

# Avantra® 8720

# Data Sheet

## Avantra® Ignition Resistant Polystyrene

Avantra® 8720 is a V-0 ignition resistant super-high impact polystyrene resin, which is used for both injection and sheet extrusion.

### Applications

With its high impact strength Avantra® 8720 is best suited for applications such as television cabinets, electronic/electrical components and enclosures, and large point-of-purchase displays.

### Typical Properties for Uncolored Products\*

Properties	Test method	SI		English	
	ASTM	Unit	Value	Unit	Value
<b>Mechanical properties</b>					
Tensile Stress at Yield	ASTM D 638	MPa	30	psi	4300
Tensile Stress at Break	ASTM D 638	MPa	24	psi	3450
Tensile Elongation	ASTM D 638	%	35	%	35
Flexural Modulus	ASTM D 790-1	MPa	2137	psi	310000
Notched Izod Impact Strength, 23°C	ASTM D 256-A	J/m	176	ft-lbs/in	3.3
Rockwell Hardness, (L, M or R) - Scale	ASTM D 785	L	65	L	65
<b>Thermal properties</b>					
Vicat Softening Temperature	ASTM D 1525	°C	100	°F	212
Temp.of Deflection Under Load at 264 psi	ASTM D 648	°C	89	°F	192
<b>Processing</b>					
Nominal Melt Flow Rate (200 °C, 5000g)	ASTM D 1238	g/10 min	4	g/10 min	4
Melt Temperature Range (Molding)	-	°C	200-240	°F	400-460
<b>Flammability</b>					
UL 94(Solid) 1.5mm All Color	UL 94	class	V-0	class	V-0
UL 94(Solid) 3mm All Color	UL 94	class	5VA	class	5VA
<b>Miscellaneous properties</b>					
Density	ASTM D 792	g/cm <sup>3</sup>	1.15	g/cm <sup>3</sup>	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	ASTM D 955	%	0.3-0.6	%	0.3-0.6

### Processing

Although Avantra® 8720 can be processed by any method applicable to polystyrene-based plastics, it is ideally suitable for use in injection molding and sheet extrusion. The melt temperature should not exceed 250 °C.

### Handling and Safety

Avantra® 8720 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® 8720 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® 8720 is supplied in pellet form. It has to be stored original containers in a cool, dry place. Avoid direct exposure to sunlight. Avantra® 8720 can also be stored in silos. Samples are available on request.

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