

Vyncolit® FS-10-V0-200

Diallyl Phthalate

Vyncolit N.V.

Message:

FS-10-V0-200 is a short glass fiber reinforced, flame retardant, diallyl ortho-phthalate molding compound with excellent heat resistance.

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		
	Flame retardancy		
Uses	Membrane key switch		
	Aircraft applications		
	Insulating material		
	Connector		
	Communication Equipment		
Agency Ratings	MIL C-24308		
Appearance	Blue		
	Dark gray		
Forms	Particles		
Processing Method	Resin transfer molding		
	Compression molding		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.91	g/cm ³	ASTM D792

Molding Shrinkage - Flow (Compression Molded)	0.20 - 0.40	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Break, Compression Molded)	75.8	MPa	ASTM D638
Flexural Modulus (Compression Molded)	11700	MPa	ASTM D790
Flexural Strength (Break)	131	MPa	ASTM D790
Compressive Strength	152	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	200	°C	UL 746
RTI Imp	200	°C	UL 746
RTI	200	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength ¹	15	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
1 kHz	4.10		ASTM D150
1 MHz	3.90		ASTM D150
Dissipation Factor			ASTM D150
1 kHz	0.011		ASTM D150
1 MHz	0.016		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
Flame Rating			UL 94
1.59 mm	V-0		UL 94
3.18 mm	V-0		UL 94
Oxygen Index	50	%	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%Flammability Ignition, ASTM D229: 130 secFlammability Burn, ASTM D229: 50 secDielectric Strength, ASTM D149, 60 Hz, Method B, wet: 14.8 kV/mmDielectric Constant, ASTM D150, 1000 Hz, wet: 4.1Dielectric Constant, ASTM D150, 1000000 Hz, wet: 3.9Dissipation Factor, ASTM D150, 1000 Hz, wet: 0.011Dissipation Factor, ASTM D150, 1000000 Hz, wet: 0.016Compression 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)

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