Advanced Polymer Alloys DuraGrip™ 6160 BK Melt Processable Elastomer

Category : Polymer , Thermoplastic , Elastomer, TPE , Thermoplastic Olefinic Elastomer (TPO)

Material Notes:

DuraGrip™ 6160BK is designed to be a special purpose Melt Processable Elastomer (MPE) that is easy to use in injection molding and extrusion processes. DGR 6160BK has an excellent soft touch feel and will Bond to Nylon, ABS, PC, PC/ABS. DuraGrip™ 6100 series is hygroscopic and requires drying prior to use.Information provided by Advanced Polymer Alloys

Order this product through the following link:
http://www.lookpolymers.com/polymer_Advanced-Polymer-Alloys-DuraGrip-6160-BK-Melt-Processable-Elastomer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.07 g/cc	1.07 g/cc	ASTM D471; ISO 2781
Viscosity	354000 cP @Shear Rate 300 1/s, Temperature 190 °C	354000 cP @Shear Rate 300 1/s, Temperature 374 °F	ASTM D3835
Linear Mold Shrinkage	0.015 cm/cm	0.015 in/in	
	0.016 cm/cm	0.016 in/in	
Linear Mold Shrinkage, Transverse	0.00 cm/cm	0.00 in/in	
	0.0050 cm/cm	0.0050 in/in	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	58	58	Time of 5 seconds; ASTM D2240; ISO 48
Tensile Strength, Ultimate	6.62 MPa	960 psi	ASTM D412; ISO 37
	7.3457 MPa	1065.4 psi	After 7 days at 70°C; ASTM D412 ISO 37
	9.267 MPa	1344 psi	After 7 days at 100oC; ASTM D412 ISO 37
Elongation at Break	350 %	350 %	ASTM D412; ISO 37
	364 %	364 %	After 7 days at 70°C; ASTM D412 ISO 37
	413 %	413 %	After 7 days at 100°C; ASTM D412 ISO 37
Modulus of Elasticity	0.00210 GPa	0.304 ksi	After 7 days at 100°C; ASTM D412 ISO 37
	0.00225 GPa	0.326 ksi	After 7 days at 70°C; ASTM D412 ISO 37
100% Modulus	0.00221 GPa	0.320 ksi	ASTM D412; ISO 37

Mechanical Properties	Metric	English	Comments
Graves Tear Strength	29.3 kN/m @Temperature 23.9 °C	168 pli @Temperature 75.0 °F	Die C; ASTM D624
Taber Abrasion, mg/1000 Cycles	189	189	Cs-17 Wheel, 1000 g Load; ASTM D3389
Compression Set	21 %	21 %	After 22 Hr at 75°F (24°C); ASTM D395; ISO 815
	82 % @Temperature 70.0 °C	82 % @Temperature 158 °F	22 hrs.; ASTM D395; ISO 815
	91 % @Temperature 100 °C	91 % @Temperature 212 °F	22 hrs.; ASTM D395; ISO 815
Tensile Set	4.1 %	4.1 %	100% Tension; ASTM D412

Thermal Properties	Metric	English	Comments
Brittleness Temperature	-65.0 °C	-85.0 °F	ASTM D746; ISO 812

Processing Properties	Metric	English	Comments
Processing Temperature	227 °C	440 °F	
Rear Barrel Temperature	204 - 221 °C	400 - 430 °F	
Middle Barrel Temperature	216 - 227 °C	420 - 440 °F	
Front Barrel Temperature	227 - 238 °C	440 - 460 °F	
Nozzle Temperature	227 - 249 °C	440 - 480 °F	
Melt Temperature	227 - 254 °C	440 - 490 °F	
Mold Temperature	43.3 - 54.4 °C	110 - 130 °F	
Injection Pressure	1.03 - 3.45 MPa	150 - 500 psi	
Cycle Time - Injection	0.50 - 2.0 sec	0.50 - 2.0 sec	boost
Screw Speed	25 - 100 rpm	25 - 100 rpm	
Cure Time	0.167 - 0.333 min	0.00278 - 0.00556 hour	Cooling Time

Descriptive Properties	Value	Comments
Fluid Resistance - Volume Change, % (ASTM D471)	12	After 7 Days in ASTM Oil No.1 at 212°F (100°C)
	2	After 7 Days in Water at 212°F (100°C)

Descriptive Properties	Value	Comments
	52	After 7 Days in ASTM Ref. Fuel No. B at 75°F (24°C)
	74	After 7 Days in IRM 903 Oil No.3 at 212°F (100°C)

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