

Developmental DTF1600.00 S Experimental Impact Copolymer Resin

Overview

DTF1600.00 S has been developed for covered automotive applications processed by back injection or extrusion moulding. DTF1600.00 S combines good balance between stiffness and impact performance with excellent process ability. Material is only available in Natural of Black colour compounded.

Applications:

- Door panels
- Door liners
- Pillar covers

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.02 g/cm ³	1.02 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	27 g/10 min	27 g/10 min	ISO 1133
Molding Shrinkage	8.0E-3 to 0.010 in/in	0.80 to 1.0 %	ISO 294-4
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus (Injection Molded)	305000 psi	2100 MPa	ISO 527-2/1
Tensile Stress (Yield, Injection Molded)	2900 psi	20.0 MPa	ISO 527-2/50
Tensile Strain (Break, Injection Molded)	100 %	100 %	ISO 527-2/50
Flexural Modulus ¹ (Injection Molded)	276000 psi	1900 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength -40°F (-40°C), Injection Molded	2.9 ft-lb/in ²	6.0 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength 32°F (0°C), Injection Molded	7.1 ft-lb/in ²	15 kJ/m ²	ISO 179/1eU
Notched Izod Impact Strength 73°F (23°C), Injection Molded	14 ft-lb/in ²	30 kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength 73°F (23°C), Injection Molded	38 ft-lb/in ²	80 kJ/m ²	ISO 180/1U
Multi-Axial Instrumented Impact Energy 73°F (23°C), 0.118 in (3.00 mm), Injection Molded	44.3 ft-lb	60.0 J	ISO 6603-2
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed	208 °F	98.0 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	117 °F	47.0 °C	ISO 75-2/A
Vicat Softening Temperature --	284 °F	140 °C	ISO 306/A120
--	140 °F	60.0 °C	ISO 306/B50
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate ² (0.0394 in (1.00 mm))	1.6 in/min	40 mm/min	ISO 3795
Fogging (212°F (100°C))	96.0	96.0	ISO 6452
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	176 °F	80 °C	
Drying Time	4.0 hr	4.0 hr	
Processing (Melt) Temp	374 to 464 °F	190 to 240 °C	
Mold Temperature	86 to 140 °F	30 to 60 °C	