

## Idemitsu Kosan Xarec<sup>®</sup> EA 522 SPS, 22% Glass Filled

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

### Material Notes:

Crystalline Polymer, Glass Filled, Ignition Resistant, Impact Modified. Used in Electronic and Electrical applications

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Idemitsu-Kosan-Xarec-EA-522-SPS-22-Glass-Filled.php](http://www.lookpolymers.com/polymer_Idemitsu-Kosan-Xarec-EA-522-SPS-22-Glass-Filled.php)

Physical Properties	Metric	English	Comments
Density	1.32 g/cc	0.0477 lb/in <sup>3</sup>	
Filler Content	22 %	22 %	
Water Absorption	0.010 %	0.010 %	24 hrs., 50% RH
Linear Mold Shrinkage, Flow	0.0020 - 0.0040 cm/cm	0.0020 - 0.0040 in/in	
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	100 MPa	14500 psi	
Elongation at Break	2.3 %	2.3 %	
Tensile Modulus	8.00 GPa	1160 ksi	
Flexural Yield Strength	155 MPa	22500 psi	
Flexural Modulus	7.50 GPa	1090 ksi	
Izod Impact, Notched (ISO)	11.0 kJ/m <sup>2</sup>	5.23 ft-lb/in <sup>2</sup>	
Izod Impact, Unnotched (ISO)	34.0 kJ/m <sup>2</sup>	16.2 ft-lb/in <sup>2</sup>	
Charpy Impact Unnotched	3.90 J/cm <sup>2</sup>	18.6 ft-lb/in <sup>2</sup>	
Charpy Impact, Notched	1.20 J/cm <sup>2</sup>	5.71 ft-lb/in <sup>2</sup>	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	24.0 Åµm/m-Å°C	13.3 Åµin/in-Å°F	
	@Temperature -30.0 - 30.0 Å°C	@Temperature -22.0 - 86.0 Å°F	
CTE, linear, Transverse to Flow	53.0 Åµm/m-Å°C	29.4 Åµin/in-Å°F	
Deflection Temperature at 0.46 MPa (66 psi)	265 Å°C	509 Å°F	

Thermal Properties <small>Deflection Temperature at 1.8 MPa (264 psi)</small>	Metric °C	English	Comments
UL RTI, Electrical	125 Å°C	257 Å°F	UL746B
UL RTI, Mechanical with Impact	120 Å°C	248 Å°F	UL746B
UL RTI, Mechanical without Impact	120 Å°C	248 Å°F	UL746B
Flammability, UL94	V-0	V-0	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	5VA	5VA	
	@Thickness 2.30 mm	@Thickness 0.0906 in	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	
Dielectric Constant	3.0	3.0	
Dielectric Strength	35.0 kV/mm	889 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	60 - 120 sec	UL 746A
	@Thickness 1.50 mm	@Thickness 0.0591 in	
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A
	@Thickness 1.50 mm	@Thickness 0.0591 in	
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 Å°C	536 - 590 Å°F	
Mold Temperature	50.0 - 80.0 Å°C	122 - 176 Å°F	
	130 - 155 Å°C	266 - 311 Å°F	For optimal surface finish

Descriptive Properties	Value	Comments
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Comments Improved tensile elongation

## **Contact Songhan Plastic Technology Co.,Ltd.**

**Website : [www.lookpolymers.com](http://www.lookpolymers.com)**

**Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)**

**Tel : +86 021-51131842**

**Mobile : +86 13061808058**

**Skype : lookpolymers**

**Address : United North Road 215,Fengxian District, Shanghai City,China**