

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

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 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 ISO 1133
230°C/3.8 kg	8.0 g/10 min	8.0 g/10 min	ASTM D1238
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			ISO 527-2
0.126 in (3.20 mm), Injection Molded	339000 psi	2340 MPa	
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			
0.0591 in (1.50 mm)	HB	HB	UL 94
0.118 in (3.00 mm)	HB	HB	

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.



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