Developmental DTF1600.00 S
Experimental Impact Copolymer Resin

Overview

DTF1600.00 S has been developed for covered automotive applications processed by back injection or extrusion moulding. DTF1600.00 S combines good balance between stiffness and impact performance with excellent process ability. Material is only available in Natural of Black colour compounded.

Applications:

- Door panels
- Door liners
- Pillar covers

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.02	g/cm³	1.02	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	27	g/10 min	27	g/10 min	ISO 1133
Molding Shrinkage	8.0E-3 to 0.010	in/in	0.80 to 1.0	%	ISO 294-4
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus (Injection Molded)	305000	psi	2100	MPa	ISO 527-2/1
Tensile Stress (Yield, Injection Molded)	2900	psi	20.0	MPa	ISO 527-2/50
Tensile Strain (Break, Injection Molded)	100	%	100	%	ISO 527-2/50
Flexural Modulus [1] (Injection Molded)	276000	psi	1900	MPa	ISO 178
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Charpy Notched Impact Strength					ISO 179/1eA
-40°F (-40°C), Injection Molded	2.9	ft·lb/in²	6.0	kJ/m²	
Charpy Unnotched Impact Strength					ISO 179/1eU
32°F (0°C), Injection Molded	7.1	ft·lb/in²	15	kJ/m²	
Notched Izod Impact Strength					ISO 180/1A
73°F (23°C), Injection Molded	14	ft·lb/in²	30	kJ/m²	
Unnotched Izod Impact Strength					ISO 180/1U
73°F (23°C), Injection Molded	38	ft·lb/in²	80	kJ/m²	
Multi-Axial Instrumented Impact Energy					ISO 6603-2
73°F (23°C), 0.118 in (3.00 mm), Injection Molded	44.3	ft·lb	60.0	J	
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Heat Deflection Temperature					
66 psi (0.45 MPa), Unannealed	208	°F	98.0	°C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	117	°F	47.0	°C	ISO 75-2/A
Vicat Softening Temperature					
--	284	°F	140	°C	ISO 306/A120
--	140	°F	60.0	°C	ISO 306/B50
Flammability	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Burning Rate [2] (0.0394 in (1.00 mm))	1.6	in/min	40	mm/min	ISO 3795
Fogging (212°F (100°C))	96.0		96.0		ISO 6452

Injection	Nominal Value	(English)	Nominal Value	(SI)
Drying Temperature	176	°F	80	°C
Drying Time	4.0	hr	4.0	hr
Processing (Melt) Temp	374 to 464	°F	190 to 240	°C
Mold Temperature	86 to 140	°F	30 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] 0.079 in/min (2.0 mm/min)

[2] 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.

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.

Follow us at:

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.