

## Advanced Polymer Alloys DuraGrip™ 6170 BK Melt Processable Elastomer

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

### Material Notes:

DuraGrip™ 6170BK is designed to be a special purpose Melt Processable Elastomer (MPE) that is easy to use in injection molding and extrusion processes. DGR 6170BK 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-6170-BK-Melt-Processable-Elastomer.php](http://www.lookpolymers.com/polymer_Advanced-Polymer-Alloys-DuraGrip-6170-BK-Melt-Processable-Elastomer.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.10 g/cc	1.10 g/cc	ASTM D471; ISO 2781
Viscosity	420000 cP	420000 cP	ASTM D3835
	@Shear Rate 300 1/s, Temperature 190 °C	@Shear Rate 300 1/s, Temperature 374 °F	
Linear Mold Shrinkage	0.0090 cm/cm	0.0090 in/in	
	0.013 cm/cm	0.013 in/in	
Linear Mold Shrinkage, Transverse	0.00 cm/cm	0.00 in/in	
	0.0040 cm/cm	0.0040 in/in	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	65	65	Time of 5 seconds; ASTM D2240; ISO 48
Tensile Strength, Ultimate	9.24 MPa	1340 psi	ASTM D412; ISO 37
	12.380 MPa	1795.6 psi	After 7 days at 70°C; ASTM D412 ISO 37
	13.027 MPa	1889.4 psi	After 7 days at 100°C; ASTM D412 ISO 37
Elongation at Break	420 %	420 %	ASTM D412; ISO 37
	453.6 %	453.6 %	After 7 days at 70°C; ASTM D412 ISO 37
	495.6 %	495.6 %	After 7 days at 100°C; ASTM D412 ISO 37
Modulus of Elasticity	0.00268 GPa	0.388 ksi	After 7 days at 100°C; ASTM D412 ISO 37
	0.00290 GPa	0.420 ksi	After 7 days at 70°C; ASTM D412 ISO 37
100% Modulus	0.00276 GPa	0.400 ksi	ASTM D412; ISO 37

Mechanical Properties	Metric	English	Comments
Graves Tear Strength	37.0 kN/m @Temperature 23.9 °C	21.0 psi @Temperature 75.0 °F	Die C; ASTM D624
Taber Abrasion, mg/1000 Cycles	87	87	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
	95 % @Temperature 100 °C	95 % @Temperature 212 °F	22 hrs.; ASTM D395; ISO 815
Tensile Set	5.0 %	5.0 %	100% Tension; ASTM D412

Thermal Properties	Metric	English	Comments
Brittleness Temperature	-67.8 °C	-90.0 °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)	1	After 7 Days in Water at 212°F (100°C)
	42	After 7 Days in IRM 903 Oil No.3 at 212°F (100°C)

Descriptive Properties	49 Value	After 7 Days in ASTM Ref. Fuel No. B at 75°F (24°C) Comments
	5	After 7 Days in ASTM Oil No.1 at 212°F (100°C)

## Contact Songhan Plastic Technology Co.,Ltd.

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