

# Avantra® 8130

# Data Sheet

## Avantra® Ignition Resistant Polystyrene

Avantra® 8130 is a ignition resistant grade of high impact polystyrene. It is free of polybrominated diphenylethers and meets UL94V-0 ratings. It gives an excellent balance of easy processing and good mechanical properties, in particular, stiffness.

### Applications

Avantra® 8130 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
<b>Mechanical properties</b>					
Tensile Stress at Yield	ASTM D638	MPa	26	psi	3750
Tensile Stress at Break	ASTM D 638	MPa	23	psi	3300
Tensile Elongation	ASTM D 638	%	70	%	70
Flexural Modulus	ASTM D 790-1	MPa	2206	psi	320,000
Izod Notched Impact Strength, 23°C	ASTM D 256-A	J/m	117	ft-lbs/in	2.2
Rockwell Hardness, (L, M or R) - Scale	ASTM D 785	L	61	L	61
<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	84	°F	183
<b>Processing</b>					
Nominal Melt Flow Rate (200 °C, 5000g)	ASTM D 1238	g/10 min	4.5	g/10 min	4.5
Melt Temperature Range (Molding)	-	°C	200-240	°F	400-460
<b>Flammability</b>					
UL (Solid) All Color 1.5mm	UL 94	class	V0	class	V0
UL (Solid) White 2.2mm	UL 94	class	5VA/5VB	class	5VA/5VB
UL (Foam) 2.5mm	UL 94	class	V0	class	V0
<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® 8130 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® 8130 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® 8130 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® 8130 is supplied in pellet form. It has to be stored original containers in a cool, dry place. Avoid direct exposure to sunlight. Avantra® 8130 can also be stored in silos. Samples are available on request.

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