MAGNUM™ 1150 EM

Trinseo - ABS Resin

Sunday, November 3, 2019

General Information

Product Description

MAGNUM™ ABS resins are thermoplastic materials which provide an excellent balance of processability, impact resistance and heat resistance as imparted by the various polymer compositions. MAGNUM ABS resin are available in a wide range of melt flow rates, impact strength and heat resistance for both high and low gloss applications manufactured by injection molding, sheet or profile extrusion and thermoforming processes.

The automotive grades of MAGNUM ABS resins offer a wide range of gloss, viscosities, impact strength and heat properties for use in numerous automotive applications. Melt flow rates from 1 to 12 g/10 min, impact strengths from 2.5 to 12 ft-lb/in and heat distortion temperatures from 165 to 190 degrees F are available. Available primarily as natural plus concentrates, MAGNUM ABS resins are used in a wide variety of automotive applications including structural instrument panels, consoles, pillars and exterior trim parts requiring painting and plating.

Within the MAGNUM ABS product line, MAGNUM 1150 EM ABS resin is a high impact, medium heat, low gloss resin. MAGNUM™ 1150 EM has improved low temperature impact strength over standard grades of ABS. MAGNUM™ 1150 EM is used in applications like pillars and instrument panel trim.

General			
Material Status	• Commercial: Active		
Availability	• Latin America	• North America	
Features	• Good Processability • High Impact Resistance	• Low Gloss • Low Temperature Impact Resistance	• Medium Heat Resistance
Uses	• Automotive Applications	• Structural Parts	
Automotive Specifications	• CHRYSLER MS-DB-198 Type B CPN3903 Color: 100% Color Match		
Forms	• Pellets		
Processing Method	• Injection Molding • Profile Extrusion	• Sheet Extrusion • Thermoforming	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.03		ASTM D792
Melt Mass-Flow Rate (230°C/3.8 kg)	0.90	g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.126 in)	6.0E-3 to 7.0E-3	in/in	ASTM D955
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus [2] (0.126 in)	254000	psi	ASTM D638
Tensile Strength [2] (Yield, 0.126 in)	5300	psi	ASTM D638
Tensile Elongation [2] (Yield, 0.126 in)	3.0	%	ASTM D638
Tensile Elongation [2] (Break, 0.126 in)	30	%	ASTM D638
Flexural Modulus [3] (0.126 in)	287000	psi	ASTM D790
Flexural Strength [3] (0.126 in)	8540	psi	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			ASTM D256
-20°F, 0.126 in	6.3	ft·lb/in	
73°F, 0.126 in	10	ft·lb/in	

MAGNUM™ 1150 EM
Trinseo - ABS Resin

Impact	Nominal Value	Unit	Test Method
Instrumented Dart Impact [4]			ASTM D3763
-20°F, 0.126 in, Peak Energy	290	in·lb	
-20°F, 0.126 in, Total Energy	380	in·lb	
73°F, 0.126 in, Peak Energy	265	in·lb	
73°F, 0.126 in, Total Energy	400	in·lb	

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi, Unannealed, 0.126 in	205	°F	
Deflection Temperature Under Load			ASTM D648
66 psi, Annealed, 0.126 in	231	°F	
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed, 0.126 in	180	°F	
Deflection Temperature Under Load			ASTM D648
264 psi, Annealed, 0.126 in	226	°F	
Vicat Softening Temperature	234	°F	ASTM D1525
CLTE - Flow (0.126 in)	5.3E-5	in/in/°F	ASTM D696

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	180	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.10	%
Processing (Melt) Temp	425 to 525	°F
Mold Temperature	80 to 140	°F
Back Pressure	150 to 500	psi
Clamp Tonnage	2.0 to 5.0	tons/in²
Screw L/D Ratio	20.0:1.0	
Screw Compression Ratio	1.5:1.0 to 3.5:1.0	

Injection Notes

Some applications such as plating may require moisture levels as low as 0.05%.

Notes

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

[2] 2.0 in/min

[3] 0.20 in/min

[4] 22.0 ft/sec