

Avantra® 8080

Data Sheet

Avantra® Ignition Resistant Polystyrene

Avantra® 8080 is a high flow, V-0, ignition resistant grade of high impact polystyrene for molding applications. This product is only available in pre-colored black.

Applications

The high flow properties of Avantra® 8080 are ideally suited for use in difficult to fill molds designed for large dimension television cabinets.

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	3700
Tensile Stress at Break	ASTM D 638	MPa	21	psi	3000
Tensile Elongation	ASTM D 638	%	55	%	55
Flexural Modulus	ASTM D 790-1	MPa	2248	psi	326000
Notched Izod Impact Strength, 23°C	ASTM D 256-A	J/m	112	ft-lbs/in	2.1
Rockwell Hardness, (L, M or R) - Scale	ASTM D 785	L	62	L	62
Thermal properties					
Vicat Softening Temperature	ASTM D 1525	°C	97	°F	207
Temp.of Deflection Under Load at 264 psi	ASTM D 648	°C	84	°F	183
Processing					
Nominal Melt Flow Rate (200 °C, 5000g)	ASTM D 1238	g/10 min	13	g/10 min	13
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
Miscellaneous properties					
Density	ASTM D 792	g/cm ³	1.16	g/cm ³	1.16
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® 8080 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® 8080 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® 8080 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® 8080 is supplied in pellet form. It has to be stored original containers in a cool, dry place. Avoid direct exposure to sunlight. Avantra® 8080 can also be stored in silos. Samples are available on request.

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