

Data Sheet

Avantra® 8120

Avantra® Ignition Resistant Polystyrene

Avantra® 8120 is a V-0 ignition resistant, easy flow, high impact polystyrene resin for injection molding.

Applications

Avantra® 8120 is primarily designed for television cabinets, business machine enclosures, and appliance components.

Typical Properties for Uncolored Products*

Properties	Test method		SI		English	
	ASTM	Unit	Value	Unit	Value	
Mechanical properties						
Tensile Stress at Yield	ASTM D 638	MPa	26	psi	3800	
Tensile Stress at Break	ASTM D 638	MPa	23	psi	3300	
Tensile Elongation	ASTM D 638	%	65	%	65	
Flexural Modulus	ASTM D 790-1	MPa	2103	psi	305,000	
Notched Izod Impact Strength, 23°C	ASTM D 256-A	J/m	128	ft-lbs/in	2.4	
Rockwell Hardness, (L, M or R) - Scale	ASTM D 785	L	61	L	61	
Thermal properties						
Vicat Softening Temperature	ASTM D 1525	°C	98	°F	209	
Temp. of Deflection Under Load at 264 psi	ASTM D 648	°C	86	°F	188	
Processing						
Nominal Melt Flow Rate (200 °C, 5000g)	ASTM D 1238	g/10 min	5.5	g/10 min	5.5	
Melt Temperature Range (Molding)	-	°C	200-240	°F	400-460	
Flammability						
UL 94(Solid) 1.5mm All Color	UL 94	class	V-0	class	V-0	
UL 94 (Solid) 2 mm Black, Natural	UL 94	class	5VA	class	5VA	
Miscellaneous properties						
Density	ASTM 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	

Processing

Although Avantra® 8120 can be processed by any method applicable to polystyrene-based plastics, it is best suited for injection molding. The melt temperature should not exceed 250 °C.

Handling and Safety

Avantra® 8120 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® 8120 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® 8120 is supplied in pellet form. It has to be stored original containers in a cool, dry place. Avoid direct exposure to sunlight. Avantra® 8120 can also be stored in silos. Samples are available on request.

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