

Vyncolit® RX®1366FR

Diallyl Phthalate

Vyncolit N.V.

Message:

Vyncolit RX®1366FR is a diallyl phthalate (DAP) material, which contains a 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.

Vyncolit RX®The main features of 1366FR 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 | 1.87 | g/cm ³ | ASTM D792 |
| Bulk Factor | 2.3 | | ASTM D1895 |
| Molding Shrinkage - Flow (Compression Molded) | 0.10 - 0.30 | % | ASTM D955 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Strength | 82.7 | MPa | ASTM D638 |
| Flexural Modulus | 12400 | MPa | ASTM D790 |
| Flexural Strength | 131 | MPa | ASTM D790 |
| Compressive Strength | 152 | MPa | ASTM D695 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact | 43 | J/m | ASTM D256A |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 204 | °C | ASTM D648 |
| CLTE - Flow | 1.9E-5 | cm/cm/°C | ASTM D696 |
| Thermal Conductivity | 0.32 | W/m/K | ASTM C177 |
| RTI Elec | 170 | °C | UL 746 |
| RTI Imp | 170 | °C | UL 746 |
| RTI | 170 | °C | UL 746 |
| Electrical | Nominal Value | Unit | Test Method |
| Dielectric Strength | | | ASTM D149 |
| -- ¹ | 18 | kV/mm | ASTM D149 |
| -- ² | 16 | kV/mm | ASTM D149 |
| Dielectric Constant | | | ASTM D150 |
| 1 kHz | 4.20 | | ASTM D150 |
| 1 MHz | 3.50 | | ASTM D150 |
| Dissipation Factor | | | ASTM D150 |
| 1 kHz | 0.010 | | ASTM D150 |
| 1 MHz | 0.016 | | ASTM D150 |
| Arc Resistance | 130 | sec | ASTM D495 |
| Comparative Tracking Index (CTI) | 600 | V | UL 746 |
| 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 | 39 | % | ASTM D2863 |
| Injection | Nominal Value | Unit | Test Method |
| 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: 50rpm Back Pressure (gauge): slight Injection Pressure: set to give 5 to 15 sec injection time Hold Pressure: 1/2 of injection pressure Cure Time, 0.125 in: 40 sec The value listed as Thermal Conductivity, ASTM C177, was tested in accordance with ASTM F433. Resin Isomer, DAP: Ortho Water Absorption, ASTM D570, 48 hrs, 50°C: 0.25% Flammability Ignition, ASTM D229: 110 sec Flammability Burn, ASTM D229: 40 sec Dielectric Strength, ASTM D149, 60 Hz, Method A, wet: 450 V/mil Dielectric Strength, ASTM D149, 60 Hz, Method B, wet: 400 V/mil Dielectric Constant, ASTM D150, 1000 Hz, wet: 4.2 Dielectric Constant, ASTM D150, 1000000 Hz, wet: 3.5 Dissipation Factor, ASTM D150, 1000 Hz, wet: 0.01 Dissipation Factor, ASTM D150, 1000000 Hz, wet: 0.016 Compression 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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