Technical Data Sheet

Duragrip DGR 6185BK

Thermoplastic Elastomer
LyondellBasell Industries
Engineering Plastics

Product Description

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

Features	• Good Adhesion	• Soft
Agency Ratings	• EU 2002/96/EC (WEEE)	
RoHS Compliance	• RoHS Compliant	
Appearance	• Black	
Processing Method	• Extrusion	• Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity			
--	1.14	1.14 g/cm³	ASTM D471
--	1.14 g/cm³	1.14 g/cm³	ISO 2781
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Taber Abrasion Resistance			ASTM D3389
1000 Cycles, 1000 G, Cs-17 Wheel	160 mg	160 mg	
Elastomers	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Set (100% Strain)	19 %	19 %	ASTM D412
Tensile Stress (100% Strain, 73°f (23°c))	1460 psi	10.1 MPa	ASTM D412 ISO 37
Tensile Strength (Yield, 73°f (23°c))	2130 psi	14.7 MPa	ASTM D412 ISO 37
Tensile Elongation (Break, 73°f (23°c))	260 %	260 %	ASTM D412 ISO 37
Tear Strength [1] (75°f (24°c))	310 lbf/in	54.3 kN/m	ASTM D624
Compression Set			ASTM D395 ISO 815
75°f (24°c), 22 Hr	23 %	23 %	
158°f (70°c), 22 Hr	65 %	65 %	
212°f (100°c), 22 Hr	82 %	82 %	
Hardness	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 5 Sec)	85	85	ASTM D2240 ISO 48
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Brittleness Temperature	-60.0 °F	-51.1 °C	ASTM D746 ISO 812
Aging	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Change in Tensile Strength in Air			
158°f (70°c), 168 Hr	-16 %	-16 %	ASTM D573 ISO 188
100% Strain, 158°f (70°c), 168 Hr	-4.0 %	-4.0 %	ASTM D573
212°f (100°c), 168 Hr	-19 %	-19 %	ASTM D573 ISO 188
100% Strain, 212°f (100°c), 168 Hr	-6.0 %	-6.0 %	ASTM D573
100% Strain 158°f (70°c), 168 Hr	-4.0 %	-4.0 %	ISO 188
100% Strain 212°f (100°c), 168 Hr	-6.0 %	-6.0 %	ISO 188

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Aging	Nominal Value (English)	Nominal Value (SI)	Test Method
Change in Ultimate Elongation in Air			ASTM D573 ISO 188
158°f (70°c), 168 Hr	-15 %	-15 %	
212°f (100°c), 168 Hr	-21 %	-21 %	
Change in Volume			ASTM D471 ISO 1817
75°f (24°c), 168 Hr, In Reference Fuel B	87 %	87 %	
158°f (70°c), 168 Hr, In Astm #1 Oil	27 %	27 %	
158°f (70°c), 168 Hr, In Irm 903 Oil	130 %	130 %	
158°f (70°c), 168 Hr, In Water	1.0 %	1.0 %	
Fill Analysis	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Melt Viscosity (374°f (190°c), 300 Sec^-1)	1060 Pa·s	1060 Pa·s	ASTM D3835

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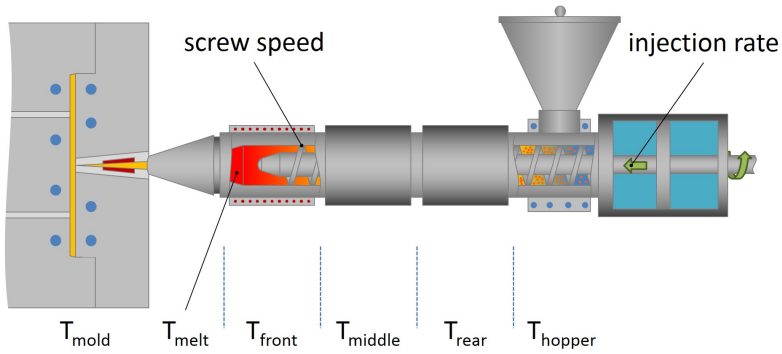

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature - Desiccant Dryer	150 °F	66 °C
Drying Time - Desiccant Dryer	3.0 hr	3.0 hr
Rear Temperature	400 to 430 °F	204 to 221 °C
Middle Temperature	420 to 440 °F	216 to 227 °C
Front Temperature	440 to 460 °F	227 to 238 °C
Nozzle Temperature	440 to 480 °F	227 to 249 °C
Processing (Melt) Temp	440 to 490 °F	227 to 254 °C
Mold Temperature	110 to 130 °F	43 to 54 °C
Injection Pressure	150 to 500 psi	1.03 to 3.45 MPa
Screw Speed	25 to 100 rpm	25 to 100 rpm

Injection Notes

Injection Speed: 1 to 3 in³/sec
Injection Time (1st Stage/Boost): 0.5 to 2 sec
Second Stage Pressure: 150 to 300 psi
Second Stage Time: 3 to 10 sec
Cooling Time: 10 to 20 sec
Back Pressure: 20 to 50 %