LNP™ LUBRICOMP™ COMPOUND CG002XXN

DESCRIPTION

LNP LUBRICOMP CG002XXN compound is based on Polystyrene (PS) resin containing graphite. Added features of this grade include: Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant, No PFAS intentionally added
Fillers	Graphite
Polymer Types	Polystyrene (PS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component, Water Management

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break, 5 mm/min	45	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	4100	MPa	ISO 527
Flexural Stress, break, 2 mm/min	72	MPa	ISO 178
Flexural Modulus, 2 mm/min	4000	MPa	ISO 178
Tensile Stress, brk, Type I, 5 mm/min	47	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2	%	ASTM D638
Tensile Modulus, 5 mm/min	4200	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	74	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	4000	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	2	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	8	kJ/m²	ISO 180/1U
Izod Impact, notched, 23°C	13	J/m	ASTM D256
Izod Impact, unnotched, 23°C	111	J/m	ASTM D4812
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	1	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	9	kJ/m²	ISO 179/1eU
THERMAL [1]			
Vicat Softening Temp, Rate B/50	99	°C	ISO 306
Vicat Softening Temp, Rate B/120	100	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	95	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	85	°C	ISO 75/Af
Vicat Softening Temp, Rate B/50	99	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	95	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	85	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, 23°C to 60°C, flow	6.76E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	7.80E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, flow	6.76E-05	1/°C	ASTM E831
CTE, 23°C to 60°C, xflow	7.80E-05	1/°C	ASTM E831
PHYSICAL [1]			
Moisture Absorption (23°C / 50% RH)	0.03 – 0.05	%	ISO 62
Water Absorption, (23°C/saturated)	0.03 – 0.05	%	ISO 62-1
Moisture Absorption, (23°C/50% RH/24 hrs)	0.04	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.05	%	ASTM D570
Mold Shrinkage, flow [2]	0.4 – 0.6	%	SABIC method
Mold Shrinkage, xflow [2]	0.4 – 0.6	%	SABIC method
Melt Volume Rate, MVR at 230°C/5.0 kg	21	cm³/10 min	ISO 1133
Melt Flow Rate, 230°C/5 kgf	20	g/10 min	ASTM D1238
Density	1.10	g/cm³	ISO 1183
Specific Gravity	1.10	-	ASTM D792
INJECTION MOLDING [3]			
Drying Temperature	80	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Hopper Temperature	40 – 60	°C	
Melt Temperature	240 – 270	°C	
Rear - Zone 1 Temperature	220 – 230	°C	
Middle - Zone 2 Temperature	230 – 250	°C	
Front - Zone 3 Temperature	240 – 270	°C	
Nozzle Temperature	235 – 265	°C	
Mold Temperature	40 – 60	°C	
Back Pressure	0.2 – 0.3	MPa	

(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