DuraGrip DGR-6170BKBLK

LyondellBasell Industries - Thermoplastic Elastomer

General Information

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.

General

Features	• Good Adhesion	
Forms	• Pellets	
Processing Method	• Extrusion	• Injection Molding

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.10		ASTM D792
Density	1.10	g/cm³	ISO 1183
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Taber Abrasion Resistance			ASTM D1044
1000 Cycles, 1.0E+6 g, CS-17 Wheel	87.0	mg	
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Set (100% Strain)	5	%	ASTM D412
Tensile Stress (100% Strain)	400	psi	ASTM D412
Tensile Stress (100% Strain, 73°F)	400	psi	ISO 37
Tensile Strength (Yield, 73°F)	1340	psi	ASTM D412
Tensile Stress (Yield, 73°F)	1340	psi	ISO 37
Tensile Elongation (Break)	420	%	ASTM D412
Tensile Elongation (Break, 73°F)	420	%	ISO 37
Tear Strength [2] (75°F)	211	lbf/in	ASTM D624
Compression Set			ASTM D395B
75°F, 22 hr	21	%	
158°F, 22 hr	82	%	
212°F, 22 hr	95	%	
Compression Set			ISO 815
75°F, 22 hr	21	%	
158°F, 22 hr	82	%	
212°F, 22 hr	95	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A, 5 sec)	65		ASTM D2240
Shore Hardness (Shore A, 5 sec)	65		ISO 868
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	-90.0	°F	ASTM D746
Brittleness Temperature	-90.0	°F	ISO 812

DuraGrip DGR-6170BKBLK

LyondellBasell Industries - Thermoplastic Elastomer

Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength in Air			ASTM D573
158°F, 168 hr	34	%	
100% Strain, 158°F, 168 hr	5.0	%	
212°F, 168 hr	41	%	
100% Strain, 212°F, 168 hr	-3.0	%	
Change in Tensile Strength in Air			ISO 188
158°F, 168 hr	34	%	
100% Strain 158°F, 168 hr	5.0	%	
212°F, 168 hr	41	%	
100% Strain 212°F, 168 hr	-3.0	%	
Change in Ultimate Elongation in Air			ASTM D573
158°F, 168 hr	8.0	%	
212°F, 168 hr	18	%	
Change in Tensile Strain at Break			ISO 1817
158°F, 168 hr	8.0	%	
212°F, 168 hr	18	%	
Change in Volume			ASTM D471
75°F, 168 hr, in Reference Fuel B	49	%	
158°F, 168 hr, in ASTM #1 Oil	5.0	%	
158°F, 168 hr, in IRM 903 Oil	42	%	
158°F, 168 hr, in Water	1.0	%	
Change in Volume			ISO 1817
75°F, 168 hr, in Reference Fuel B	49	%	
158°F, 168 hr, in ASTM #1 Oil	5.0	%	
158°F, 168 hr, in IRM 903 Oil	42	%	
158°F, 168 hr, in Water	1.0	%	

Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (374°F, 300 sec^-1)	420	Pa·s	ASTM D3835

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	151	°F
Drying Time	3.0	hr
Rear Temperature	399 to 430	°F
Middle Temperature	421 to 441	°F
Front Temperature	441 to 460	°F
Nozzle Temperature	441 to 480	°F
Processing (Melt) Temp	441 to 489	°F
Mold Temperature	109 to 129	°F
Injection Pressure	400 to 801	psi
Screw Speed	50 to 150	rpm

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] Die C