

Technical Data Sheet

**Duragrip Duragrip DGR 6090BK**

Thermoplastic Elastomer
LyondellBasell Industries
Engineering Plastics

Product Description

DuraGrip® DGR 6090BK is designed to be a general-purpose Thermoplastic Elastomer (TPE) that is easy to use in injection molding and extrusion processes. DGR 6090BK has an excellent soft touch feel, will bond to olefins, and is easy to color. DuraGrip® is not hygroscopic and under normal conditions does not require drying.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Features	• General Purpose		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	0.993	0.991 g/cm ³	ASTM D792
Elastomers	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Stress (100% Strain, 73°F (23°C))	1100 psi	7.55 MPa	ASTM D412
Tensile Strength (Yield, 73°F (23°C))	1940 psi	13.4 MPa	ASTM D412
Tensile Elongation (Break)	560 %	560 %	ASTM D412
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness (Shore A, 5 sec)	88	88	ASTM D2240
Fill Analysis	Nominal Value (English)	Nominal Value (SI)	Test Method
Melt Viscosity (374°F (190°C), 295 sec ^A -1)	133 Pa·s	133 Pa·s	Internal Method

Additional Information

The value listed as Density -Specific Gravity, ASTM D792, was tested in accordance with ASTM D471.

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	150 °F	66 °C
Drying Time	3.0 hr	3.0 hr
Rear Temperature	370 to 390 °F	188 to 199 °C
Middle Temperature	390 to 410 °F	199 to 210 °C
Front Temperature	420 to 440 °F	216 to 227 °C
Nozzle Temperature	400 to 430 °F	204 to 221 °C
Processing (Melt) Temp	390 to 430 °F	199 to 221 °C
Mold Temperature	110 to 130 °F	43 to 54 °C
Injection Pressure	150 to 600 psi	1.03 to 4.14 MPa
Screw Speed	25 to 100 rpm	25 to 100 rpm

Injection Notes

DuraGrip® is not hygroscopic, under normal conditions does not require drying. Dry in a desiccant dryer if porosity is observed.

Injection Speed: 1 to 3 in³/sec

Injection Time (1st Stage/Boost): 0.5 to 4 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 %

Purging- Purge with a low density polyethylene (LDPE) or polypropylene after use. If machine is idle for greater than 30 minutes, purge thoroughly.

Notes

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affect the quality of this product
- Keep material completely dry for good processing

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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