

Styron Magnum[®] 2642 ABS, Impact Grade

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Heat Resistant, 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 2600 series of MAGNUM ABS resins are designated for use in healthcare applications. Both high and low gloss resins are available which have passed the USP XXIII Class IV medical testing. Other non-USP classified testing is also done on the MAGNUM 2600 series of ABS resins to evaluate the biocompatibility of the resins. MAGNUM 2642 ABS resin is a low gloss ABS with impact resistance and processability similar to the high gloss MAGNUM 2610 ABS resin. With a melt flow rate of 6 g/10 min. and an Izod impact strength of 160 J/m, MAGNUM 2642 is suitable for many healthcare applications. 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-2642-ABS-Impact-Grade.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	104	104	
Tensile Strength, Yield	41.4 MPa	6000 psi	ASTM Data
Elongation at Yield	2.1 %	2.1 %	ISO Data
Tensile Modulus	1.79 GPa	260 ksi	ASTM Data
Izod Impact, Notched	1.60 J/cm	3.00 ft-lb/in	ASTM Data
Charpy Impact Unnotched	10.0 J/cm ²	47.6 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
	1.30 J/cm ²	6.19 ft-lb/in ²	ISO Data
Impact Test	43.0 J @Temperature 23.0	31.7 ft-lb	Instrumented Dart Total Energy

Mechanical Properties	Metric	English	Comments
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	78.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature 20.0 $\text{Å}^\circ\text{C}$	43.3 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature 68.0 $\text{Å}^\circ\text{F}$	ISO data
Deflection Temperature at 0.46 MPa (66 psi)	91.0 $\text{Å}^\circ\text{C}$	196 $\text{Å}^\circ\text{F}$	Unannealed; ASTM Data
Deflection Temperature at 1.8 MPa (264 psi)	77.0 $\text{Å}^\circ\text{C}$	171 $\text{Å}^\circ\text{F}$	Unannealed; ASTM Data
	96.1 $\text{Å}^\circ\text{C}$	205 $\text{Å}^\circ\text{F}$	Annealed; ASTM Data
Vicat Softening Point	104 $\text{Å}^\circ\text{C}$	219 $\text{Å}^\circ\text{F}$	
Optical Properties	Metric	English	Comments
Gloss	52.5 %	52.5 %	Gardner Gloss, 60 Å°

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