

MAGNUM™ A642

ABS Resin

Overview

MAGNUM™ A642 is a very high heat resistance ABS resin with good processing characters. Produced by MASS (continues process) polymerization technology, this material offers a low emission and low odor performance even in a wide range of processing window. Its stable light base color makes it an ideal candidate for self-coloring process to reduce the total production cost.

- Applications:

- Matt/unpainted automotive interior and exterior trims
- Taillight housings
- Dashboard components
- Pillar covers
- Consoles
- Household appliances

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.05 g/cm ³	1.05 g/cm ³	ISO 1183
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)	6.5 g/10 min	6.5 g/10 min	ISO 1133
Molding Shrinkage	4.0E-3 to 7.0E-3 in/in	0.40 to 0.70 %	ISO 294-4
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	297000 psi	2050 MPa	ISO 527-1/1
Tensile Stress (Yield)	6240 psi	43.0 MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	3.0 %	3.0 %	
Break	25 %	25 %	
Flexural Modulus ¹	290000 psi	2000 MPa	ISO 178
Flexural Stress ¹	9720 psi	67.0 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	6.7 ft-lb/in ²	14 kJ/m ²	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 psi (0.45 MPa), Unannealed	212 °F	100 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	185 °F	85.0 °C	ISO 75-2/A
Vicat Softening Temperature	225 °F	107 °C	ISO 306/B50
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ²			UL 94
0.06 in (1.5 mm)	HB	HB	
0.12 in (3.0 mm)	HB	HB	
Burning Rate ²	55.0 min/mm	55.0 min/mm	ISO 3795
Carbon Emission ²	20.0 µg/g	20.0 µg/g	VDA 277
Additional Information	Nominal Value (English)	Nominal Value (SI)	Test Method
Fogging - (100C)	99 %	99 %	ISO 6452

Mass balance versions (bio-based (BIO) or chemically recycled (CR)) of this product are chemically and physically indistinguishable to the standard fossil grade. This technical data sheet applies to all versions. Letters of sameness are available upon request.

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 to 194 °F	80 to 90 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr

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

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