



MAGNUM™ 375 HP

Trinseo - ABS Resin

Sunday, November 3, 2019

General Information

Product Description

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

General

Material Status	• Commercial: Active		
Availability	• Latin America	• North America	
Features	• High Heat Resistance	• Low Gloss	• Medium Impact Resistance
Uses	• Automotive Applications	• Automotive Interior Parts	
Automotive Specifications	• FORD WSS-M4D690-B1 • GM GMW15572P-ABS-T2	• VAG VW-TL 527 • VAG VW-TL 527 A	
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.06		ASTM D792
Density	1.06	g/cm ³	ISO 1183/B
Apparent (Bulk) Density	0.68	g/cm ³	ASTM D1895
Melt Mass-Flow Rate (230°C/3.8 kg)	2.1	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	2.1	g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.56	%	
Flow	0.57	%	

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ²	334000	psi	ASTM D638
Tensile Modulus	338000	psi	ISO 527-2
Tensile Strength ² (Yield)	7100	psi	ASTM D638
Tensile Stress (Yield)	6820	psi	ISO 527-2/50
Tensile Elongation ² (Yield)	3.1	%	ASTM D638
Tensile Strain (Yield)	2.9	%	ISO 527-2/50
Tensile Elongation ² (Break)	8.8	%	ASTM D638
Tensile Strain (Break)	3.5	%	ISO 527-2/50
Flexural Modulus ³	349000	psi	ASTM D790
Flexural Modulus ^{4, 5}	347000	psi	ISO 178
Flexural Strength ³	11100	psi	ASTM D790
Flexural Stress ^{4, 6}	10400	psi	ISO 178

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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	5.2	ft·lb/in ²	
73°F	10	ft·lb/in ²	
Notched Izod Impact			ASTM D256
-22°F	2.5	ft·lb/in	
73°F	4.1	ft·lb/in	
Notched Izod Impact Strength			ISO 180/A
-22°F	4.8	ft·lb/in ²	
73°F	12	ft·lb/in ²	
Instrumented Dart Impact			ASTM D3763
-22°F, Peak Energy	204	in·lb	
73°F, Peak Energy	266	in·lb	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	211	°F	ASTM D648
Heat Deflection Temperature (66 psi, Unannealed)	208	°F	ISO 75-2/B
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	179	°F	
Heat Deflection Temperature (264 psi, Unannealed)	183	°F	ISO 75-2/A
Vicat Softening Temperature	217	°F	ASTM D1525 ⁷
Vicat Softening Temperature	217	°F	ISO 306/B50
CLTE - Flow (-40 to 212°F)	4.3E-5	in/in/°F	ASTM E831
CLTE - Transverse (-40 to 212°F)	5.3E-5	in/in/°F	ASTM E831
Flammability	Nominal Value	Unit	Test Method
FMVSS Flammability ⁸	1.2	in/min	FMVSS 302

Additional Information

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

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	180 to 185	°F
Drying Time	> 2.0	hr
Rear Temperature	460	°F
Middle Temperature	480	°F
Front Temperature	490	°F
Nozzle Temperature	480 to 490	°F
Processing (Melt) Temp	469 to 520	°F

Notes

¹ Typical properties: these are not to be construed as specifications.

² 2.0 in/min

³ Method I (3 point load), 0.051 in/min

⁴ 0.079 in/min

⁵ 3-points

⁶ 3-point

⁷ Rate A (50°C/h), Loading 2 (50 N)

⁸ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.