LNP™ LUBRICOMP™ COMPOUND KL003LH

KL-4030 LE

DESCRIPTION

LNP LUBRICOMP KL003LH compound is based on POM (Acetal) resin containing 15% PTFE. Added features of this grade include: Low Extractable, Healthcare, Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant, Food contact, Healthcare/Formula lock
Fillers	Unreinforced, PTFE
Polymer Types	Acetal (POM) Copolymer
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Water Management
Consumer	Home Appliances
Hygiene and Healthcare	Pharmaceutical Packaging and Drug Delivery, Surgical devices, General Healthcare, Patient Testing
Packaging	Industrial Packaging, Food & Beverage

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	52	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	47	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	12	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	27	%	ASTM D638
Tensile Modulus, 5 mm/min	2580	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	2210	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	50	MPa	ISO 527
Tensile Stress, break, 5 mm/min	49	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	13	%	ISO 527
Tensile Strain, break, 5 mm/min	32	%	ISO 527
Tensile Modulus, 1 mm/min	2520	MPa	ISO 527
Flexural Strength, 2 mm/min	64	MPa	ISO 178
Flexural Modulus, 2 mm/min	2210	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	871	J/m	ASTM D4812
Izod Impact, notched, 23°C	41	J/m	ASTM D256
Multiaxial Impact	1	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	4	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	59	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	4	kJ/m²	ISO 180/1A

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	151	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	87	°C	ASTM D648
CTE, -30°C to 30°C, flow	1.3E-04	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	1.2E-04	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	148	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	85	°C	ISO 75/Af
PHYSICAL [1]			
Specific Gravity	1.49	-	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.19	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	2 – 3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	2 – 3	%	ASTM D955
Wear Factor Washer	14	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	0.13	-	ASTM D3702 Modified: Manual
Density	1.48	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.3	%	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