LNP™ LUBRILOY™ COMPOUND Z20001

Z-FR

DESCRIPTION

LNP LUBRILOY Z20001 compound is based on Polyphenylene Ether / Polystyrene (PPE/PS) blend containing proprietary lubricant. Added features of this grade include: Wear Resistant, Non-Brominated, Non-Chlorinated Flame Retardant.

GENERAL INFORMATION	
Features	Flame Retardant, Wear resistant, Non Cl/Br flame retardant, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component, Water Management
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	57	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	48	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	5	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	40	%	ASTM D638
Tensile Modulus, 5 mm/min	2120	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	2130	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	58	MPa	ISO 527
Tensile Stress, break, 5 mm/min	49	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5	%	ISO 527
Tensile Strain, break, 5 mm/min	24	%	ISO 527
Tensile Modulus, 1 mm/min	2000	MPa	ISO 527
Flexural Stress	74	MPa	ISO 178
Flexural Modulus, 2 mm/min	1920	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	2110	J/m	ASTM D4812
Izod Impact, notched, 23°C	419	J/m	ASTM D256
Multiaxial Impact	45	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	46	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	210	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	31	kJ/m²	ISO 180/1A

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	120	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	105	°C	ASTM D648
CTE, -30°C to 30°C, flow	8.7E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	9.8E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	116	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	99	°C	ISO 75/Af
PHYSICAL [1]			
Specific Gravity	1.1	-	ASTM D792
Density	1.1	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.12	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.8 – 1	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	1 – 3	%	ASTM D955
Wear Factor Washer	54	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Wear Factor Ring	0	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.27	-	ASTM D3702 Modified: Manual
Static COF	0.19	-	ASTM D3702 Modified: Manual
Moisture Absorption (23°C / 50% RH)	0.22	%	ISO 62
FLAME CHARACTERISTICS [3]			
UL Yellow Card Link	E121562-101345288	-	-
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Melt Temperature	275 – 295	°C	
Front - Zone 3 Temperature	265 – 275	°C	
Middle - Zone 2 Temperature	260 – 270	°C	
Rear - Zone 1 Temperature	255 – 265	°C	
Mold Temperature	60 – 95	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	

(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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(4) 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