

Styron Magnum® 9700HF ABS

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Molded

Material Notes:

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. The MAGNUM 9000 series of high gloss ABS resins are designed to offer a wide range of impact strengths and melt flow rates to meet the needs of the durables injection molding markets. The 9000 series products offer typical Izod impact strength values from 210 to 400 J/m and melt flow rates ranging from 2.5 to 7.0 g/10min. The gloss values are typically greater than 95% on the 60. Gardner scale for the highest gloss resins and greater than 90% for those products having a broader range of gloss. MAGNUM 9700HF ABS resin is designed to offer a slightly higher melt flow rate and a broader range of gloss than MAGNUM 9020 while maintaining the impact and tensile strength. Data provided by Dow Chemical. This product line was spun off from Dow Chemical to Styron in 2010.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-Magnum-9700HF-ABS.php

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in ³	ASTM Data
Linear Mold Shrinkage	0.0055 cm/cm	0.0055 in/in	
Melt Flow	6.0 g/10 min @Load 3.80 kg, Temperature 230 °C	6.0 g/10 min @Load 8.38 lb, Temperature 446 °F	ASTM Data

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	109	109	
Tensile Strength, Ultimate	34.5 MPa	5000 psi	ASTM Data
Tensile Strength, Yield	43.4 MPa	6290 psi	ASTM Data
Elongation at Break	50 %	50 %	ASTM Data
Elongation at Yield	2.3 %	2.3 %	ISO Data
Tensile Modulus	2.28 GPa	331 ksi	ASTM Data
Izod Impact, Notched	2.67 J/cm	5.00 ft-lb/in	ASTM Data
Charpy Impact Unnotched	9.00 J/cm ²	42.8 ft-lb/in ²	ISO Data, Low Temp
	NB	NB	ISO Data
Charpy Impact, Notched	0.700 J/cm ²	3.33 ft-lb/in ²	ISO Data, Low Temp

Mechanical Properties	2.20 J/cm ² Metric	10.5 ft-lb/in ² English	ISO Data Comments
Impact Test	54.0 J @Temperature 23.0 Â°C	39.8 ft-lb @Temperature 73.4 Â°F	Instrumented Dart Total Energy

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	96.0 Âµm/m-Â°C @Temperature 20.0 Â°C	53.3 Âµin/in-Â°F @Temperature 68.0 Â°F	ISO data
Deflection Temperature at 0.46 MPa (66 psi)	94.0 Â°C	201 Â°F	Unannealed; ASTM Data
Deflection Temperature at 1.8 MPa (264 psi)	76.7 Â°C	170 Â°F	Unannealed; 103Â°C (217Â°F) annealed; ASTM Data
Vicat Softening Point	106 Â°C	223 Â°F	
Flammability, UL94	HB @Thickness 1.47 mm	HB @Thickness 0.0579 in	

Optical Properties	Metric	English	Comments
Gloss	92 %	92 %	Gardner Gloss, 60Â°

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