

Idemitsu Kosan Xarec® WA 550 SPS, 30% Glass Filled

Category : Polymer , Thermoplastic , Polystyrene (PS) , Syndiotactic Polystyrene (SPS) , Syndiotactic Polystyrene (SPS) with Glass or Carbon Fiber

Material Notes:

Crystalline Polymer, Glass Filled. Used in Automotive and Industrial applications

Order this product through the following link:

http://www.lookpolymers.com/polymer_Idemitsu-Kosan-Xarec-WA-550-SPS-30-Glass-Filled.php

Physical Properties	Metric	English	Comments
Density	1.27 g/cc	0.0459 lb/in ³	
Filler Content	30 %	30 %	
Water Absorption	0.010 %	0.010 %	24 hrs., 50% RH
Linear Mold Shrinkage, Flow	0.0010 - 0.0030 cm/cm	0.0010 - 0.0030 in/in	
Linear Mold Shrinkage, Transverse	0.0030 - 0.0060 cm/cm	0.0030 - 0.0060 in/in	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	135 MPa	19600 psi	
Elongation at Break	1.8 %	1.8 %	
Tensile Modulus	10.0 GPa	1450 ksi	
Flexural Yield Strength	200 MPa	29000 psi	
Flexural Modulus	9.80 GPa	1420 ksi	
Izod Impact, Notched (ISO)	12.0 kJ/m ²	5.71 ft-lb/in ²	
Izod Impact, Unnotched (ISO)	39.0 kJ/m ²	18.6 ft-lb/in ²	
Charpy Impact Unnotched	4.70 J/cm ²	22.4 ft-lb/in ²	
Charpy Impact, Notched	1.30 J/cm ²	6.19 ft-lb/in ²	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	20.0 Åµm/m-Å°C	11.1 Åµin/in-Å°F	
	@Temperature -30.0 - 30.0 Å°C	@Temperature -22.0 - 86.0 Å°F	
CTE, linear, Transverse to Flow	44.0 Åµm/m-Å°C	24.4 Åµin/in-Å°F	
Deflection Temperature at 0.46 MPa (66 psi)	270 Å°C	518 Å°F	

Thermal Properties <small>Deflection Temperature at 1.8 MPa (264 psi)</small>	Metric °C	English	Comments
UL RTI, Electrical	120 Â°C	248 Â°F	UL746B
UL RTI, Mechanical with Impact	105 Â°C	221 Â°F	UL746B
UL RTI, Mechanical without Impact	105 Â°C	221 Â°F	UL746B
Flammability, UL94	HB @Thickness 0.750 mm	HB @Thickness 0.0295 in	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	
Dielectric Constant	3.1	3.1	
Dielectric Strength	25.0 kV/mm	635 kV/in	ASTM D145
Dissipation Factor	0.0010	0.0010	IEC 60250
Arc Resistance	120 - 180 sec	120 - 180 sec	ASTM D495
Comparative Tracking Index	400 - 600 V	400 - 600 V	IEC 60112
Hot Wire Ignition, HWI	60 - 120 sec @Thickness 1.50 mm	60 - 120 sec @Thickness 0.0591 in	UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs @Thickness 1.50 mm	>= 120 arcs @Thickness 0.0591 in	UL 746A
High Voltage Arc-Tracking Rate, HVTR	0.000 - 10.0 mm/min	0.000 - 0.394 in/min	UL746A

Processing Properties	Metric	English	Comments
Melt Temperature	280 - 310 Â°C	536 - 590 Â°F	
Mold Temperature	50.0 - 80.0 Â°C	122 - 176 Â°F	
	130 - 155 Â°C	266 - 311 Â°F	For optimal surface finish

Descriptive Properties	Value	Comments
Comments	Optimized for heat & chemical resistance	

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