

DuraGrip® DGR 6185BK

Thermoplastic Elastomer

Advanced Polymer Alloys

Message:

DuraGrip® 6185BK is a black, special purpose Melt Processible Elastomer (MPE) that is easy to use in injection molding and extrusion processes. DGR 6185BK has an excellent soft touch feel and will Bond to varying Nylons, ABS, PC, PC/ABS. DuraGrip™ 6100 series is hygroscopic and requires drying prior to use.

General Information			
Features	Good adhesion		
	Soft		
Agency Ratings	EU 2002/96/EC (WEEE)		
RoHS Compliance	RoHS compliance		
Appearance	Black		
Processing Method	Extrusion		
	Injection molding		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.14	g/cm ³	ASTM D471, ISO 2781
Molding Shrinkage			
Flow: 1.59mm	1.9	%	
Flow: 3.18mm	1.2	%	
Transverse flow: 1.59mm	1.0	%	
Transverse flow: 3.18mm	0.80	%	

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 5 sec)	85		ASTM D2240, ISO 48

Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	160	mg	ASTM D3389

Elastomers	Nominal Value	Unit	Test Method
Tensile Set (100% Strain)	19	%	ASTM D412
Tensile Stress (100% Strain, 23°C)	10.1	MPa	ASTM D412, ISO 37
Tensile Strength (Yield, 23°C)	14.7	MPa	ASTM D412, ISO 37
Tensile Elongation (Break, 23°C)	260	%	ASTM D412, ISO 37
Tear Strength ¹ (24°C)	54.3	kN/m	ASTM D624
Compression Set			ASTM D395, ISO 815
24°C, 22 hr	23	%	ASTM D395, ISO 815
70°C, 22 hr	65	%	ASTM D395, ISO 815
100°C, 22 hr	82	%	ASTM D395, ISO 815

Aging	Nominal Value	Unit	Test Method
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Change in Tensile Strength in Air			
70°C, 168 hr	-16	%	ASTM D573, ISO 188
100% strain, 70°C, 168 hr	-4.0	%	ASTM D573
100°C, 168 hr	-19	%	ASTM D573, ISO 188
100% strain, 100°C, 168 hr	-6.0	%	ASTM D573
100% strain 70°C, 168 hr	-4.0	%	ISO 188
100% strain 100°C, 168 hr	-6.0	%	ISO 188
Change in Ultimate Elongation in Air			ASTM D573, ISO 188
70°C, 168 hr	-15	%	ASTM D573, ISO 188
100°C, 168 hr	-21	%	ASTM D573, ISO 188
Change in Volume			
24°C, 168 hr, in reference fuel B	87	%	ASTM D471
70°C, 168 hr, ASTM Standard Oil (No. 1)	27	%	ASTM D471
70°C, 168 hr, in IRM 903 oil	130	%	ASTM D471
70°C, 168 hr, in water	1.0	%	ASTM D471, ISO 1817
24°C, 168 hr, in reference fuel B	87	%	ISO 1817
70°C, 168 hr, in ASTM #1 oil	27	%	ISO 1817
70°C, 168 hr, in IRM 903 oil	130	%	ISO 1817
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-51.1	°C	ASTM D746, ISO 812
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (190°C, 300 sec ⁻¹)	1060	Pa · s	ASTM D3835
Injection	Nominal Value	Unit	
Drying Temperature - Desiccant Dryer	65.6	°C	
Drying Time - Desiccant Dryer	3.0	hr	
Suggested Max Regrind	25	%	
Rear Temperature	204 - 221	°C	
Middle Temperature	216 - 227	°C	
Front Temperature	227 - 238	°C	
Nozzle Temperature	227 - 249	°C	
Processing (Melt) Temp	227 - 254	°C	
Mold Temperature	43.3 - 54.4	°C	
Injection Pressure	1.03 - 3.45	MPa	
Screw Speed	25 - 100	rpm	
Injection instructions			
Injection Speed: 1 to 3 in ³ /secInjection Time (1st Stage/Boost): 0.5 to 2 secSecond Stage Pressure: 150 to 300 psiSecond Stage Time: 3 to 10 secCooling Time: 10 to 20 secBack Pressure: 20 to 50 %			
NOTE			
1.	C mould		

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