

Styron MAGNUM[®] 347 HP Acrylonitrile Butadiene Styrene (ABS) Resin

Category : Polymer , Thermoplastic , ABS Polymer

Material Notes:

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 117 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 HP ABS resin is a higher flow version of 342 EZ having slightly lower impact strength. The melt flow rate of approximately 12 g/10 min is often suitable for parts with long flow lines and minimal impact requirements. Information provided by Styron

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-MAGNUM-347-HP-Acrylonitrile-Butadiene-Styrene-ABS-Resin.php

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in ³	ASTM D792
Maximum Moisture Content	0.10	0.10	
Linear Mold Shrinkage, Flow	0.0040 - 0.0070 cm/cm	0.0040 - 0.0070 in/in	ASTM D955
Melt Flow	12 g/10 min @Load 3.80 kg, Temperature 230 [°] C	12 g/10 min @Load 8.38 lb, Temperature 446 [°] F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	41.4 MPa	6000 psi	Type I, 51 mm/min; ASTM D638
Elongation at Break	30 %	30 %	Type I, 51 mm/min; ASTM D638
Elongation at Yield	2.5 %	2.5 %	Type I, 51 mm/min; ASTM D638
Tensile Modulus	2.07 GPa	300 ksi	Type I, 51 mm/min; ASTM D638
Flexural Strength	65.5 MPa	9500 psi	Type I, 1.3 mm/min; ASTM D790
Flexural Modulus	2.17 GPa	315 ksi	Type I, 1.3 mm/min; ASTM D790
Izod Impact, Notched	1.30 J/cm @Thickness 3.20 mm, Temperature 23.0 [°] C	2.44 ft-lb/in @Thickness 0.126 in, Temperature 73.4 [°] F	0.25 mm Notch Depth; ASTM D256
	73.9 J	54.5 ft-lb	

Mechanical Properties	Metric	English	Comments
	@Thickness 3.20 mm, Temperature 23.0 Â°C	@Thickness 0.126 in, Temperature 73.4 Â°F	3.39 m/sec, Total Energy; ASTM D3763
	85.0 J	62.7 ft-lb	
	@Thickness 3.20 mm, Temperature 23.0 Â°C	@Thickness 0.126 in, Temperature 73.4 Â°F	3.39 m/sec, Peak Energy; ASTM D3763

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	85.0 Â°C @Thickness 3.20 mm	185 Â°F @Thickness 0.126 in	Unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	73.9 Â°C @Thickness 3.20 mm	165 Â°F @Thickness 0.126 in	Unannealed; ASTM D648
Vicat Softening Point	102 Â°C	216 Â°F	ASTM D1525

Processing Properties	Metric	English	Comments
Melt Temperature	216 - 232 Â°C	421 - 450 Â°F	
Mold Temperature	26.7 - 48.9 Â°C	80.1 - 120 Â°F	
Drying Temperature	82.2 - 85.0 Â°C	180 - 185 Â°F	
Dry Time	2.00 - 4.00 hour	2.00 - 4.00 hour	
Back Pressure	0.345 - 3.45 MPa	50.0 - 500 psi	

Descriptive Properties	Value	Comments
Clamp Tonnage	2.8-4.1 kN/cm ²	
Screw Compression Ratio	1.5:1 to 3.5:1	
Screw L/D Ratio	0.8340277777777778	

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