

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

Notes

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

¹ 0.079 in/min (2.0 mm/min)

² 21.7 ft/sec (6.60 m/sec)

³ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.



PRODUCT STEWARDSHIP

Trinseo and its affiliated companies have a fundamental concern for all who make, distribute, and use their products and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products so that appropriate steps may be taken to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Trinseo products – from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

CUSTOMER NOTICE

Customers are responsible for reviewing their manufacturing processes and their applications of Trinseo products from the standpoint of human health and environmental quality to ensure that Trinseo products are not used in ways for which they are not suitable. Trinseo personnel are available to answer questions and to provide reasonable technical support. Trinseo product literature, including safety data sheets, should be consulted prior to the use of Trinseo products. Current safety data sheets are available from Trinseo.

No freedom from infringement of any patent owned by Trinseo or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, the customer is responsible for determining whether products and the information in this document are appropriate for the customer's use and for ensuring that the customer's workplace and disposal practices are in compliance with applicable legal requirements. Although the information herein is provided in good faith and was believed to be accurate when prepared, Trinseo assumes no obligation or liability for the information in this document.

DISCLAIMER

TRINSEO MAKES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, IN THIS DOCUMENT; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE (INCLUDING MEDICAL APPLICATIONS) ARE EXPRESSLY EXCLUDED. SINCE THE CONDITIONS AND METHODS OF USE OF THE INFORMATION AND PRODUCTS REFERRED TO ARE BEYOND TRINSEO'S KNOWLEDGE AND CONTROL, TRINSEO DISCLAIMS ANY AND ALL LIABILITY FOR LOSSES OR DAMAGES THAT MAY RESULT FROM RELIANCE ON THE INFORMATION OR USE OF THE PRODUCTS DESCRIBED HEREIN. TRINSEO MAKES NO WARRANTIES, EXPRESS OR IMPLIED, THAT THE USE OF ANY TRINSEO PRODUCT WILL BE FREE FROM ANY INFRINGEMENT CLAIMS.

GENERAL NOTICE

Any photographs of end-use applications in this document represent potential end-use applications but do not necessarily represent current commercial applications, nor do they represent an endorsement by Trinseo of the actual products. Further, these photographs are for illustration purposes only and do not reflect either an endorsement or sponsorship of any other manufacturer for a specific potential end-use product or application, or for Trinseo, or for specific products manufactured by Trinseo. If products are described as "experimental" or "developmental": (1) product specifications may not be fully determined; (2) analysis of hazards and caution in handling and use are required; (3) there is greater potential for Trinseo to change specifications and/or discontinue production, and (4) although Trinseo may from time to time provide samples of such products, Trinseo is not obligated to supply or otherwise commercialize such products for any use or application whatsoever.

Copyright ©Trinseo (2019) All rights reserved.

™Trademark of Trinseo S.A. or its affiliates

®Responsible Care is a service mark of the American Chemistry Council

Follow us at:

