

MAGNUM™ 3325 MT ABS Resin

Overview

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MAGNUM 3325MT is a medium heat ABS. Its inherent low gloss combined with a high flow makes it specifically suitable for unpainted interior automotive applications. MAGNUM 3325MT can thereby help you to save up to 50% of the part costs. It is globally available, locally produced in major car production regions.

Benefits:

- Lot to lot consistency allowing for optimal machine parameters settings from the start
- Self-coloring enabling improvement of costs by using less pigments and lowering your logistic costs
- Low VOC allowing a better interior air quality facing increasing regulatory and OEMs constraints.
- Heat stability during wide range of processing temperatures: enhanced part design freedom
- High scratch and mar resistance for an improved aesthetic durability of the parts
- Easier recyclability of unpainted part

Applications:

- Matt/unpainted interior automotive applications
- Mid-consoles
- Pillars
- Door liners
- Glove boxes

Automotive Specifications

- CHRYSLER MS-DB-191 Type A CPN1497 Color: Black
- FORD ESB-M4D483-A2
- FORD WSS-M4D483-C1
- GM GMP.ABS.003
- CHRYSLER MS-DB-191 Type A CPN1734 Color: Color Match
- FORD WSK-M4D827-A
- FORD WSS-M4D827-C1
- GM GMW15572P-ABS-T2 Color: Natural

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density			
--	1.04 g/cm ³	1.04 g/cm ³	ASTM D792
--	1.05 g/cm ³	1.05 g/cm ³	ISO 1183/B
Apparent (Bulk) Density	0.65 g/cm ³	0.65 g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR)			
230°C/3.8 kg	2.5 g/10 min	2.5 g/10 min	ASTM D1238
220°C/10.0 kg	10 g/10 min	10 g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	0.671 in ³ /10min	11.0 cm ³ /10min	ISO 1133
Molding Shrinkage			
Flow	4.0E-3 to 7.0E-3 in/in	0.40 to 0.70 %	ASTM D955
--	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			
-- ¹	300000 psi	2070 MPa	ASTM D638
0.126 in (3.20 mm), Injection Molded	319000 psi	2200 MPa	ISO 527-2
Tensile Strength			
Yield ¹	6130 psi	42.3 MPa	ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	6240 psi	43.0 MPa	ISO 527-2/50
Tensile Strain			
Yield, 0.126 in (3.20 mm), Injection Molded	3.3 %	3.3 %	ISO 527-2/50
Break ¹	25 %	25 %	ASTM D638

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Flexural Modulus			
-- ²	320000 psi	2210 MPa	ASTM D790
0.126 in (3.20 mm), Injection Molded ^{3, 4}	305000 psi	2100 MPa	ISO 178
Flexural Strength			
-- ²	9350 psi	64.5 MPa	ASTM D790
0.126 in (3.20 mm), Injection Molded ^{3, 4}	9430 psi	65.0 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			
-22°F (-30°C), Compression Molded	3.8 ft-lb/in ²	8.0 kJ/m ²	ISO 179/2
-22°F (-30°C), Injection Molded	5.2 ft-lb/in ²	11 kJ/m ²	ISO 179/1eA
73°F (23°C), Injection Molded	8.1 ft-lb/in ²	17 kJ/m ²	ISO 179/1eA
73°F (23°C), Compression Molded	5.7 ft-lb/in ²	12 kJ/m ²	ISO 179/2
Notched Izod Impact			
73°F (23°C), 0.126 in (3.20 mm) ⁵	5.8 ft-lb/in	310 J/m	ASTM D256
-22°F (-30°C)	4.8 ft-lb/in ²	10 kJ/m ²	ISO 180/1A
73°F (23°C)	8.1 ft-lb/in ²	17 kJ/m ²	ISO 180/1A
Instrumented Dart Impact ⁶			ASTM D3763
-20°F (-29°C), 0.126 in (3.20 mm), Peak Energy	281 in-lb	31.7 J	
-20°F (-29°C), 0.126 in (3.20 mm), Total Energy	304 in-lb	34.3 J	
73°F (23°C), 0.126 in (3.20 mm), Peak Energy	275 in-lb	31.1 J	
73°F (23°C), 0.126 in (3.20 mm), Total Energy	402 in-lb	45.4 J	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 psi (0.45 MPa), Unannealed, 0.126 in (3.20 mm)	205 °F	96.1 °C	ASTM D648
264 psi (1.8 MPa), Unannealed, 0.126 in (3.20 mm)	181 °F	82.8 °C	ASTM D648
264 psi (1.8 MPa), Annealed	214 °F	101 °C	ISO 75-2/A
Vicat Softening Temperature			
--	227 °F	108 °C	ASTM D1525
--	216 °F	102 °C	ISO 306/B50
CLTE - Flow	5.2E-5 in/in/°F	9.4E-5 cm/cm/°C	ASTM D696
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate ⁷ (0.0787 in (2.00 mm))	2.4 in/min	60 mm/min	ISO 3795
Flame Rating ⁷			UL 94
0.06 in (1.5 mm)	HB	HB	
0.12 in (3.0 mm)	HB	HB	
Carbon Emission ⁷	20.0 µg/g	20.0 µg/g	VDA 277
Fogging ⁷ (212°F (100°C))	98 %	98 %	ISO 6452

