

Developmental DTF1803.00 Experimental Compounded Polypropylene

Overview

DTF1803.00 is a 12% talc filled PP exhibiting high flow and very high stiffness. It is particularly well suited for low wall thickness bumper skins.

DTF1803.00 exists in two versions:

- DTF1803.00 S for painted parts
- DTF1803.00 SU for non-painted UV stabilised parts.

Applications

- Bumper skins
- Bumper strips

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density ¹	0.980 g/cm ³	0.980 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	17 g/10 min	17 g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
--	6.0E-3 to 7.0E-3 in/in	0.60 to 0.70 %	
-- ²	7.0E-3 to 9.0E-3 in/in	0.70 to 0.90 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	218000 psi	1500 MPa	ISO 527-2/1
Tensile Stress (Yield)	2900 psi	20.0 MPa	ISO 527-2/50
Tensile Strain (Break)	> 200 %	> 200 %	ISO 527-2/50
Flexural Modulus ^{3,4}	210000 psi	1450 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact Strength			ISO 180/1A
-40°F (-40°C)	3.3 ft-lb/in ²	7.0 kJ/m ²	
14°F (-10°C)	17 ft-lb/in ²	35 kJ/m ²	
73°F (23°C)	24 ft-lb/in ²	50 kJ/m ²	
Multi-Axial Instrumented Impact Energy ⁵			ISO 6603-2
-40°F (-40°C), 0.118 in (3.00 mm)	22.1 ft-lb	30.0 J	
-22°F (-30°C), 0.118 in (3.00 mm)	36.9 ft-lb	50.0 J	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	176 °F	80.0 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	122 °F	50.0 °C	ISO 75-2/A
Vicat Softening Temperature	266 °F	130 °C	ISO 306/A120
CLTE - Flow ⁶			DIN 53752
-22 to 77°F (-30 to 25°C)	3.1E-5 in/in/°F	5.5E-5 cm/cm/°C	
77 to 176°F (25 to 80°C)	4.1E-5 in/in/°F	7.4E-5 cm/cm/°C	
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	176 °F	80 °C	
Drying Time	1.0 to 2.0 hr	1.0 to 2.0 hr	
Processing (Melt) Temp	410 to 500 °F	210 to 260 °C	
Mold Temperature	68 to 140 °F	20 to 60 °C	