

# MAGNUM™ 375 HP ABS Resin

**Overview** High Heat, Low Gloss, Medium Impact ABS resin for injection molded automotive interior trim applications.

**Applications**

- Chrysler-MSDB-300, MSDB-191
- Ford-WSB-M4D690-A
- GM- GMP.ABS.009

**Automotive Specifications**

- FORD WSS-M4D690-B1
- GM GMW15572P-ABS-T2
- VAG VW-TL 527
- VAG VW-TL 527 A

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.06 g/cm <sup>3</sup>	1.06 g/cm <sup>3</sup>	ASTM D792 ISO 1183/B
Apparent (Bulk) Density	0.68 g/cm <sup>3</sup>	0.68 g/cm <sup>3</sup>	ASTM D1895
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	2.1 g/10 min	2.1 g/10 min	ASTM D1238 ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	5.6E-3 in/in	0.56 %	
Flow	5.7E-3 in/in	0.57 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			
-- 1	334000 psi	2300 MPa	ASTM D638
--	338000 psi	2330 MPa	ISO 527-2
Tensile Strength			
Yield <sup>1</sup>	7100 psi	49.0 MPa	ASTM D638
Yield	6820 psi	47.0 MPa	ISO 527-2/50
Tensile Elongation			
Yield <sup>1</sup>	3.1 %	3.1 %	ASTM D638
Yield	2.9 %	2.9 %	ISO 527-2/50
Break <sup>1</sup>	8.8 %	8.8 %	ASTM D638
Break	3.5 %	3.5 %	ISO 527-2/50
Flexural Modulus			
-- 2	349000 psi	2410 MPa	ASTM D790
-- 3, 4	347000 psi	2390 MPa	ISO 178
Flexural Strength			
-- 2	11100 psi	76.5 MPa	ASTM D790
-- 3, 5	10400 psi	72.0 MPa	ISO 178

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	5.2 ft·lb/in <sup>2</sup>	11 kJ/m <sup>2</sup>	
73°F (23°C)	10 ft·lb/in <sup>2</sup>	22 kJ/m <sup>2</sup>	
Notched Izod Impact			
-22°F (-30°C)	2.5 ft·lb/in	130 J/m	ASTM D256
73°F (23°C)	4.1 ft·lb/in	220 J/m	ASTM D256
-22°F (-30°C)	4.8 ft·lb/in <sup>2</sup>	10 kJ/m <sup>2</sup>	ISO 180/A
73°F (23°C)	12 ft·lb/in <sup>2</sup>	25 kJ/m <sup>2</sup>	ISO 180/A
Instrumented Dart Impact			ASTM D3763
-22°F (-30°C), Peak Energy	204 in·lb	23.0 J	
73°F (23°C), Peak Energy	266 in·lb	30.0 J	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 psi (0.45 MPa), Unannealed	211 °F	99.4 °C	ASTM D648
66 psi (0.45 MPa), Unannealed	208 °F	98.0 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	179 °F	81.7 °C	ASTM D648
264 psi (1.8 MPa), Unannealed	183 °F	83.9 °C	ISO 75-2/A
Vicat Softening Temperature	217 °F	103 °C	ISO 306/B50 ASTM D1525 <sup>6</sup>
CLTE			ASTM E831
Flow : -40 to 212°F (-40 to 100°C)	4.3E-5 in/in/°F	7.7E-5 cm/cm/°C	
Transverse : -40 to 212°F (-40 to 100°C)	5.3E-5 in/in/°F	9.5E-5 cm/cm/°C	
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
FMVSS Flammability <sup>7</sup>	1.2 in/min	30 mm/min	FMVSS 302

#### Additional Information

Tests conducted on 0.125 inch (3.2 mm) injection molded specimen, unannealed, unless noted.

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	180 to 185 °F	82 to 85 °C
Drying Time	> 2.0 hr	> 2.0 hr
Rear Temperature	460 °F	238 °C
Middle Temperature	480 °F	249 °C
Front Temperature	490 °F	254 °C
Nozzle Temperature	480 to 490 °F	249 to 254 °C
Processing (Melt) Temp	469 to 520 °F	243 to 271 °C

#### 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 (51 mm/min)

<sup>2</sup> Method I (3 point load), 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> 3-point

<sup>6</sup> Rate A (50°C/h), Loading 2 (50 N)

<sup>7</sup> This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.



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