

Data Sheet

Endura® PS-100

Endura® Flame Retardant Concentrate for High Impact Polystyrene

Endura® PS-100 is a polystyrene-based halogenated flame-retardant concentrate designed for compounding, extrusion, and injection molding applications to meet UL-94 V-0, V-2 and 5V-A flammability criteria. Endura® PS-100 offers excellent dispersion of flame-retardant additives. Endura® PS-100 can be used to produce a compound with a good balance of physical, mechanical and flame-retardant properties. Endura® PS-100 contains active brominated flame-retardants with antimony oxide synergist, modifiers and stabilizers.

Typical Properties*

Property	Test Method	Result
Specific Gravity	ASTM D-792	1.6
Recommended Processing Temperature		380 – 450 °F

Flammability Data for Endura® PS-100 in a Typical HIPS Resin

Flammability Test	Loading(%)	Test Thickness(in)	Performance Rating
UL-94	30.0	0.062	V-0
UL-94	28.0	0.062	V-1
UL-94	26.0	0.062	V-2

Physical Data for 30% Endura® PS-100 in a Typical HIPS Resin

Property	Test Method	Result
Specific Gravity	ASTM-D-792	1.15
Melt Flow Rate, g/10 min	ASTM-D-1238 'G'	7.5
Tensile Strength, Yield, psi	ASTM-D-638	3650
Tensile Strength, Break, psi	ASTM-D-638	3500
Flexural Modulus 3PT, psi	ASTM-D-790	350,000
Elongation at Break, %	ASTM-D-638	45
Impact, Izod Notched, ft-lb/in	ASTM-D-256	1.90
Impact, Gardner, in-lb	ASTM-D-3029	63

Concentrates Offer Many Advantages

Improved Properties - The flame retardant ingredients in our concentrates are predispersed and thoroughly wetted by the carrier resin. This results in improved flame retardancy and physical properties and in many cases lower loadings when compared to free powders.

Cleaner, Improved Material Handling - Plastics processors who use concentrates rather than dry powders benefit from a cleaner plant and reduced dust exposure. Material handling is simplified with free-flowing, non-bridging concentrates that can be transferred easily with pneumatic conveyors.

Handling and Use

Endura® flame-retardant concentrates are considered to be non-hazardous under normal conditions. Material Safety Data Sheets are available. You are encouraged to read and understand these documents before using the product. Since these products are used at elevated temperatures, fumes may be generated under some use conditions. Ventilation is necessary to minimize employee exposure to these fumes.

Packaging and Samples

Standard packaging for concentrates is in 1,000-lb boxes, lined and on pallets. Optional are 250-lb fiber drums and 50-lb bags. To meet particular needs, boxes up to 1,400 lb can be supplied. Samples are available on request by calling Polymer Products' toll-free order number: 1-800-836-8589.

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