Material Data Sheet: Z-HIPS

Physical Properties	Metric	English	Comments
Specific Gravity	1.04 g/cm^3	8.679 lbs/gal	ASTM D792
Maximum Moisture Content	0.010	0.010	
Linear Mold Shrinkage, Flow	0.0040 - 0.0080 cm/cm Thickness 3.20 mm	0.0040 - 0.0080 in/in Thickness 0.126 in	ASTM D955
Melt Flow	6.0 g/10 min Load 5.00 kg, Temperature 200 °C	6.0 g/10 min Load 11.0 lb, Temperature 392 °F	ASTM D1238 (G)
	16 g/10 min Load 3.80 kg, Temperature 230 °C	16 g/10 min Load 8.38 lb, Temperature 446 °F	ASTM D1238 (I)
	69 g/10 min Load 10.0 kg, Temperature 220 °C	69 g/10 min Load 22.0 lb, Temperature 428 °F	ASTM D1238 (G)

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	109	109	ASTM D785
Tensile Strength, Yield	34.3 MPa Thickness 3.20 mm	4980 psi Thickness 0.126 in	50mm/min; ASTM D638
Elongation at Break	79 % Thickness 3.20 mm	79 % Thickness 0.126 in	50mm/min; ASTM D638
Elongation at Yield	4.0 % Thickness 3.20 mm	4.0 % Thickness 0.126 in	50mm/min; ASTM D638
Tensile Modulus	2.26 GPa Thickness 3.20 mm	327 ksi Thickness 0.126 in	1mm/min; ASTM D638
Flexural Yield Strength	53.9 MPa Thickness 3.20 mm	7820 psi Thickness 0.126 in	15mm/min; ASTM D790
Flexural Modulus	2.67 GPa Thickness 3.20 mm	387 ksi Thickness 0.126 in	15mm/min; ASTM D790
Izod Impact, Notched	0.490 J/cm Thickness 3.20 mm, Temperature -30.0 °C	0.918 ft-lb/in Thickness 0.126 in, Temperature -22.0 °F	ASTM D256

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	
Dielectric Strength	40.0 kV/mm	1020 kV/in	
Arc Resistance	120 - 180 sec	120 - 180 sec	ASTM D495

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	92.0 °C Thickness 6.40 mm	198 °F Thickness 0.252 in	Unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	83.0 °C Thickness 6.40 mm	181 °F Thickness 0.252 in	Unannealed; ASTM D648
Vicat Softening Point	95.0 °C Load 5.00 kg	203 °F Load 11.0 lb	50°C/h; ASTM D1525
UL RTI, Electrical	50.0 °C Thickness ≥1.50 mm	122 °F Thickness ≥0.0591 in	
	50.0 °C Thickness ≥3.00 mm	122 °F Thickness ≥0.118 in	
UL RTI, Mechanical with Impact	50.0 °C Thickness ≥1.50 mm	122 °F Thickness ≥0.0591 in	
	50.0 °C Thickness ≥3.00 mm	122 °F Thickness ≥0.118 in	
UL RTI, Mechanical without Impact	50.0 °C Thickness ≥1.50 mm	122 °F Thickness ≥0.0591 in	
	50.0 °C Thickness ≥3.00 mm	122 °F Thickness ≥0.118 in	
Flammability, UL94	HB Thickness ≥1.60 mm	HB Thickness ≥0.0630 in	
	HB Thickness ≥3.20 mm	HB Thickness ≥0.126 in	

The information presented are typical values intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Final properties of the material can be impacted (+/-) by part design, end-use conditions, test conditions, etc. Actual values will vary with build conditions. Product specifications are subject to change without notice.

The performance characteristics of these materials may vary according to application, operating conditions, or end-use. Each user is responsible for determining that the Zortrax material is safe, lawful and technically suitable for the inttended application, as well as for identifying the proper disposal (or recycling) method consistent with applicable environmental laws and regulations. Zortrax makes no warranties of any kind, express or implied including but not limited to the warranties of merchantability, fitness for a particular use.

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Entered in the Register of Entrepreneurs of the National Court Register kept by the District Court in Olsztyn, VIII Commercial Division of the National Court Register, under KRS number 0000564079, with a share capital of PLN 7 462 500 paid in full.