

## SYNTHOS Krasten® 172 General Purpose Polystyrene

Category : Polymer , Thermoplastic , Polystyrene (PS) , Polystyrene, Heat Resistant Grade

### Material Notes:

Very good heat resistance and mechanical strength. Examples of Application: Extrusion – cups for hot drinks, shower enclosure panels, lightweight XPS sheets. Blends with high impact polystyrene, SBS, thermoformed packaging. Injection moulding – vegetable boxes for refrigerators, CD and DVD cases. Synthos was formerly known as Kaucuk. All information provided by Synthos.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SYNTHOS-Krasten-172-General-Purpose-Polystyrene.php](http://www.lookpolymers.com/polymer_SYNTHOS-Krasten-172-General-Purpose-Polystyrene.php)

Physical Properties	Metric	English	Comments
Density	1.05 g/cc	0.0379 lb/in <sup>3</sup>	ISO 1183
Linear Mold Shrinkage	0.0020 - 0.0050 cm/cm	0.0020 - 0.0050 in/in	Internal; 50x50mm
Melt Flow	2.8 - 3.5 g/10 min @Load 5.00 kg, Temperature 200 °C	2.8 - 3.5 g/10 min @Load 11.0 lb, Temperature 392 °F	Granulate; ISO 1133/H

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	150 MPa	21800 psi	H 358/30; Ø 50x4mm; ISO 2039-1
Tensile Strength at Break	56.0 MPa	8120 psi	5mm/min; ISO 527-2/1A/5
Elongation at Break	3.0 %	3.0 %	50mm/min; ISO 527-2/1A/5
Tensile Modulus	3.20 GPa	464 ksi	1mm/min; ISO 527-2/1A/1
Flexural Strength	100 MPa	14500 psi	2mm/min; 80x10x4mm; ISO 178
Izod Impact, Unnotched (ISO)	12.0 kJ/m <sup>2</sup> @Temperature 23.0 °C	5.71 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	80x10x4mm; ISO 180/1U
Charpy Impact Unnotched	1.60 J/cm <sup>2</sup> @Temperature 23.0 °C	7.61 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	80x10x4mm; ISO 179/1eU
	2.60 J/cm <sup>2</sup> @Temperature 23.0 °C	12.4 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	80x10x4mm; ISO 179/1fU

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	85.0 °C	185 °F	80x10x4mm; ISO 75-2/ Af
Vicat Softening Point	101 °C	214 °F	50°C/h; 50N; 10x10x4mm; ISO 306/B50

Thermal Properties	105 °C Metric	221 °F English	50°C/h; 10N; 10x10x4mm; ISO 500/100 Comments
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	Tested in EZÚ Praha
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	Tested in EZÚ Praha
Glow Wire Test	650 °C	1200 °F	Ø 93x3mm; IEC 695-2-1

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+16 ohm-cm	>= 1.00e+16 ohm-cm	500V; Ø 93x3mm; IEC 93
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	500V; Ø 93x3mm; IEC 93
Dielectric Constant	<= 2.7 @Frequency 50 Hz	<= 2.7 @Frequency 50 Hz	500V; Ø 93x3mm; IEC 250
Dielectric Strength	>= 60.0 kV/mm	>= 1520 kV/in	Transformer Oil; Ø 93x3mm; IEC 243-1
Dissipation Factor	<= 0.0020 @Frequency 50 Hz	<= 0.0020 @Frequency 50 Hz	500V; Ø 93x3mm; IEC 250
Comparative Tracking Index	>= 250 V	>= 250 V	Solution A; Ø 93x3mm; IEC 112

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