

MAGNUM™ 347 EZ

ABS Resin

Overview

MAGNUM ABS resins are thermoplastic materials which provide an excellent balance of processability, impact resistance and heat resistance as imparted by the various polymer compositions. MAGNUM ABS resins are available in a wide range of melt flow rates, impact strength and heat resistance for both high and low gloss applications manufactured by injection molding, sheet or profile extrusion and thermoforming processes.

Automotive MAGNUM ABS resins offer a wide range of gloss, viscosity, impact strength and heat properties for use in numerous automotive applications. Melt flow rates from 1 to 12 g/10 min, impact strengths from 2.4 to 11 ft-lb/in and heat distortion temperatures from 171°F to 194°F are available. Available primarily as natural plus concentrates, MAGNUM ABS resins are used in a wide variety of automotive applications including structural instrument panels, consoles, pillars, and exterior trim parts requiring painting and plating.

MAGNUM 347 EZ ABS resin is a higher flow version of 342 EZ having slightly lower impact strength. The melt flow rate of approximately 12 g/10min is often suitable for parts with long flow lines and minimal impact requirements.

Automotive Specifications

- CHRYSLER MS-DB-200 CPN3457 • CHRYSLER MS-DB-200 CPN508
- GM GMW15572P-ABS-T1

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.04 g/cm ³	1.04 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	12 g/10 min	12 g/10 min	ASTM D1238
Molding Shrinkage - Flow	4.0E-3 to 7.0E-3 in/in	0.40 to 0.70 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus ¹	300000 psi	2070 MPa	ASTM D638
Tensile Strength ¹ (Yield)	6000 psi	41.4 MPa	ASTM D638
Tensile Elongation ¹			ASTM D638
Yield	2.5 %	2.5 %	
Break	30 %	30 %	
Flexural Modulus ²	315000 psi	2170 MPa	ASTM D790
Flexural Strength ²	9500 psi	65.5 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact ³			ASTM D256
73°F (23°C), 0.126 in (3.20 mm)	2.5 ft-lb/in	130 J/m	
Instrumented Dart Impact ⁴			ASTM D3763
73°F (23°C), 0.126 in (3.20 mm), Peak Energy	250 in-lb	28.2 J	
73°F (23°C), 0.126 in (3.20 mm), Total Energy	310 in-lb	35.0 J	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed, 0.126 in (3.20 mm)	185 °F	85.0 °C	
264 psi (1.8 MPa), Unannealed, 0.126 in (3.20 mm)	165 °F	73.9 °C	
Vicat Softening Temperature	215 °F	102 °C	ASTM D1525

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	180 to 185 °F	82 to 85 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Suggested Max Moisture	0.10 %	0.10 %
Processing (Melt) Temp	420 to 450 °F	216 to 232 °C
Mold Temperature	80 to 120 °F	27 to 49 °C
Back Pressure	50.0 to 500 psi	0.345 to 3.45 MPa
Clamp Tonnage	2.0 to 3.0 tons/in ²	2.8 to 4.1 kN/cm ²
Screw L/D Ratio	20.0:1.0	20.0:1.0
Screw Compression Ratio	1.5:1.0 to 3.5:1.0	1.5:1.0 to 3.5:1.0

Notes

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

¹ Type I, 2.0 in/min (51 mm/min)

² Type I, 0.050 in/min (1.3 mm/min)

³ 10 mil (0.25 mm) Notch Depth

⁴ 11.1 ft/sec (3.39 m/sec)



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:

