

# Avantra® 8731

# Preliminary Data Sheet

## Avantra® Ignition Resistant Polystyrene

Avantra® 8731 is a ignition resistant grade of high impact polystyrene with. It is free of polybrominated diphenylethers and meets UL94V-0 (@ 0.062"/1.5 mm min.) rating. It exhibits excellent mechanical and heat resistance properties.

### Applications

Avantra® 8731 is recommended for sheet extrusion and injection molding

### Typical Properties for Uncolored Products

	Test method ASTM	SI Unit	Value	Unit	English Value
<b>MECHANICAL PROPERTIES</b>					
Tensile Stress at Yield	D638	MPa	30	psi	4150
Tensile Stress at Break	D 638	MPa	22	psi	3000
Tensile Elongation	D 638	%	35	%	35
Flexural Modulus	D 790-1	MPa	2145	psi	299000
Izod Notched Impact Strength 23°C	D 256-A	J/m	177	ft-lbs/in	3.3
<b>THERMAL PROPERTIES</b>					
Vicat Softening Temperature	D 1525	°C	TBD	°F	TBD
Temp.of Deflection Under Load at 264 psi	D 648	°C	TBD	°F	TBD
<b>PROCESSING</b>					
Nominal Melt Flow Rate (200 °C, 5000g)	D 1238	g/10 min	5	g/10 min	5
Melt Temperature Range (Molding)	-	°C	200-240	°F	400-460
<b>FLAMMABILITY</b>					
UL (Solid) NC / BK 1.5mm	94	Class	V-0		
<b>MISCELLANEOUS PROPERTIES</b>					
Density	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	D 955	%	0.3-0.6	%	0.3-0.6

### Processing

Although Avantra® 8731 can be processed by any method applicable to polystyrene-based plastics. It is ideally suited for sheet extrusion and injection molding. The melt temperature should not exceed 250 °C.

### Handling and Safety

Avantra® 8731 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® 8731 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® 8731 is supplied in pellet form. It has to be stored original containers in a cool, dry place. Avoid direct exposure to sunlight. Avantra® 8731 can also be stored in silos. Samples are available on request.

\*Important: The descriptions, designs, and data contained herein are presented for your information only. Because there are many factors under your control which may affect processing or applications/use it is necessary for you to make appropriate tests to determine whether the product is suitable for your particular purpose prior to use. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, OR DATA MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, DATA OR DESIGNS PROVIDED BE PRESUMED TO BE A PART OF OUR TERMS AND CONDITIONS OF SALE. Further, you expressly understand and agree that the descriptions, designs, and data furnished by Polymer Products hereunder are given gratis and Polymer Products assumes no obligation or liability for same or results obtained from use thereof, all such being given to you and accepted by you at your risk. Any laboratory flammability tests set forth herein are not intended to reflect hazards prescribed by materials under actual fire conditions. As governmental regulations and use conditions may change, it is the Buyer's responsibility to determine the suitability of Polymer Products products for specific applications.