LNP™ LUBRICOMP™ COMPOUND VCP36

REGION EUROPE

DESCRIPTION

LNP LUBRICOMP VCP36 compound is based on Super Tough Nylon resin containing 30% carbon fiber and 15% PTFE/SILICON. Added features of this grade include: Internally Lubricated, Electrically Conductive, Heat Stabilized, Wear Resistant.

GENERAL INFORMATION	
Applications	All-Terrain Vehicle, Building Element, Defense Vehicles, Defense, Gear/Bearing/Slider, Refrigerator
Features	Electrically Conductive, Heat Stabilized, Wear resistant, High stiffness/Strength
Fillers	Carbon Fiber, PTFE/Silicone
Polymer Types	Polyamide 66 (Nylon 66)
Processing Techniques	Injection Molding

TYPICAL PROPERTY VALUES

Revision 20250606

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Modulus, 1 mm/min	17500	MPa	ISO 527
Tensile Stress, break, 5 mm/min	126	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1	%	ISO 527
Flexural Modulus, 2 mm/min	13600	MPa	ISO 178
Flexural Strength, 2 mm/min	180	MPa	ISO 178
Tensile Modulus, 5 mm/min	17000	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	94	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	12800	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	160	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	8	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	35	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	8	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	35	kJ/m²	ISO 179/1eU
Izod Impact, notched, 23°C	66	J/m	ASTM D256
Izod Impact, unnotched, 23°C	335	J/m	ASTM D4812
THERMAL [1]			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	243	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	259	°C	ISO 75/Bf
HDT, 1.82 MPa, 3.2mm, unannealed	243	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	258	°C	ASTM D648
Vicat Softening Temp, Rate A/120	251	°C	ISO 306
Vicat Softening Temp, Rate B/120	250	°C	ISO 306
Vicat Softening Temp, Rate B/120	250	°C	ASTM D1525
CTE, -40°C to 40°C, flow	6.00E-06	1/°C	ISO 11359-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	6.00E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, flow	6.00E-06	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.00E-06	1/°C	ASTM E831
PHYSICAL [1]			
Density	1.26	g/cm³	ISO 1183
Moisture Absorption, (23°C/50% RH/24hrs)	0.6	%	ISO 62-4
Mold Shrinkage, flow [2]	0.1 – 0.3	%	SABIC method
Mold Shrinkage, xflow [2]	0.1 – 0.3	%	SABIC method
Specific Gravity	1.26	-	ASTM D792
Wear Factor Washer	20	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Instr.
Dynamic COF	0.85	-	ASTM D3702 Modified: Instr.
Static COF	0.82	-	ASTM D3702 Modified: Instr.
INJECTION MOLDING [3]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15	%	
Hopper Temperature	40 – 60	°C	
Melt Temperature	285 – 300	°C	
Rear - Zone 1 Temperature	265 – 290	°C	
Middle - Zone 2 Temperature	275 – 300	°C	
Front - Zone 3 Temperature	285 – 305	°C	
Nozzle Temperature	285 – 300	°C	
Mold Temperature	90 – 110	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw speed (Circumferential speed)	0.15 – 0.25	m/s	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

DISCLAIMER