

Vyncolit® X613

Phenolic

Vyncolit N.V.

Message:

Vyncolit® X613 is a glass fiber and glass beads reinforced phenolic molding compound with high mechanical and thermal properties and excellent electrical insulation properties.

General Information			
UL YellowCard	E167521-225075		
Filler / Reinforcement	Micro glass bead \glass fiber, 45% filler by weight		
Agency Ratings	EU 2002/96/EC (WEEE) 3		
	EU 2006/122/EC		
RoHS Compliance	RoHS compliance		
Appearance	Black		
	Green		
Processing Method	Resin transfer molding		
	Compression molding		
	Injection molding		
Part Marking Code (ISO 11469)	>PF-(GF+GB)45		
Physical	Nominal Value	Unit	Test Method
Density	1.60	g/cm ³	ISO 1183
Apparent Density	0.64	g/cm ³	ISO 60
Molding Shrinkage	0.35	%	ISO 2577
Water Absorption (23°C, 24 hr)	0.080	%	ISO 62
Post Shrinkage	0.090	%	ISO 2577
Flexural Strain at Break	1.6	%	ISO 178
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (Injection Molded)	13000	MPa	ISO 527-2
Tensile Stress (Break, Injection Molded)	100	MPa	ISO 527-2
Tensile Strain (Break, Injection Molded)	0.80	%	ISO 527-2
Flexural Modulus (Injection Molded)	12000	MPa	ISO 178
Flexural Stress (Injection Molded)	190	MPa	ISO 178
Compressive Stress	260	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (Injection Molded)	3.8	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (Injection Molded)	13	kJ/m ²	ISO 179

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	213	°C	ISO 75-2/A
Linear thermal expansion coefficient			ASTM E831
Flow	1.9E-5	cm/cm/°C	ASTM E831
Lateral	5.5E-5	cm/cm/°C	ASTM E831
RTI Elec	150	°C	UL 746
RTI Imp	150	°C	UL 746
RTI	150	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.9E+13	ohms	IEC 60093
Volume Resistivity	7.0E+14	ohms·cm	IEC 60093
Dielectric Strength	17	kV/mm	IEC 60243-1
Comparative Tracking Index	175	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	V-0		UL 94
Injection	Nominal Value	Unit	
Rear Temperature	60.0	°C	
Middle Temperature	73.9	°C	
Nozzle Temperature	87.8	°C	
Processing (Melt) Temp	98.9 - 116	°C	
Mold Temperature	166 - 188	°C	
Injection Pressure	100 - 248	MPa	
Holding Pressure	30.0 - 89.6	MPa	
Back Pressure	4.83 - 15.2	MPa	
Injection instructions			

Injection Time: 2 to 8 secHold Time: 1 to 5 sec/mm

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

