LNP™ LUBRICOMP™ COMPOUND KP004XXP

KL-4540

DESCRIPTION

LNP LUBRICOMP KP004XXP compound is based on Acetal (POM) Copolymer resin containing 20% PTFE/silicone. Added features of this grade include: Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant
Fillers	Unreinforced, PTFE/Silicone
Polymer Types	Acetal (POM) Copolymer
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
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, yield	43	MPa	ASTM D638
Tensile Stress, break	43	MPa	ASTM D638
Tensile Strain, yield	13.7	%	ASTM D638
Tensile Strain, break	30.3	%	ASTM D638
Tensile Modulus, 50 mm/min	1830	MPa	ASTM D638
Flexural Stress	63	MPa	ASTM D790
Flexural Modulus	2020	MPa	ASTM D790
Tensile Stress, yield	39	MPa	ISO 527
Tensile Stress, break	39	MPa	ISO 527
Tensile Strain, yield	21.5	%	ISO 527
Tensile Strain, break	42.8	%	ISO 527
Tensile Modulus, 1 mm/min	2020	MPa	ISO 527
Flexural Stress	60	MPa	ISO 178
Flexural Modulus	2080	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	619	J/m	ASTM D4812
Izod Impact, notched, 23°C	53	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	3	J	ASTM D3763
Multiaxial Impact	1	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	42	kJ/m²	ISO 180/1U

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	87	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.11E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.14E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	1.11E-04	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.14E-04	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	79	°C	ISO 75/Af
PHYSICAL [1]			
Density	1.48	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.18	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	2.1 – 2.9	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	2.1 – 2.9	%	ASTM D955
Mold Shrinkage, flow, 24 hrs [2]	2.09 – 2.92	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	2.09 – 2.92	%	ISO 294
Wear Factor Washer	9	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.25	-	ASTM D3702 Modified: Manual
Static COF	0.14	-	ASTM D3702 Modified: Manual
Density	1.48	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.43	%	ISO 62
INJECTION MOLDING [3]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Melt Temperature	200 – 215	°C	
Front - Zone 3 Temperature	210 – 220	°C	
Middle - Zone 2 Temperature	195 – 205	°C	
Rear - Zone 1 Temperature	175 – 190	°C	
Mold Temperature	80 – 110	°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) 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