

Teknor Apex TELCAR® 1000-92 Thermoplastic Elastomer

Category : Polymer , Thermoplastic , Elastomer, TPE , Thermoplastic Elastomer, Melt-Processible Rubber

Material Notes:

Information provided by Teknor Apex Company

Order this product through the following link:

http://www.lookpolymers.com/polymer_Teknor-Apex-TELCAR-1000-92-Thermoplastic-Elastomer.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.920 g/cc	0.920 g/cc	+/- 0.02; ASTM D792
Linear Mold Shrinkage	0.011 cm/cm	0.011 in/in	24 hours; ASTM D955
	0.013 cm/cm	0.013 in/in	After 30 min. at 180°F; ASTM D955
Melt Flow	2.0 g/10 min	2.0 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 230 °C	@Load 4.76 lb, Temperature 446 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	42	42	10 second delay. +/- 3; ASTM D2240
Tensile Strength at Break	7.58 MPa	1100 psi	20"/min Type 1; ASTM D412
Tensile Strength, Yield	10.3 MPa	1490 psi	ASTM D412
	10.992 MPa	1594.3 psi	107% Retention, Air Oven Aged 42 days at 121°C
Elongation at Break	11.30 MPa	1639 psi	110% Retention, Air Oven Aged 42 days at 110°C
	140 %	140 %	
	181.5 %	181.5 %	33% Retention, Air Oven Aged 42 days at 110°C
Elongation at Yield	203.5 %	203.5 %	37% Retention, Air Oven Aged 42 days at 121°C
	550 %	550 %	ASTM D412
	16 %	16 %	ASTM D412
100% Modulus	0.00841 GPa	1.22 ksi	ASTM D412
300% Modulus	0.008522 GPa	1.236 ksi	ASTM D412
Flexural Modulus	0.2899 GPa	42.05 ksi	ASTM D790
Izod Impact, Notched	NB	NB	Heat Aging Performance 1000 hrs at 120°C

Mechanical Properties	Metric	English	Comments
	@Temperature -40.0 °C	@Temperature -40.0 °F	Heat Aging Performance 1000 hrs at 120°C
Gardner Impact	33.9 J @Temperature -30.0 °C	25.0 ft-lb @Temperature -22.0 °F	
Tensile Impact Strength	>= 470 kJ/m ²	>= 224 ft-lb/in ²	
Impact Test	22.6 J @Temperature -40.0 °C	16.7 ft-lb @Temperature -40.0 °F	At Yield. Deflection: 693 mils, Force: 425 lbs (Instrumented Impact, 9000 in/min)
	39.5 J @Temperature -40.0 °C	29.2 ft-lb @Temperature -40.0 °F	At Break. Deflection: 1359 mils, Failure Mode: Ductile (Instrumented Impact 9000 in/min)
Tear Strength	63.8 kN/m	364 pli	Die C; ASTM D1004

Thermal Properties	Metric	English	Comments
CTE, linear	119 µm/m-°C @Temperature -30.0 - 30.0 °C	66.1 µin/in-°F @Temperature -22.0 - 86.0 °F	
CTE, linear, Transverse to Flow	117 µm/m-°C @Temperature -30.0 - 30.0 °C	65.0 µin/in-°F @Temperature -22.0 - 86.0 °F	
Deflection Temperature at 0.46 MPa (66 psi)	62.5 °C	145 °F	
Deflection Temperature at 1.8 MPa (264 psi)	40.7 °C	105 °F	
Glass Transition Temp, Tg	-55.9 °C	-68.6 °F	
Flame Spread	767 mm/min	30.2 in/min	Pass: Burn Rate- Max 100; FMVSS 302

Descriptive Properties	Value	Comments
Fogging	92, 3 hours at 100°C, Haake buchler	

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