

Technical Data Sheet

DuraGrip DGR-6170BKBLK

Thermoplastic Elastomer

Product Description

DuraGrip 6170BK is designed to be a special purpose Melt Processible 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.

Processing Method	Extrusion; Injection Molding
Attribute	Good Adhesion
Forms	Pellets

Typical Properties	Nominal Value	Units	Test Method
Physical			
Density	1.1	g/cm ³	ISO 1183
Density - Specific Gravity	1.1	g/cm ³	ASTM D792
Change in Volume			
(in Reference Fuel B, 24 °C, 168 hr)	49	%	ASTM D471
(in Reference Fuel B, 24 °C, 168 hr)	49	%	ISO 1817
(in ASTM #1 Oil, 70 °C, 168 hr)	5.0	%	ISO 1817
(in ASTM #1 Oil, 70 °C, 168 hr)	5.0	%	ASTM D471
(in IRM 903 Oil, 70 °C, 168 hr)	42	%	ISO 1817
(in IRM 903 Oil, 70 °C, 168 hr)	42	%	ASTM D471
(in Water, 70 °C, 168 hr)	1.0	%	ASTM D471
(in Water, 70 °C, 168 hr)	1.0	%	ISO 1817
Melt Viscosity, (190 °C, 300 sec ⁻¹)	420	Pa·s	ASTM D3835
Mechanical			
Change in Ultimate Elongation in Air			
(70 °C, 168 hr)	8.0	%	ASTM D573
(100 °C, 168 hr)	18	%	ASTM D573
Tensile Stress at 100%			
(23 °C)	2.76	MPa	ISO 37

Change in Tensile Strength in Air		
(70 °C, 168 hr)	34 %	ASTM D573
(70 °C, 168 hr)	34 %	ISO 188
(70 °C, 168 hr, 100%)	5.0 %	ISO 188
(70 °C, 168 hr, 100%)	5.0 %	ASTM D573
(100 °C, 168 hr)	41 %	ASTM D573
(100 °C, 168 hr)	41 %	ISO 188
(100 °C, 168 hr, 100%)	-3.0 %	ISO 188
(100 °C, 168 hr, 100%)	-3.0 %	ASTM D573
Tensile Set, (100%)	5 %	ASTM D412
Tensile Strength at Yield, (23 °C)	9.24 MPa	ASTM D412
Tensile Stress at Yield, (23 °C)	9.24 MPa	ISO 37
Change in Tensile Strain at Break		
(168 hr, 70 °C)	8.0 %	ISO 1817
(168 hr, 100 °C)	18 %	ISO 1817
Tensile Strain at Break, (23 °C)	420 %	ISO 37
Tensile Elongation at Break	420 %	ASTM D412
Tear Strength, (24 °C, Die C)	37.0 kN/m	ASTM D624
Impact		
Ductile/Brittle Transition Temperature	-67.8 °C	ASTM D746
Hardness		
Shore Hardness, (Shore A, 5 sec)	65	ISO 868
Durometer Hardness, (Shore A, 5 sec)	65	ASTM D2240
Additional Information		
Compression Set		
(24 °C, 22 hr, Method B)	21 %	ASTM D395
(100 °C, 22 hr, Method B)	95 %	ASTM D395
(24 °C, 22 hr)	21 %	ISO 815
(100 °C, 22 hr)	95 %	ISO 815
(70 °C, 22 hr, Method B)	82 %	ASTM D395
(70 °C, 22 hr)	82 %	ISO 815
Taber Abrasion Resistance, (CS-17 Wheel, 1.0E+6 g, 1000 Cycles)	87.0 mg	ASTM D1044

Injection Parameters	Nominal Value	Units
Drying Time	3	hr
Drying Temperature	66	°C
Nozzle Temperature	227 to 249	°C
Screw Speed	50 to 150	rpm
Processing (Melt) Temp	227 to 254	°C
Front Temperature	227 to 238	°C
Middle Temperature	216 to 227	°C
Rear Temperature	204 to 221	°C
Mold Temperature	43 to 54	°C
Injection Pressure	2.76 to 5.52	MPa