

## 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 <sup>3</sup>	1.05 g/cm <sup>3</sup>	ASTM D792 ISO 1183/B
Apparent Density	0.65 g/cm <sup>3</sup>	0.65 g/cm <sup>3</sup>	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 <sup>1</sup>	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 <sup>1</sup>	5080 psi	35.0 MPa	ASTM D638
Tensile Elongation			
Yield <sup>1</sup>	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 <sup>1</sup>	8.7 %	8.7 %	ASTM D638
Flexural Modulus			
-- <sup>2</sup>	360000 psi	2480 MPa	ASTM D790
0.126 in (3.20 mm), Injection Molded <sup>3, 4</sup>	348000 psi	2400 MPa	ISO 178
Flexural Strength			
-- <sup>2</sup>	10900 psi	75.0 MPa	ASTM D790
0.126 in (3.20 mm), Injection Molded <sup>3, 4</sup>	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 <sup>2</sup>	9.0 kJ/m <sup>2</sup>	
73°F (23°C), Injection Molded	9.0 ft-lb/in <sup>2</sup>	19 kJ/m <sup>2</sup>	
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 <sup>2</sup>	9.0 kJ/m <sup>2</sup>	ISO 180/A
73°F (23°C), Injection Molded	9.0 ft-lb/in <sup>2</sup>	19 kJ/m <sup>2</sup>	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 <sup>5</sup>
--	203 °F	95.0 °C	ISO 306/B50
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate <sup>6</sup> (0.0787 in (2.00 mm))	2.4 in/min	60 mm/min	ISO 3795
Flame Rating <sup>6</sup>			UL 94
0.0591 in (1.50 mm)	HB	HB	
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.

<sup>1</sup> 2.0 in/min (50 mm/min)

<sup>2</sup> 0.051 in/min (1.3 mm/min)

<sup>3</sup> 0.079 in/min (2.0 mm/min)

<sup>4</sup> 3-points

<sup>5</sup> Rate B (120°C/h), Loading 1 (10 N)

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



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