

**Technical Data Sheet**  
**DuraGrip® DGR 6850NC**  
 Thermoplastic Elastomer  
 Engineering Plastics



**Product Description**

DuraGrip® 6850NC is an FDA compliant Thermoplastic Elastomer (TPE) that is easy to use in injection molding and extrusion processes. DuraGrip® 6850NC has an excellent soft touch feel, good elasticity, will bond to polypropylene and some polyethylenes. It complies with 21 C.F.R.177.2600 and 21 C.F.R.177.1210 (non-fatty/non-oily foodstuffs). DuraGrip® 6850NC is not hygroscopic and under normal conditions does not require drying.

**General**

Features	• Good Adhesion		
Agency Ratings	• EU 2002/96/EC (WEEE)	• FDA 21 CFR 177.1210	• FDA 21 CFR 177.2600
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity			
--	0.980	0.978 g/cm <sup>3</sup>	ASTM D792
--	0.978 g/cm <sup>3</sup>	0.978 g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/5.0 kg)	20 g/10 min	20 g/10 min	ASTM D1238

Elastomers	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Stress			ASTM D412 ISO 37
100% Strain	270 psi	1.86 MPa	
300% Strain	350 psi	2.41 MPa	
Tensile Strength (Yield)	1120 psi	7.72 MPa	ASTM D412 ISO 37
Tensile Elongation (Break)	670 %	670 %	ASTM D412 ISO 37
Tear Strength <sup>1</sup>	120 lbf/in	21.0 kN/m	ASTM D624

Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness (Shore A, 5 sec)	55	55	ASTM D2240 ISO 868

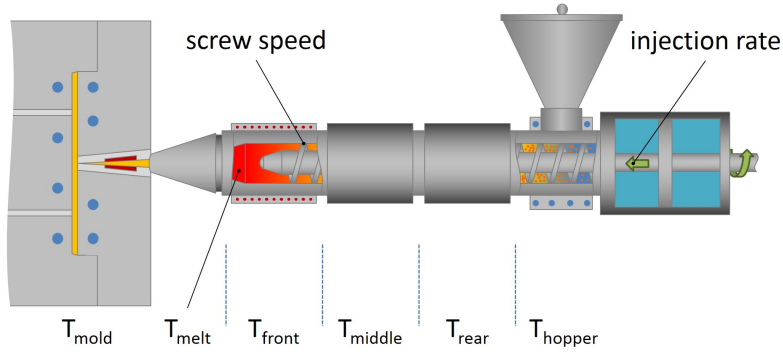
Fill Analysis	Nominal Value (English)	Nominal Value (SI)	Test Method
Melt Viscosity (374°F (190°C), 200 sec <sup>-1</sup> )	154 Pa·s	154 Pa·s	ASTM D3835

**Additional Information**

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

The value listed as Density, ISO 1183, was tested in accordance with ISO 2781.

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Injection	Nominal Value (English)	Nominal Value (SI)
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
Screw Speed	25 to 100 rpm	25 to 100 rpm

**Injection Notes**

- Injection Speed: 1 to 3 in<sup>3</sup>/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 75 %