MAGNUM™ 347 EZ

ABS Resin

Trinseo

Message:

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 resins 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.
Automotive MAGNUM ABS resins offer a wide range of gloss, viscosity, impact strength and heat properties for use in numerous automotive applications. Melt flow rates from 1 to 12 g/10 min, impact strengths from 2.4 to 11 ft-lb/in and heat distortion temperatures from 171°F to 194°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.
MAGNUM 347 EZ ABS resin is a higher flow version of 342 EZ having slightly lower impact strength. The melt flow rate of approximately 12 g/10min is often suitable for parts with long flow lines and minimal impact requirements.

General Information	
Features	Good Processability
	High Heat Resistance
	Medium Impact Resistance
Uses	Automotive Applications
	Structural Parts
Forms	Pellets
Processing Method	Injection Molding
	Profile Extrusion
	Sheet Extrusion
	Thermoforming

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.04	g/cm³	ASTM D792
--	1050	kg/m³	ISO 1183 [1]
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	12	g/10 min	ASTM D1238
Melt volume-flow rate (220°C/10.0 kg)	43.0	cm³/10min	ISO 1133 [2]
Molding Shrinkage - Flow	0.40 to 0.70	%	ASTM D955
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
-- [3]	2070	MPa	ASTM D638
--	1890	MPa	ISO 527-2 [4]
Tensile Strength			
Yield [5]	41.4	MPa	ASTM D638
Yield	34.0	MPa	ISO 527-2 [6]
Tensile Elongation			

Yield [7]	2.5	%	ASTM D638
Yield	2.2	%	ISO 527-2 [8]
Break [9]	30	%	ASTM D638
Nominal strain at break	> 50	%	ISO 527-2 [10]
Flexural Modulus [11]	2170	MPa	ASTM D790
Flexural Strength [12]	65.5	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy notched impact strength			ISO 179/1eA [13]
-30°C	5.00	kJ/m^2	
23°C	8.00	kJ/m^2	
Charpy impact strength			ISO 179/1eU [14]
-30°C	90.0	kJ/m^2	
23°C	140	kJ/m^2	
Notched Izod Impact [15] (23°C, 3.20 mm)	130	J/m	ASTM D256
Instrumented Dart Impact [16]			ASTM D3763
23°C, 3.20 mm, Peak Energy	28.2	J	
23°C, 3.20 mm, Total Energy	35.0	J	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	85.0	°C	ASTM D648
0.45 MPa	88.0	°C	ISO 75-2 [17]
1.8 MPa, Unannealed, 3.20 mm	73.9	°C	ASTM D648
1.8 MPa	77.0	°C	ISO 75-2 [18]
Vicat Softening Temperature			
--	102	°C	ASTM D1525
50°C/h, B (50N)	94.0	°C	ISO 306 [19]
CLTE - Flow	7.6E-5	cm/cm/°C	ISO 11359-2 [20]
Injection	**Nominal Value**	**Unit**	
Drying Temperature	82.2 to 85.0	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.10	%	
Processing (Melt) Temp	216 to 232	°C	
Mold Temperature	26.7 to 48.9	°C	
Back Pressure	0.345 to 3.45	MPa	
Clamp Tonnage	2.8 to 4.1	kN/cm^2	
Screw L/D Ratio	20.0:1.0		
Screw Compression Ratio	1.5:1.0 to 3.5:1.0		
NOTE			
1.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		

2.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
3.	Type I, 51 mm/min
4.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
5.	Type I, 51 mm/min
6.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
7.	Type I, 51 mm/min
8.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
9.	Type I, 51 mm/min
10.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
11.	Type I, 1.3 mm/min
12.	Type I, 1.3 mm/min
13.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
14.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
15.	0.25 mm Notch Depth
16.	3.39 m/sec
17.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
18.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
19.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
20.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

Recommended distributors for this material

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