

INSPIRE™ TF7000 ES

Performance Polymers

Overview

INSPIRE* TF7000 ES Natural Performance Polymer DA™ is a very high stiffness (2400 MPa) TPO designed for instrument panel upper and lower components, as well as other interior trim applications where stiffness, good impact resistance, and good molded-in-color part aesthetics are important. Its high melt flow rate also allows for rapid filling of large parts in the injection molding process.

Main Characteristics:

- Excellent Surface Aesthetics
- Good Scratch & Mar Resistance
- Instrument Panel Uppers/Lowers
- Interior Trim Applications
- High Flow
- Approved on DaimlerChrysler MS-DC265D

Automotive Specifications

- CHRYSLER MS-DC-265 Type D
- GM QK 004023 U Color: Charcoal
- IMDS ID 30867190 Color: Charcoal

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.03 g/cm ³	1.03 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	27 g/10 min	27 g/10 min	ASTM D1238
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Stress (Yield)	3340 psi	23.0 MPa	ISO 527-2/50
Flexural Modulus ¹	348000 psi	2400 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact Strength (73°F (23°C))	14 ft·lb/in ²	29 kJ/m ²	ISO 180/1A
Instrumented Dart Impact ²			ASTM D3763
32°F (0°C), Ductile	257 in·lb	29.0 J	
73°F (23°C), Ductile	204 in·lb	23.0 J	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness (Shore D)	70	70	ASTM D2240
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	225 °F	107 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	142 °F	61.0 °C	ISO 75-2/Af
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate ³	1.9 in/min	48 mm/min	FMVSS 302