

# NOVALAC RX®129

Phenolic

Vyncolit N.V.

## Message:

NOVALAC RX® 129 is a phenolic (Phenolic) material that contains mineral fillers. 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.

NOVALAC RX®The main features of the 129 are:

- flame retardant/rated flame
- chemical resistance
- Creep resistance
- Good dimensional stability

Typical application areas include:

- Electrical/electronic applications
- engineering/industrial accessories
- electrical appliances
- House
- Tools

General Information			
Filler / Reinforcement	Mineral filler		
Features	Good dimensional stability		
	Low smoke		
	Antibacterial property		
	Solvent resistance		
	Good creep resistance		
	alkali resistance		
	acid resistance		
Uses	Membrane key switch		
	Pump parts		
	Gear		
	Electrical/Electronic Applications		
	Electrical appliances		
	Power/other tools		
	Connector		
	Application in Automobile Field		
Forms	Particles		
Processing Method	Resin transfer molding		
	Compression molding		
	Injection molding		
Physical	Nominal Value	Unit	Test Method

Specific Gravity	1.44	g/cm <sup>3</sup>	ASTM D792, ISO 1183
Bulk Factor	2.0		ASTM D1895
Molding Shrinkage			
Flow: Molding	0.50	%	ASTM D955
Flow direction	0.50	%	ISO 294-4
Water Absorption (23°C, 24 hr)	0.30	%	ASTM D570, ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			
E scale	90		ASTM D785
E scale	95		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress			
Fracture	40.0	MPa	ISO 527-2
--	44.8	MPa	ASTM D638
Flexural Modulus			
--	7580	MPa	ASTM D790
--	7000	MPa	ISO 178
Flexural Strength			
--	82.7	MPa	ASTM D790
--	75.0	MPa	ISO 178
Compressive Strength	224	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
--	24	J/m	ASTM D256A
--	1.0	kJ/m <sup>2</sup>	ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, not annealed	182	°C	ASTM D648
1.8 MPa, not annealed	185	°C	ISO 75-2/A
CLTE - Flow	4.3E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.49	W/m/K	ASTM C177
RTI Elec	150	°C	UL 746
RTI Imp	150	°C	UL 746
RTI	150	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength			
-- <sup>1</sup>	6.1	kV/mm	ASTM D149
-- <sup>2</sup>	3.5	kV/mm	ASTM D149
--	6.0	kV/mm	IEC 60243-1
Arc Resistance	125	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94

1.59 mm	HB	UL 94
3.18 mm	V-1	UL 94

Injection	Nominal Value	Unit
Rear Temperature	60.0	°C
Middle Temperature	73.9	°C
Nozzle Temperature	87.8	°C
Processing (Melt) Temp	98.9 - 116	°C
Mold Temperature	166 - 188	°C
Back Pressure	0.207	MPa

#### Injection instructions

Plastication: 50rpm Injection Pressure: Set to give 3 to 5 seconds injection time Hold Pressure: 50 to 100% of injection pressure Hold Time: 10 sec minimum Cure Time, 0.125 in: 30 to 35 sec The value listed as Thermal Conductivity, ASTM C177, was tested in accordance with ASTM C518. The value listed as Molding Shrinkage, ISO 294-4, was tested in accordance with ISO 2577 using compression molded specimens. Water Absorption, ASTM D570, 48 hrs, 50°C: 1.2% Flexural Strain, ASTM D790: 1.2% DTUL @264psi - Unannealed, ASTM D648, Post Baked: 550°F Dielectric Strength, ASTM D149, 60 Hz, Method A, wet: 155 V/mil Dielectric Strength, ASTM D149, 60 Hz, Method B, wet: 90 V/mil Compressive Strength, ISO 604: 260 MPa Dielectric Strength, IEC 243, Method A, wet: 6 V/mil Compression and Transfer Molding Conditions:  
Preforming Pressure: 8000 to 12000 psi  
Preheat Temperature: 210 to 235 °F  
Preheat Time: 45 sec  
Mold Temperature: 330 to 360 °F  
Compression Mold Pressure: 2500 to 5000 psi  
Transfer Mold Pressure: 4000 to 6000 psi  
Cure Time, 0.125 in: 40 to 50 sec

#### NOTE

1. Method A (short time)
2. Method B (step by step)

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