

Vyncolit® X689

Phenolic

Vyncolit N.V.

Message:

Vyncolit® X689 is a glass fiber reinforced and molybdenumdisulfide modified phenolic molding compound with excellent mechanical and thermal properties and lower thermal expansion coefficient. It has excellent tribological properties.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 55% filler by weight		
Additive	Molybdenum disulfide lubricant		
Features	Lubrication		
RoHS Compliance	RoHS compliance		
Appearance	Black		
Forms	Particle		
Processing Method	Resin transfer molding		
	Compression molding		
	Injection molding		
Part Marking Code (ISO 11469)	>PF-(GB+GF)55		
Physical	Nominal Value	Unit	Test Method
Density	1.69	g/cm ³	ISO 1183
Apparent Density	0.72	g/cm ³	ISO 60
Molding Shrinkage - Flow	0.36	%	ISO 2577
Water Absorption (23°C, 24 hr)	0.15	%	ISO 62
Post Shrinkage	0.15	%	ISO 2577
Flexural Strain at Break	1.6	%	ISO 178
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (Injection Molded)	14000	MPa	ISO 527-2
Tensile Stress (Break, Injection Molded)	104	MPa	ISO 527-2
Tensile Strain (Break, Injection Molded)	0.95	%	ISO 527-2
Flexural Modulus (Injection Molded)	11000	MPa	ISO 178
Flexural Stress (Injection Molded)	179	MPa	ISO 178
Compressive Stress	271	MPa	ISO 604
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (Injection Molded)	3.2	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (Injection Molded)	10	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	195	°C	ISO 75-2/Af

Linear thermal expansion coefficient			ISO 11359-2
Flow	2.1E-5	cm/cm/°C	ISO 11359-2
Lateral	4.4E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.5E+13	ohms	IEC 60093
Volume Resistivity	5.7E+14	ohms·cm	IEC 60093
Dielectric Strength	29	kV/mm	IEC 60243-1
Comparative Tracking Index	175	V	IEC 60112
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			

Plastication: 50rpmInjection Time: 2 to 8 secHold Time: 1 to 5 sec/mmCure Time, 0.125 in: 5 to 12 sec/mm

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