

Avantra® 8530

Data Sheet

Avantra® Ignition Resistant Polystyrene

Avantra® 8530 is an ignition resistant grade of high impact polystyrene with exceptional moldability. It is free of polybrominated diphenylethers and meets UL94V-0 (@ 0.062"/1.5 mm min.) rating. It gives exceptional moldability while maintaining good mechanical and heat resistance properties.

Applications

Avantra® 8530 is best suited for gas-assist molding applications of large size electronic/electrical enclosures.

Typical Properties for Uncolored Products

	Test method ASTM	SI Unit	Value	Unit	English Value
MECHANICAL PROPERTIES					
Tensile Stress at Yield	D638	MPa	25	psi	3650
Tensile Stress at Break	D 638	MPa	19	psi	2730
Tensile Elongation	D 638	%	55	%	55
Flexural Modulus	D 790-1	MPa	2219	psi	320000
Izod Notched Impact Strength 23°C	D 256-A	J/m	107	ft-lbs/in	2.00
THERMAL PROPERTIES					
Vicat Softening Temperature	D 1525	°C	94	°F	201
Temp.of Deflection Under Load at 264 psi	D 648	°C	75	°F	167
PROCESSING					
Nominal Melt Flow Rate (200 °C, 5000g)	D 1238	g/10 min	13.5	g/10 min	13.5
Melt Temperature Range (Molding)	-	°C	200-240	°F	400-460
FLAMMABILITY					
UL (Solid) 1.5mm / All Color	94	Class	V-0		
UL (Solid) 3.2mm / NC & BK	94	Class	5VB		
MISCELLANEOUS PROPERTIES					
Density	D 792	g/cm ³	1.15	g/cm ³	1.15
Water Absorption (Saturation in water at 23°C)		%	<0.15	%	<0.15
Moisture Absorpt. (23°C/50% r.h.)		%	<0.1	%	<0.1
Mold Shrinkage	D 955	%	0.3-0.6	%	0.3-0.6

Processing

Although Avantra® 8530 can be processed by any method applicable to polystyrene-based plastics, it is ideally suitable for use in difficult to fill molds for large electronic/electrical housings. The melt temperature should not exceed 250 °C.

Handling and Safety

Avantra® 8530 is not known to have any ill effect on workers in an adequately ventilated molding shop when it is processed by usual methods used for polystyrene-based plastics. During processing of Avantra® 8530 small quantities of styrene monomer may be released into the atmosphere. At styrene vapor concentrations below 20 ppm no negative effects on health are expected. In our experience, the concentration of styrene does not exceed 1 ppm in well-ventilated workplaces - that is where five to eight air changes per hour are made.

Packaging and Samples

Avantra® 8530 is supplied in pellet form. It has to be stored original containers in a cool, dry place. Avoid direct exposure to sunlight. Avantra® 8530 can also be stored in silos. Samples are available on request.

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