# Vyncolit® 73-70-70 C-P

#### Diallyl Phthalate

Vyncolit N.V.

#### Message:

Vyncolit 73-70-70 C- P is a diallyl phthalate (DAP) material, and the filler is glass fiber reinforced material. This product is available in North America, Africa and the Middle East, Latin America, Europe or Asia Pacific. The processing methods are: resin transfer molding, compression molding or injection molding.

The main features of the Vyncolit 73-70-70 C- P are:

flame retardant/rated flame

chemical resistance

Flame Retardant

Good dimensional stability

moisture resistance

Typical application areas include:

Electrical/electronic applications

Wire and cable

Aerospace

military applications

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
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
Bulk Factor	2.4		ASTM D1895
Molding Shrinkage - Flow (Compression			
Molded)	0.20 - 0.40	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	75.8	MPa	ASTM D638
Flexural Modulus	11700	MPa	ASTM D790
Flexural Strength	124	MPa	ASTM D790
Compressive Strength	152	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	32	J/m	ASTM D256A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	260	°C	ASTM D648
CLTE - Flow	2.1E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.29	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			ASTM D149
-			
1	15	kV/mm	ASTM D149
	15 14	kV/mm kV/mm	ASTM D149 ASTM D149
1			
<sup>1</sup>			ASTM D149
1 2 Dielectric Constant	14		ASTM D149 ASTM D150
1 2 Dielectric Constant 1 kHz	4.20		ASTM D149 ASTM D150 ASTM D150
1 2 Dielectric Constant 1 kHz 1 MHz	4.20		ASTM D149  ASTM D150  ASTM D150  ASTM D150
1 2 Dielectric Constant 1 kHz 1 MHz Dissipation Factor	14 4.20 3.50		ASTM D149  ASTM D150  ASTM D150  ASTM D150  ASTM D150
1 2 Dielectric Constant  1 kHz 1 MHz Dissipation Factor 1 kHz	14 4.20 3.50 0.010		ASTM D149  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D150
1 2 Dielectric Constant  1 kHz 1 MHz Dissipation Factor 1 kHz 1 MHz	14 4.20 3.50 0.010 0.014	kV/mm	ASTM D149  ASTM D150
1 2 Dielectric Constant  1 kHz 1 MHz Dissipation Factor 1 kHz 1 MHz Arc Resistance	14 4.20 3.50 0.010 0.014 130	kV/mm sec	ASTM D149  ASTM D150
Dielectric Constant  1 kHz  1 MHz  Dissipation Factor  1 kHz  1 MHz  Arc Resistance  Comparative Tracking Index (CTI)	14 4.20 3.50 0.010 0.014 130 600	kV/mm  sec V	ASTM D149  ASTM D150  ASTM D495  UL 746
Dielectric Constant  1 kHz  1 MHz  Dissipation Factor  1 kHz  1 MHz  Arc Resistance  Comparative Tracking Index (CTI)	14 4.20 3.50 0.010 0.014 130 600	kV/mm  sec V	ASTM D149  ASTM D150  ASTM D495  UL 746  Test Method
Dielectric Constant  1 kHz  1 MHz  Dissipation Factor  1 kHz  1 MHz  Arc Resistance  Comparative Tracking Index (CTI)  Flammability  Flame Rating	14  4.20  3.50  0.010  0.014  130  600  Nominal Value	kV/mm  sec V	ASTM D149  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D495  UL 746  Test Method  UL 94
Dielectric Constant  1 kHz  1 MHz  Dissipation Factor  1 kHz  1 MHz  Arc Resistance  Comparative Tracking Index (CTI)  Flammability  Flame Rating  1.59 mm	14  4.20  3.50  0.010  0.014  130  600  Nominal Value	kV/mm  sec V	ASTM D149  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D495  UL 746  Test Method  UL 94  UL 94
Dielectric Constant  1 kHz  1 MHz  Dissipation Factor  1 kHz  1 MHz  Arc Resistance  Comparative Tracking Index (CTI)  Flammability  Flame Rating  1.59 mm  3.18 mm	14  4.20  3.50  0.010  0.014  130  600  Nominal Value  V-0  V-0	kV/mm  sec  V  Unit	ASTM D149  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D495  UL 746  Test Method  UL 94  UL 94  UL 94
Dielectric Constant  1 kHz  1 MHz  Dissipation Factor  1 kHz  1 MHz  Arc Resistance  Comparative Tracking Index (CTI)  Flammability  Flame Rating  1.59 mm  3.18 mm  Oxygen Index	14  4.20  3.50  0.010  0.014  130  600  Nominal Value  V-0  V-0  45	kV/mm  sec  V  Unit	ASTM D149  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D495  UL 746  Test Method  UL 94  UL 94  UL 94
Dielectric Constant  1 kHz  1 MHz  Dissipation Factor  1 kHz  1 MHz  Arc Resistance  Comparative Tracking Index (CTI)  Flammability  Flame Rating  1.59 mm  3.18 mm  Oxygen Index  Injection	14  4.20  3.50  0.010  0.014  130  600  Nominal Value  V-0  V-0  45  Nominal Value	kV/mm  sec  V  Unit  %  Unit	ASTM D149  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D150  ASTM D495  UL 746  Test Method  UL 94  UL 94  UL 94

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 F433.Resin Isomer, DAP: OrthoWater Absorption, ASTM D570, 48 hrs, 50°C: 0.25%Flammability Ignition, ASTM D229: 115 secFlammability Burn, ASTM D229: 15 secDielectric Strength, ASTM D149, 60 Hz, Method A, wet: 375 V/milDielectric Strength, ASTM D149, 60 Hz, Method B, wet: 350 V/milDielectric Constant, ASTM D150, 1000000 Hz, wet: 4.2Dielectric Constant, ASTM D150, 1000000 Hz, wet: 3.5Dissipation Factor, ASTM D150, 1000 Hz, wet: 0.01Dissipation Factor, ASTM D150, 10000000 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 A (short time)	
2.	Method B (step by step)	

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#### Recommended distributors for this material

## 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

