

Technical Data Sheet

**Duragrip DGR 7800**

Thermoplastic Elastomer
LyondellBasell Industries
Engineering Plastics

Product Description

DuraGrip® DGR 7800 is a specialty grade Thermoplastic Elastomers (TPE) that is formulated with FDA compliant raw materials and is easy to use in the injection molding and extrusion process. DGR 7800 has an excellent soft touch feel and will bond to olefins.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Features	• Good Adhesion	• Soft	
Appearance	• Translucent		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity			
--	0.982	0.980 g/cm ³	ASTM D471
--	0.892 g/cm ³	0.892 g/cm ³	ISO 1183
Elastomers	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Stress (100% Strain)	343 psi	2.36 MPa	ASTM D412 ISO 37
Tensile Strength (Yield)	1040 psi	7.18 MPa	ASTM D412 ISO 37
Tensile Elongation (Break)	690 %	690 %	ASTM D412 ISO 37
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness (Shore A, 5 sec)	59	59	ASTM D2240 ISO 868
Fill Analysis	Nominal Value (English)	Nominal Value (SI)	Test Method
Melt Viscosity (374°F (190°C), 300 sec ⁻¹)	120 Pa·s	120 Pa·s	ASTM D3835

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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 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 cu. in. /sec.
Injection Time (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%

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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