

XAREC™ EA 543

Syndiotactic Polystyrene

Idemitsu Kosan Co., Ltd.

Message:

Crystalline Polymers - 40% Glass Filled, Impact Modified, Ignition Resistant Polymer for Electronic Connector Applications

General Information			
UL YellowCard	E48268-519720		
Filler / Reinforcement	Glass fiber reinforced material, 40% filler by weight		
Additive	Impact modifier		
Features	Impact modification		
	Crystallization		
	Flame retardant		
Uses	Electrical/Electronic Applications Connector		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.50	g/cm ³	ISO 1183
Molding Shrinkage			Internal method
Vertical flow direction: 2.00mm	0.30 - 0.70	%	Internal method
Flow direction: 2.00mm	0.10 - 0.30	%	Internal method
Water Absorption ¹ (Equilibrium, 23°C, 50% RH)	0.020	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	12900	MPa	ISO 527-2
Tensile Stress (Break)	130	MPa	ISO 527-2
Tensile Strain (Break)	1.6	%	ISO 527-2
Flexural Modulus	13100	MPa	ISO 178
Flexural Stress	200	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	11	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	29	kJ/m ²	ISO 179
Notched Izod Impact (23°C)	9.0	kJ/m ²	ISO 180
Unnotched Izod Impact Strength (23°C)	26	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed ²	265	°C	ISO 75-2/B

1.8 MPa, not annealed ³	245	°C	ISO 75-2/A
1.8 MPa, not annealed ⁴	240	°C	ISO 75-2/A
Linear thermal expansion coefficient			TMA
Flow: -30 to 30°C	1.6E-5	cm/cm/°C	TMA
Lateral: -30 to 30°C	2.9E-5	cm/cm/°C	TMA
RTI Elec	125	°C	UL 746
RTI Imp	110	°C	UL 746
RTI	110	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+16	ohms·cm	IEC 60093
Dielectric Strength	35	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	3.50		IEC 60250
Dissipation Factor	3.0E-3		IEC 60250
Arc Resistance	PLC 6		ASTM D495
Comparative Tracking Index (CTI) ⁵	PLC 2		IEC 60112
High Amp Arc Ignition (HAI)			UL 746
1.50 mm	PLC 0		UL 746
3.00 mm	PLC 0		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 0		UL 746
Hot-wire Ignition (HWI)			UL 746
1.50 mm	PLC 0		UL 746
3.00 mm	PLC 0		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	3.0 - 5.0	hr	
Processing (Melt) Temp	280 - 310	°C	
Mold Temperature	50.0 - 80.0	°C	
Injection instructions			
Mold Temperature for optimal gloss and heat resistance: 130 to 155°C			
NOTE			
1.	24 hrs		
2.	150°C tool		
3.	150°C tool		
4.	80°C tool		
5.	Solution A		

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