TRINSEO™

MAGNUM™ 347 EZ
ABS Resin

Overview

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.

Automotive Specifications

- CHRYSLER MS-DB-200 CPN3457
- CHRYSLER MS-DB-200 CPN508
- GM GMW15572P-ABS-T1

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.04	g/cm³	1.04	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	12	g/10 min	12	g/10 min	ASTM D1238
Molding Shrinkage - Flow	4.0E-3 to 7.0E-3	in/in	0.40 to 0.70	%	ASTM D955
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus [1]	300000	psi	2070	MPa	ASTM D638
Tensile Strength [1] (Yield)	6000	psi	41.4	MPa	ASTM D638
Tensile Elongation [1]					ASTM D638
Yield	2.5	%	2.5	%	
Break	30	%	30	%	
Flexural Modulus [2]	315000	psi	2170	MPa	ASTM D790
Flexural Strength [2]	9500	psi	65.5	MPa	ASTM D790
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Notched Izod Impact [3]					ASTM D256
73°F (23°C), 0.126 in (3.20 mm)	2.5	ft·lb/in	130	J/m	
Instrumented Dart Impact [4]					ASTM D3763
73°F (23°C), 0.126 in (3.20 mm), Peak Energy	250	in·lb	28.2	J	
73°F (23°C), 0.126 in (3.20 mm), Total Energy	310	in·lb	35.0	J	
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load					ASTM D648
66 psi (0.45 MPa), Unannealed, 0.126 in (3.20 mm)	185	°F	85.0	°C	
264 psi (1.8 MPa), Unannealed, 0.126 in (3.20 mm)	165	°F	73.9	°C	
Vicat Softening Temperature	215	°F	102	°C	ASTM D1525

Injection	Nominal Value	(English)	Nominal Value	(SI)
Drying Temperature	180 to 185	°F	82 to 85	°C
Drying Time	2.0 to 4.0	hr	2.0 to 4.0	hr
Suggested Max Moisture	0.10	%	0.10	%
Processing (Melt) Temp	420 to 450	°F	216 to 232	°C
Mold Temperature	80 to 120	°F	27 to 49	°C
Back Pressure	50.0 to 500	psi	0.345 to 3.45	MPa
Clamp Tonnage	2.0 to 3.0	tons/in²	2.8 to 4.1	kN/cm²
Screw L/D Ratio	20.0:1.0		20.0:1.0	
Screw Compression Ratio	1.5:1.0 to 3.5:1.0		1.5:1.0 to 3.5:1.0	