

Styron Magnum® 9010 ABS, High Gloss

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 9010 ABS resin is one of the highest gloss resins with a medium impact strength and high flow. MAGNUM 9010 is used primarily in injection molding durable applications like housewares and computer equipment where this level of processability is required. 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-9010-ABS-High-Gloss.php

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in ³	ASTM Data
Melt Density	0.882 g/cc	0.0319 lb/in ³	Melt density
Linear Mold Shrinkage	0.0055 cm/cm	0.0055 in/in	
Melt Flow	7.0 g/10 min @Load 3.80 kg, Temperature 230 °C	7.0 g/10 min @Load 8.38 lb, Temperature 446 °F	ASTM Data

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	107	107	
Tensile Strength, Ultimate	35.9 MPa	5210 psi	ASTM Data
Tensile Strength, Yield	48.3 MPa	7010 psi	ASTM Data
Elongation at Break	45 %	45 %	ASTM Data
Elongation at Yield	2.4 %	2.4 %	ISO Data
Tensile Modulus	2.41 GPa	350 ksi	ASTM Data
Izod Impact, Notched	2.14 J/cm	4.01 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

Mechanical Properties	Metric	English	Comments
Energy Impact, Notched	1.90 J/cm ²	9.04 ft-lb/in ²	ISO Data, Low Temp
Impact Test	45.0 J @Temperature 23.0 Â°C	33.2 ft-lb @Temperature 73.4 Â°F	Instrumented Dart Total Energy

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	92.0 Âµm/m-Â°C @Temperature 20.0 Â°C	51.1 Âµin/in-Â°F @Temperature 68.0 Â°F	ISO data
Specific Heat Capacity	2.03 J/g-Â°C	0.485 BTU/lb-Â°F	
Thermal Conductivity	0.128 W/m-K	0.888 BTU-in/hr-ftÂ²- Â°F	
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)	79.0 Â°C	174 Â°F	Unannealed; 104Â°C (219Â°F) annealed; ASTM Data
Vicat Softening Point	108 Â°C	226 Â°F	

Optical Properties	Metric	English	Comments
Gloss	95 %	95 %	Gardner Gloss, 60Â°

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