Vyncolit® TEM 9053

Epoxy; Epoxide

Vyncolit N.V.

Message:

TEM 9053 is a short fiberglass and mineral filled, toughened, epoxy molding compound, with excellent dimensional stability and high strength properties.

General Information	
Filler / Reinforcement	Glass \Mineral
Features	Good dimensional stability The degassing effect is low to no Low viscosity High strength Solvent resistance Anti-salt water/fog Good thermal shock resistance Good chemical resistance alkali resistance acid resistance Good toughness Non-corrosive
Uses	Electrical components Military application Connector
Agency Ratings	FDA not rated USDA Unspecified Approval
Appearance	Black
Forms	Particles
Processing Method	Resin transfer molding Compression molding Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.95	g/cm³	ASTM D792
Molding Shrinkage - Flow (Compression Molded)	0.25	%	ASTM D955
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	70		ASTM D785

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Break, Compression Molded)	97.0	MPa	ASTM D638
Flexural Modulus (Compression Molded)	16600	MPa	ASTM D790
Flexural Strength (Break)	160	MPa	ASTM D790
Compressive Strength	235	MPa	ASTM D695
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (Compression Molded)	24	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed, Compression Molded)	160	°C	ASTM D648
CLTE - Flow	2.6E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.71	W/m/K	ASTM C177
Electrical	**Nominal Value**	**Unit**	**Test Method**
Dielectric Strength [1]	13	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	4.20		ASTM D150
Dissipation Factor (1 MHz)	0.015		ASTM D150
Arc Resistance	180	sec	ASTM D495
Injection	**Nominal Value**	**Unit**	
Middle Temperature	60.0 - 82.2	°C	
Nozzle Temperature	82.2 - 93.3	°C	
Processing (Melt) Temp	93.3 - 116	°C	
Mold Temperature	149 - 177	°C	
Injection Pressure	34.5 - 68.9	MPa	
Holding Pressure	13.8 - 34.5	MPa	
Back Pressure	0.345	MPa	

Injection instructions

Gauge: 0.3The value listed as Thermal Conductivity, ASTM C177, was tested in accordance with ASTM C518.Powder Density, ASTM D1895: 0.85 g/cm^{3}Water Absorption, ASTM D570, 48 hrs, 50°C: 0.23%DTUL @264psi - Unannealed, ASTM D648, Post Baked, Compression Molded: 160°CDielectric Strength, ASTM D149, 60 Hz, Method B, wet: 12.8 kV/mmDielectric Constant, ASTM D150, 1000000 Hz, wet: 4.2Dissipation Factor, ASTM D150, 1000000 Hz, wet: 0.015Compression and Transfer Molding Conditions:
Preheat Temperature: 180 to 225 °F
Mold Temperature: 325 to 370 °F
Compression Mold Pressure: 1000 to 5000 psi
Transfer Mold Pressure: 1500 to 8000 psi
Cure Time, 0.125 in: 60 to 90 sec

NOTE	
1.	Method B (step by step)

Recommended distributors for this material

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