Vyncolit® FS-5

Diallyl Phthalate

Vyncolit N.V.

Message:

FS-5 is a short glass fiber reinforced, non-flame retardant, diallyl ortho-phthalate molding compound, which meets the requirements of ASTM D5948 Type SIG.

General Information	
Filler / Reinforcement	Glass fiber reinforced material
Features	Good dimensional stability Moisture resistance Antibacterial property Solvent resistance Impact resistance, high Good electrical performance Good chemical resistance alkali resistance Good wear resistance Fuel resistance Heat resistance, high acid resistance
Uses	Membrane key switch Aircraft applications Insulating material Connector Communication Equipment
Agency Ratings	ASTM D 5948, Type SIG MIL C-24308
Appearance	White Brown Black Red Blue Green
Forms	Particles
Processing Method	Resin transfer molding

Compression molding

Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.91	g/cm³	ASTM D792
Molding Shrinkage - Flow (Compression Molded)	0.20 - 0.40	%	ASTM D955
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Break, Compression Molded)	69.0	MPa	ASTM D638
Flexural Modulus (Compression Molded)	11700	MPa	ASTM D790
Flexural Strength (Break)	110	MPa	ASTM D790
Compressive Strength	131	MPa	ASTM D695
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (Compression Molded)	32	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed, Compression Molded)	260	°C	ASTM D648
CLTE - Flow	1.8E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.36	W/m/K	ASTM C177
RTI Elec	130	°C	UL 746
RTI Imp	130	°C	UL 746
RTI	130	°C	UL 746
Electrical	**Nominal Value**	**Unit**	**Test Method**
Dielectric Strength [1]	15	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
1 kHz	3.90		ASTM D150
1 MHz	3.70		ASTM D150
Dissipation Factor			ASTM D150
1 kHz	0.011		ASTM D150
1 MHz	0.014		ASTM D150
Arc Resistance	175	sec	ASTM D495
Comparative Tracking Index (CTI)	600	V	UL 746
Comparative Tracking Index	600	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Oxygen Index	29	%	ASTM D2863
Injection	**Nominal Value**	**Unit**	
Rear Temperature	60.0	°C	
Middle Temperature	76.7	°C	
Nozzle Temperature	87.8	°C	
Processing (Melt) Temp	110 - 116	°C	
Mold Temperature	160 - 182	°C	

Injection instructions
Plastication: 50rpmBack Pressure (gauge): slightInjection Pressure: set to give 5 to 15 sec injection timeHold Pressure: 1/2 of injection pressureCure Time, 0.125 in: 40 secThe value listed as Thermal Conductivity, ASTM C177, was tested in accordance with ASTM C518.Water Absorption, ASTM D570, 48 hrs, 50°C: 0.35%Dielectric Strength, ASTM D149, 60 Hz, Method B, wet: 14.8 kV/mmDielectric Constant, ASTM D150, 1000 Hz, wet: 3.9Dielectric Constant, ASTM D150, 1000000 Hz, wet: 3.7Dissipation Factor, ASTM D150, 1000 Hz, wet: 0.011Dissipation Factor, ASTM D150, 1000000 Hz, wet: 0.014Compression and Transfer Molding Conditions: Preforming Pressure: 8000 to 12000 psi Preheat Temperature: 220 to 230 °F Preheat Time: 45 sec Mold Temperature: 320 to 350 °F Compression Mold Pressure: 3500 to 6000 psi Transfer Mold Pressure: 2500 to 5000 psi Cure Time, 0.125 in: 45 to 70 sec

NOTE	
1.	Method B (step by step)

Recommended distributors for this material

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