal Properties	Metric	English	Comments
CTE, linear	65.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	36.1 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	125 $^\circ\text{C}$	257 $^\circ\text{F}$	ISO 75-1,2(JIS K7191-1,2)
UL RTI, Electrical	130 $^\circ\text{C}$ @Thickness 0.360 mm	266 $^\circ\text{F}$ @Thickness 0.0142 in	UL746B
UL RTI, Mechanical with Impact	125 $^\circ\text{C}$ @Thickness 0.360 mm	257 $^\circ\text{F}$ @Thickness 0.0142 in	UL746B
UL RTI, Mechanical without Impact	130 $^\circ\text{C}$ @Thickness 0.360 mm	266 $^\circ\text{F}$ @Thickness 0.0142 in	UL746B
Flammability, UL94	V-2 @Thickness 0.360 - 2.40 mm	V-2 @Thickness 0.0142 - 0.0945 in	

Optical Properties	Metric	English	Comments
Transmission, Visible	85 - 89 %	85 - 89 %	Total Luminous; ISO 13468-1 (JIS K7361-1)

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	