

BASF Polystyrol® 158 K Polystyrene (Global)

Category : Polymer , Thermoplastic , Polystyrene (PS) , Polystyrene, Molded, Unreinforced

Material Notes:

Heat-resistant, rapid freezing general-purpose grade. Suitable for expanded film and for blending with Styrolux and impact-modified Polystyrol in heat contact applications (e.g. coffee cups). Data was collected by ISO methods and provided by BASF.

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Polystyrol-158-K-Polystyrene-Global.php

Physical Properties	Metric	English	Comments
Density	1.05 g/cc	0.0379 lb/in ³	
Water Absorption	0.10 %	0.10 %	
Moisture Absorption at Equilibrium	0.10 %	0.10 %	
Linear Mold Shrinkage, Flow	0.0045 cm/cm	0.0045 in/in	
Melt Flow	3.0 g/10 min @Load 5.00 kg, Temperature 200 °C	3.0 g/10 min @Load 11.0 lb, Temperature 392 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	55.0 MPa	7980 psi	
Elongation at Break	3.0 %	3.0 %	
Tensile Modulus	3.30 GPa	479 ksi	
Charpy Impact Unnotched	1.70 J/cm ²	8.09 ft-lb/in ²	
Charpy Impact, Notched	0.300 J/cm ²	1.43 ft-lb/in ²	
Tensile Creep Modulus, 1 hour	3300 MPa	479000 psi	
Tensile Creep Modulus, 1000 hours	2600 MPa	377000 psi	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 µm/m-°C @Temperature 20.0 °C	44.4 µin/in-°F @Temperature 68.0 °F	
Deflection Temperature at 0.46 MPa (66 psi)	98.0 °C	208 °F	
Deflection Temperature at 1.8 MPa (264 psi)	86.0 °C	187 °F	
Vicat Softening Point	101 °C	214 °F	

Thermal Properties	Metric	English	Comments
Glass Transition Temp. Tg	100 °C	212 °F	
Flammability, UL94	HB	HB	
	@Thickness 3.18 mm	@Thickness 0.125 in	
Oxygen Index	18 %	18 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	$\geq 1.00\text{e}+15$ ohm-cm	$\geq 1.00\text{e}+15$ ohm-cm	
Surface Resistance	$1.00\text{e}+14$ ohm	$1.00\text{e}+14$ ohm	
Dielectric Constant	2.5	2.5	
	@Frequency 100 Hz	@Frequency 100 Hz	
	2.5	2.5	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dissipation Factor	0.000050	0.000050	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	0.000090	0.000090	
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	425 V	425 V	

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