

Styron Magnum® 1040 ABS, Very High impact

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Impact Grade, 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 Automotive grades of 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 130 to 590 J/m and heat distortion temperatures from 77.C to 90.C 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 1040 ABS resin is often suitable for applications requiring Izod impact strengths of 530 J/m. This low gloss, very high impact grade is one of the more viscous resins having a melt flow rate of about 2.2 g/10 min. and is often used in door sills and glove boxes. 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-1040-ABS-Very-High-impact.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	2.2 g/10 min @Load 3.80 kg, Temperature 230 °C	2.2 g/10 min @Load 8.38 lb, Temperature 446 °F	ASTM Data

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	41.4 MPa	6000 psi	ASTM Data
Elongation at Yield	2.8 %	2.8 %	ISO Data
Tensile Modulus	2.00 GPa	290 ksi	ASTM Data
Izod Impact, Notched	5.34 J/cm	10.0 ft-lb/in	ASTM Data
Charpy Impact Unnotched	NB	NB	ISO Data
	NB	NB	ISO Data, Low Temp
Charpy Impact, Notched	1.60 J/cm ²	7.61 ft-lb/in ²	ISO Data, Low Temp
	6.30 J/cm ²	30.0 ft-lb/in ²	ISO Data
Impact Test	54.0 J @Temperature 23.0	39.8 ft-lb	Instrumented Dart Total Energy

Mechanical Properties	Metric	English	Comments
Thermal Properties			
		@Temperature 73.4 °F	
CTE, linear, Parallel to Flow	80.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	44.4 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO data
	@Temperature 20.0 $\text{Å}^\circ\text{C}$	@Temperature 68.0 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	93.0 $\text{Å}^\circ\text{C}$	199 $\text{Å}^\circ\text{F}$	Unannealed; ASTM Data
Deflection Temperature at 1.8 MPa (264 psi)	79.4 $\text{Å}^\circ\text{C}$	175 $\text{Å}^\circ\text{F}$	Unannealed; ASTM Data
Vicat Softening Point	107 $\text{Å}^\circ\text{C}$	225 $\text{Å}^\circ\text{F}$	
Optical Properties			
Gloss	52.5 %	52.5 %	Gardner Gloss, 60 Å°

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