

Vyncolit® 3540CG

Phenolic

Vyncolit N.V.

Message:

Vyncolit 3540CG is a graphite filled phenolic molding compound with excellent dimensional stability. It is self lubricating and has a low coefficient of friction.

General Information	
Filler / Reinforcement	Graphite powder
Additive	Lubricant
Features	Good dimensional stability
	Low friction coefficient
	Self-lubricating
Appearance	Black
Forms	Particle
Processing Method	Resin transfer molding
	Compression molding
	Injection molding

Physical	Nominal Value	Unit	Test Method
Density	1.72	g/cm ³	ISO 1183
Molding Shrinkage - Flow	0.50 - 0.60	%	ISO 294-4
Water Absorption (23°C, 24 hr)	0.10	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (Injection Molded)	20500	MPa	ISO 527-2
Tensile Stress (Break, Injection Molded)	40.0	MPa	ISO 527-2
Tensile Strain (Break, Injection Molded)	0.25	%	ISO 527-2
Flexural Modulus (Injection Molded)	12500	MPa	ISO 178
Flexural Stress (Injection Molded)	80.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (Injection Molded)	1.5	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength	2.5	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, not annealed	160	°C	ISO 75-2/A
8.0 MPa, not annealed	140	°C	ISO 75-2/C
Linear thermal expansion coefficient			ASTM E831
Flow	2.5E-5	cm/cm/°C	ASTM E831
Lateral	2.5E-5	cm/cm/°C	ASTM E831

Flammability	Nominal Value	Test Method
Flame Rating		UL 94
1.60 mm	V-1	UL 94
4.00 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: 50rpm Injection Time: 2 to 8 sec Hold Time: 1 to 5 sec/mm Cure Time, 0.125 in: 5 to 12 sec/mm All ISO properties listed were tested in accordance with ISO 3167 The value listed as Molding Shrinkage, ISO 294-4, was tested in accordance with ISO 2577. ISO Type: PF 2 C4 Powder Density, ISO 60: 0.8 to 0.9 g/cm³ Post Shrinkage, ISO 2577: 0.05 to 0.15% HDT A (1.80 MPa) Unannealed, ISO 75A, Injection Molding: 150 to 170°C CHDT A (8.0 MPa) Unannealed, ISO 75A, Injection Molding: 130 to 150°C CCLTE, Flow (TMA), ASTM E831, Injection Molding: 20 to 30 cm⁻⁶/cm°C CCLTE, Transverse (TMA), ASTM E831, Injection Molding: 20 to 30 cm⁻⁶/cm°C Flexural Strength, ISO 178, Injection Molding: 70 to 90 MPa Flexural Modulus, ISO 178, Injection Molding: 11.5 to 13.5 GPa Strain to failure in Flexure, ISO 178, Injection Molding: 0.6 to 0.7% Tensile Stress at Break, ISO 527-1,-2, Injection Molding: 30 to 50 MPa Tensile Modulus, ISO 527-1,-2, Injection Molding: 19.5 to 21.5 GPa Tensile Strain at Break, ISO 527-1,-2, Injection Molding: 0.2 to 0.3% Charpy Notched Impact Strength, ISO 179, Injection Molding: 1 to 2 kJ/m² Charpy Unnotched Impact Strength, ISO 179, Injection Molding: 2 to 3 kJ/m² Compressive Strength, ISO 604: 90 to 120 MPa

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