

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) | Test Method |
| 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 | |

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ DTF1803.00S

² Total Shrinkage

³ 0.079 in/min (2.0 mm/min)

⁴ 3-points

⁵ Energy to break

⁶ ISO bar

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