

MAGNUM™ 8391 ABS Resin

Overview

MAGNUM™ 8391 ABS combines an excellent glossy appearance with high flow and medium impact performance. The mass (continuous process) ABS technology ensures an ABS resin that combines excellent processability with a stable light base color that is ideal for self-coloring.

Applications:

- Household Appliance
- Consumer Goods
- Toys

Complies with:

- U.S. FDA FCN 1525

Consult the regulation for complete details.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.05 g/cm ³	1.05 g/cm ³	ASTM D792 ISO 1183/B
Apparent (Bulk) Density	0.65 g/cm ³	0.65 g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR)			
220°C/10.0 kg	28 g/10 min	28 g/10 min	ASTM D1238
220°C/5.0 kg	8.5 g/10 min	8.5 g/10 min	ASTM D1238
230°C/3.8 kg	8.0 g/10 min	8.0 g/10 min	ASTM D1238
220°C/5.0 kg	8.4 g/10 min	8.4 g/10 min	ISO 1133
Molding Shrinkage - Flow	4.0E-3 to 7.0E-3 in/in	0.40 to 0.70 %	ASTM D955 ISO 294-4
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			
--	363000 psi	2500 MPa	ASTM D638
0.126 in (3.20 mm), Injection Molded	339000 psi	2340 MPa	ISO 527-2
Tensile Strength			
Yield ¹	6960 psi	48.0 MPa	ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	6530 psi	45.0 MPa	ISO 527-2/50
Yield, 0.126 in (3.20 mm), Injection Molded	6820 psi	47.0 MPa	ISO 527-2/100
Break ¹	5080 psi	35.0 MPa	ASTM D638
Tensile Elongation			
Yield ¹	2.7 %	2.7 %	ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	2.5 %	2.5 %	ISO 527-2/50
Yield, 0.126 in (3.20 mm), Injection Molded	2.6 %	2.6 %	ISO 527-2/100
Break ¹	8.7 %	8.7 %	ASTM D638
Flexural Modulus			
-- ²	360000 psi	2480 MPa	ASTM D790
0.126 in (3.20 mm), Injection Molded ^{3,4}	348000 psi	2400 MPa	ISO 178
Flexural Strength			
-- ²	10900 psi	75.0 MPa	ASTM D790
0.126 in (3.20 mm), Injection Molded ^{3,4}	10200 psi	70.0 MPa	ISO 178

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C), Injection Molded	4.3 ft·lb/in ²	9.0 kJ/m ²	
73°F (23°C), Injection Molded	9.0 ft·lb/in ²	19 kJ/m ²	
Notched Izod Impact			
73°F (23°C)	4.4 ft·lb/in	230 J/m	ASTM D256
-22°F (-30°C), Injection Molded	4.3 ft·lb/in ²	9.0 kJ/m ²	ISO 180/A
73°F (23°C), Injection Molded	9.0 ft·lb/in ²	19 kJ/m ²	ISO 180/A
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (R-Scale)	108	108	ASTM D785
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 psi (0.45 MPa), Unannealed	189 °F	87.0 °C	ASTM D648
264 psi (1.8 MPa), Unannealed	165 °F	74.0 °C	ASTM D648
264 psi (1.8 MPa), Annealed	203 °F	95.0 °C	ISO 75-2/A
Vicat Softening Temperature			
--	210 °F	99.0 °C	ASTM D1525 ⁵
--	203 °F	95.0 °C	ISO 306/B50
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate ⁶ (0.0787 in (2.00 mm))	2.4 in/min	60 mm/min	ISO 3795
Flame Rating ⁶			UL 94
0.06 in (1.5 mm)	HB	HB	
0.12 in (3.0 mm)	HB	HB	
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (60°)	92	92	ASTM D523

Notes

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

¹ 2.0 in/min (50 mm/min)

² 0.051 in/min (1.3 mm/min)

³ 0.079 in/min (2.0 mm/min)

⁴ 3-points

⁵ Rate B (120°C/h), Loading 1 (10 N)

⁶ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

trinseo.com

The principles of Responsible Care® and sustainability influence the production of printed literature for Trinseo S.A. and its affiliated companies. As a contribution towards the protection of our environments, Trinseo's printed literature is produced in small quantities and on paper containing recovered/post-consumer fiber and using 100 percent soy-based ink whenever possible.

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.

NOTICE REGARDING MEDICAL APPLICATION RESTRICTIONS

TRINSEO REQUESTS THAT CUSTOMERS REFER TO TRINSEO'S MEDICAL APPLICATION POLICY [HTTP://WWW.TRINSEO.COM/MEDICAL.HTM](http://www.trinseo.com/MEDICAL.HTM) BEFORE CONSIDERING THE USE OF TRINSEO PRODUCTS IN MEDICAL APPLICATIONS. THE RESTRICTIONS AND DISCLAIMERS SET FORTH IN THAT POLICY ARE INCORPORATED BY REFERENCE

For more information on products, innovations, expertise, and other services available from Trinseo, visit www.trinseo.com, or in the U.S. contact us at +1-855-TRINSEO (+1-855-874-6736).

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.

For additional information not covered by the content of this document or to ensure you have the latest version of this document available, please refer to our website at www.trinseo.com/contact.

Copyright ©Trinseo (2020) 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:

