

Idemitsu Kosan Xarec® WA 204 SPS, 20% Glass Filled

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

Material Notes:

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

Order this product through the following link:

http://www.lookpolymers.com/polymer_Idemitsu-Kosan-Xarec-WA-204-SPS-20-Glass-Filled.php

Physical Properties	Metric	English	Comments
Density	1.17 g/cc	0.0423 lb/in ³	ISO 1183 B
Filler Content	20 %	20 %	Glass
Moisture Absorption	0.0100 %	0.0100 %	24 hours, 50% RH
Linear Mold Shrinkage, Flow	0.002 - 0.004 cm/cm	0.002 - 0.004 in/in	
Linear Mold Shrinkage, Transverse	0.003 - 0.005 cm/cm	0.003 - 0.005 in/in	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	105 MPa	15200 psi	ISO 527
Elongation at Break	2.3 %	2.3 %	ISO 527
Tensile Modulus	7.30 GPa	1060 ksi	ISO 527
Flexural Strength	160 MPa	23200 psi	ISO 178
Flexural Modulus	6.70 GPa	972 ksi	ISO 178
Izod Impact, Notched (ISO)	11.0 kJ/m ² @Temperature 23.0 °C	5.23 ft-lb/in ² @Temperature 73.4 °F	ISO 180
Izod Impact, Unnotched (ISO)	37.0 kJ/m ²	17.6 ft-lb/in ²	ISO 180
Charpy Impact Unnotched	4.20 J/cm ² @Temperature 23.0 °C	20.0 ft-lb/in ² @Temperature 73.4 °F	ISO 179
Charpy Impact, Notched	1.10 J/cm ² @Temperature 23.0 °C	5.24 ft-lb/in ² @Temperature 73.4 °F	ISO 179

Thermal Properties	Metric	English	Comments
	29.0 Åµm/m-Å°C	16.1 Åµin/in-Å°F	

CTE, linear, Parallel to Flow Thermal Properties	Metric @ Temperature -30.0 - 30.0 Â°C	English @ Temperature -22.0 - 86.0 Â°F	Comments
CTE, linear, Transverse to Flow	61.0 Âµm/m-Â°C	33.9 Âµin/in-Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	265 Â°C	509 Â°F	ISO 75B
Deflection Temperature at 1.8 MPa (264 psi)	235 Â°C	455 Â°F	ISO 75A
UL RTI, Electrical	110 Â°C	230 Â°F	UL746B
UL RTI, Mechanical with Impact	105 Â°C	221 Â°F	UL746B
UL RTI, Mechanical without Impact	110 Â°C	230 Â°F	UL746B
Flammability, UL94	HB @Thickness 0.750 mm	HB @Thickness 0.0295 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1e+16 ohm-cm	1e+16 ohm-cm	IEC 93
Dielectric Constant	3.1	3.1	IEC 250
Dielectric Strength	28.0 kV/mm	711 kV/in	ASTM D149
Dissipation Factor	0.0010	0.0010	IEC60250
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	285 - 310 Â°C	545 - 590 Â°F	pre-drying not required
Mold Temperature	50.0 - 80.0 Â°C	122 - 176 Â°F	
	130 - 155 Â°C	266 - 311 Â°F	for optimal gloss and heat resistance

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