

## Advanced Polymer Alloys DuraGrip™ DGR 6030 NC/BK Thermoplastic Elastomer (TPE)

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

### Material Notes:

DuraGrip® DGR 6030 NC/BK are designed to be general purpose Thermoplastic Elastomers (TPE) that are easy to use in injection molding and extrusion processes. DGR 6030 NC/BK have an excellent soft touch feel, will bond to olefinics, and are available in FDA compliant formulations. DuraGrip® is not hygroscopic and under normal conditions does not require drying. Information provided by Advanced Polymer Alloys

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Advanced-Polymer-Alloys-DuraGrip-DGR-6030-NCBK-Thermoplastic-Elastomer-TPE.php](http://www.lookpolymers.com/polymer_Advanced-Polymer-Alloys-DuraGrip-DGR-6030-NCBK-Thermoplastic-Elastomer-TPE.php)

Physical Properties	Metric	English	Comments
Specific Gravity	0.990 g/cc	0.990 g/cc	ASTM D471; ISO 2781
Viscosity	129000 cP	129000 cP	ASTM D3835
	@Shear Rate 300 1/s, Temperature 190 °C	@Shear Rate 300 1/s, Temperature 374 °F	
Linear Mold Shrinkage	0.022 cm/cm	0.022 in/in	
	@Thickness 3.17 mm	@Thickness 0.125 in	
	0.028 cm/cm	0.028 in/in	
	@Thickness 1.59 mm	@Thickness 0.0625 in	
Linear Mold Shrinkage, Transverse	0.013 cm/cm	0.013 in/in	
	@Thickness 1.59 mm	@Thickness 0.0625 in	
	0.016 cm/cm	0.016 in/in	
	@Thickness 3.17 mm	@Thickness 0.125 in	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	33	33	Time of 5 seconds; ASTM D2240; ISO 48
Tensile Strength, Ultimate	3.9841 MPa	577.85 psi	After 7 days at 100oC; ASTM D412 ISO 37
	4.2468 MPa	615.95 psi	After 7 days at 70°C; ASTM D412 ISO 37
	4.38 MPa	635 psi	ASTM D412; ISO 37
Elongation at Break	485 %	485 %	After 7 days at 100°C; ASTM D412 ISO 37
	500 %	500 %	ASTM D412; ISO 37

Mechanical Properties	Metric	English	Comments
			at 70°C; ASTM D412 ISO 37
Modulus of Elasticity	0.000986 GPa	0.143 ksi	After 7 days at 70°C; ASTM D412 ISO 37
	0.00103 GPa	0.150 ksi	After 7 days at 100°C; ASTM D412 ISO 37
100% Modulus	0.00105 GPa	0.153 ksi	ASTM D412; ISO 37
Graves Tear Strength	14.2 kN/m	81.0 pli	Die C; ASTM D624
	@Temperature 23.9 °C	@Temperature 75.0 °F	
Taber Abrasion, mg/1000 Cycles	140	140	Cs-17 Wheel, 1000 g Load; ASTM D3389
Compression Set	10 %	10 %	After 22 Hr at 75°F (24°C); ASTM D395; ISO 815
	33 %	33 %	22 hrs.; ASTM D395; ISO 815
	@Temperature 70.0 °C	@Temperature 158 °F	
	53 %	53 %	22 hrs.; ASTM D395; ISO 815
	@Temperature 100 °C	@Temperature 212 °F	
Tensile Set	5.0 %	5.0 %	100% Tension; ASTM D412

Thermal Properties	Metric	English	Comments
Brittleness Temperature	-67.2 °C	-89.0 °F	ASTM D746; ISO 812

Processing Properties	Metric	English	Comments
Processing Temperature	204 °C	400 °F	
Rear Barrel Temperature	188 - 199 °C	370 - 390 °F	
Middle Barrel Temperature	199 - 210 °C	390 - 410 °F	
Front Barrel Temperature	216 - 227 °C	420 - 440 °F	
Nozzle Temperature	204 - 221 °C	400 - 430 °F	
Melt Temperature	199 - 221 °C	390 - 430 °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 Processing Properties	0.167 - 0.333 min Metric	0.00278 - 0.00556 hour English	Cooling Time Comments
<b>Descriptive Properties</b>	<b>Value</b>	<b>Comments</b>	
Fluid Resistance - Volume Change, % (ASTM D471)	22	After 7 Days in ASTM Ref. Fuel No. B at 75°F (24°C)	
	6	After 7 Days in ASTM Oil No.1 at 212°F (100°C)	
	70	After 7 Days in IRM 903 Oil No.3 at 212°F (100°C)	
	-9	After 7 Days in Water at 212°F (100°C)	

## Contact Songhan Plastic Technology Co.,Ltd.

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