

MAGNUM™ 375 HP

ABS Resin

Trinseo

Message:

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 Information			
Features	Gloss, low		
	Heat resistance, high		
	Medium impact resistance		
Uses	Application in Automobile Field		
	Car interior parts		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.06	g/cm ³	ASTM D792, ISO 1183/B
Apparent Density	0.68	g/cm ³	ASTM D1895
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	2.1	g/10 min	ASTM D1238, ISO 1133
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.56	%	ISO 294-4
Flow direction	0.57	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2300	MPa	ASTM D638
--	2330	MPa	ISO 527-2
Tensile Strength			
Yield ²	49.0	MPa	ASTM D638
Yield	47.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ³	3.1	%	ASTM D638
Yield	2.9	%	ISO 527-2/50
Fracture ⁴	8.8	%	ASTM D638
Fracture	3.5	%	ISO 527-2/50
Flexural Modulus			
-- ⁵	2410	MPa	ASTM D790

--	2390	MPa	ISO 178
Flexural Strength			
-- ⁶	76.5	MPa	ASTM D790
--	72.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	11	kJ/m ²	ISO 179/1eA
23°C	22	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	130	J/m	ASTM D256
23°C	220	J/m	ASTM D256
-30°C	10	kJ/m ²	ISO 180/A
23°C	25	kJ/m ²	ISO 180/A
Instrumented Dart Impact			ASTM D3763
-30°C, Peak Energy	23.0	J	ASTM D3763
23°C, Peak Energy	30.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	99.4	°C	ASTM D648
0.45 MPa, not annealed	98.0	°C	ISO 75-2/B
1.8 MPa, not annealed	81.7	°C	ASTM D648
1.8 MPa, not annealed	83.9	°C	ISO 75-2/A
Vicat Softening Temperature	103	°C	ISO 306/B50, ASTM D1525 ⁷
Linear thermal expansion coefficient			ASTM E831
Flow: -40 to 100°C	7.7E-5	cm/cm/°C	ASTM E831
Horizontal: -40 to 100°C	9.5E-5	cm/cm/°C	ASTM E831
Flammability	Nominal Value	Unit	Test Method
FMVSS Flammability ⁸	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	Unit	
Drying Temperature	82.0 - 85.0	°C	
Drying Time	> 2.0	hr	
Rear Temperature	238	°C	
Middle Temperature	249	°C	
Front Temperature	254	°C	
Nozzle Temperature	249 - 254	°C	
Processing (Melt) Temp	243 - 271	°C	
NOTE			
1.	51 mm/min		
2.	51 mm/min		

3.	51 mm/min
4.	51 mm/min
5.	Method I (three-point load), 1.3 mm/min
6.	Method I (three-point load), 1.3 mm/min
7.	速率 A (50°C/h), 载荷2 (50N)
8.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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