

Developmental DTF2502.04 ESU Experimental Compounded Polypropylene

Overview DTF2502.04 ESU is a high flow high modulus polypropylene compound for automotive interior technical mouldings.

DTF2502.04 ESU is intended for applications requiring high-class surface finish with high stiffness and impact performance.

Applications:

- Instrument Panel
- Door panels
- Pillar trim

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.05 g/cm ³	1.05 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	22 g/10 min	22 g/10 min	ISO 1133
Molding Shrinkage	6.0E-3 to 0.010 in/in	0.60 to 1.0 %	ISO 294-4
Post Shrinkage	7.0 to 12 mil/in	0.70 to 1.2 %	ISO 294-4
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	305000 psi	2100 MPa	ISO 527-2/1
Tensile Stress (Yield)	3340 psi	23.0 MPa	ISO 527-2/50
Tensile Strain (Break)	400 %	400 %	ISO 527-2/10
Flexural Modulus ^{1, 2}	348000 psi	2400 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	1.8 ft·lb/in ²	3.8 kJ/m ²	
73°F (23°C)	14 ft·lb/in ²	30 kJ/m ²	
Notched Izod Impact Strength			ISO 180/1A
-22°F (-30°C)	1.9 ft·lb/in ²	4.0 kJ/m ²	
73°F (23°C)	16 ft·lb/in ²	33 kJ/m ²	
Multi-Axial Instrumented Impact Energy ³			ISO 6603-2
32°F (0°C), 0.118 in (3.00 mm)	35.4 ft·lb	48.0 J	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	243 °F	117 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	149 °F	65.0 °C	ISO 75-2/A
Vicat Softening Temperature	284 °F	140 °C	ISO 306/A120
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate ⁴ (0.0394 in (1.00 mm))	1.5 in/min	38 mm/min	ISO 3795
Fogging (212°F (100°C))	< 1.00 Mg/g	< 1.00 Mg/g	ISO 6452
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	176 °F	80 °C	
Drying Time	2.0 to 3.0 hr	2.0 to 3.0 hr	
Processing (Melt) Temp	392 to 500 °F	200 to 260 °C	
Mold Temperature	68 to 140 °F	20 to 60 °C	