LNP™ LUBRICOMP™ COMPOUND AI001XHP

DESCRIPTION

LNP LUBRICOMP AI001XHP compound is based on Acrylonitrile Butadiene Styrene (ABS) resin containing silicone. Added feature of this material is: Internally lubricated, Easy molding, Wear Resistant, Healthcare, Formulation lock, (NoC).

GENERAL INFORMATION	
Features	Good Processability, Wear resistant, No PFAS intentionally added
Fillers	Unreinforced, Silicone
Polymer Types	Acrylonitrile Butadiene Styrene (ABS)
Processing Techniques	Injection Molding, Extrusion

TYPICAL PROPERTY VALUES

Revision 20250317

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Flexural Modulus, 1.3 mm/min, 50 mm span	2240	MPa	ASTM D790
Flexural Stress, yld, 1.3 mm/min, 50 mm span	63	MPa	ASTM D790
Flexural Modulus, 2 mm/min	2200	MPa	ISO 178
Flexural Stress	62	MPa	ISO 178
Tensile Modulus, 50 mm/min	2140	MPa	ASTM D638
Tensile Stress, yld, Type I, 50 mm/min	42	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	31	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	2.5	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	23	%	ASTM D638
Tensile Modulus, 1 mm/min	2120	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	40	MPa	ISO 527
Tensile Stress, break, 50 mm/min	31	MPa	ISO 527
Tensile Strain, break, 50 mm/min	2.4	%	ISO 527
Tensile Nominal Strain, break, 50 mm/min	30	%	ISO 527
IMPACT [1]			
Charpy Impact, notched, 23°C	25	kJ/m²	ISO 179/2C
Charpy Impact, unnotched, 23°C	NB	kJ/m²	ISO 179/2C
Izod Impact, notched, 23°C	290	J/m	ASTM D256
Izod Impact, unnotched, 23°C	1700	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	25	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 0°C	19	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 0°C	120	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 -30°C	10	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 -30°C	110	kJ/m²	ISO 180/1U
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	76	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	92	°C	ASTM D648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	81	°C	ISO 75/Af

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	90	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/50	97	°C	ISO 306
Vicat Softening Temp, Rate B/120	98	°C	ISO 306
CTE, -40°C to 40°C, flow	9.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	9.8E-05	1/°C	ISO 11359-2
PHYSICAL (1)			
Density	1.04	g/cm³	ISO 1183
Melt Volume Rate, MVR at 230°C/5.0 kg	11	cm³/10 min	ISO 1133
Melt Flow Rate, 230°C/5 kgf	11	g/10 min	ASTM D1238
Moisture Absorption, (23°C/50% RH/24hrs)	0.2	%	ISO 62-4
Moisture Absorption, (23°C/50% RH/Equilibrium)	0.2	%	ISO 62-4
Water Absorption, (23°C/24hrs)	0.6	%	ISO 62-1
Water Absorption, (23°C/saturated)	0.8	%	ISO 62-1
Mold Shrinkage, flow	0.5 – 0.7	%	SABIC method
Mold Shrinkage, xflow	0.7 – 0.9	%	SABIC method
Dynamic COF	0.3	-	ASTM D3702 Modified: Manual
Static COF	0.4	-	ASTM D3702 Modified: Manual
Wear Factor Washer	13	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
INJECTION MOLDING (2)			
Drying Time	2 – 4	Hrs	
Drying Temperature	80	°C	
Maximum Moisture Content	0.05 – 0.1	%	
Hopper Temperature	40	°C	
Melt Temperature	250 – 260	°C	
Rear - Zone 1 Temperature	230 – 250	°C	
Middle - Zone 2 Temperature	240 – 260	°C	
Front - Zone 3 Temperature	250 – 270	°C	
Nozzle Temperature	250 – 270	°C	
Mold Temperature	70 – 80	°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) 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