

# NOVALAC RX®611

Phenolic

Vyncolit N.V.

## Message:

RX®611 is a fiberglass reinforced phenolic molding compound, with good dimensional stability and good strength at elevated temperatures. Meets ASTM D-5948 Type MFH.

General Information			
Filler / Reinforcement	Glass fiber reinforced material		
Features	Ultra high toughness		
	Good dimensional stability		
	Low smoke		
	High strength		
	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		
	Shell		
Agency Ratings	ASTM D 5948, Type MFH		
Appearance	Black		
	Green		
Forms	Particles		
Processing Method	Resin transfer molding		
	Compression molding		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.74	g/cm <sup>3</sup>	ISO 1183

Molding Shrinkage - Flow	0.20	%	ISO 294-4
Water Absorption (23°C, 24 hr)	0.040	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (E-Scale)	100		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Break, Compression Molded)	80.0	MPa	ISO 527-2
Flexural Modulus (Compression Molded)	16000	MPa	ISO 178
Flexural Stress	130	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	2.5	kJ/m <sup>2</sup>	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	190	°C	ISO 75-2/A
CLTE - Flow	1.7E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.52	W/m/K	ASTM C177
RTI Elec	180	°C	UL 746
RTI Imp	180	°C	UL 746
RTI	180	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength <sup>1</sup>	13	kV/mm	ASTM D149
Arc Resistance	145	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.59 mm	V-0		UL 94
3.18 mm	V-0		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	
Injection Pressure	100 - 248	MPa	
Holding Pressure	30.0 - 89.6	MPa	
Back Pressure	4.83 - 15.2	MPa	
Injection instructions			
Plastication: 50rpmInjection Time: 2 to 8 secHold Time: 1 to 5 sec/mmCure Time, 0.125 in: 5 to 12 sec/mmAll ISO properties listed were tested in accordance with ISO 3167.All ASTM properties listed were tested in accordance with ASTM D5948.The value listed as Thermal Conductivity, ASTM C177, was tested in accordance with ASTM C518.Dielectric Strength, ASTM D149, 60 Hz, Method A, wet: 13 kV/mmPowder Density, ISO 60: 0.8 g/cm <sup>3</sup> HDT A (1.80 MPa) Unannealed, ISO 75A, Post Baked: >282°CCompressive Strength, ISO 604: 340 MPa			
NOTE			
1.	Method A (short time)		

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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

