

LNPT™ LUBRILLOY™ COMPOUND UX99725

PDX-U-99725

DESCRIPTION

LNP LUBRILLOY UX99725 compound is based on Polyphthalamide (PPA) resin containing proprietary lubricant. Added features of this grade include: Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant, High temperature resistance, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyphthalamide (PPA)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Under the Hood, Automotive Exteriors

TYPICAL PROPERTY VALUES

Revision 20241017

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 5 mm/min	68	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	60	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	8	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	20	%	ASTM D638
Tensile Modulus, 5 mm/min	2244	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	2010	MPa	ASTM D790
Flexural Stress at 5% strain, 1.3 mm/min, 50 mm span	82	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	66	MPa	ISO 527
Tensile Stress, break, 5 mm/min	64	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	7	%	ISO 527
Tensile Strain, break, 5 mm/min	9	%	ISO 527
Tensile Modulus, 1 mm/min	2153	MPa	ISO 527
Flexural Modulus, 2 mm/min	2180	MPa	ISO 178
Flexural Strength, 2 mm/min	94	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	118	J/m	ASTM D256
Izod Impact, notched 80°10*4 +23°C	13	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80°10*4 sp=62mm	15	kJ/m ²	ISO 179/1eA
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	140	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	121	°C	ASTM D648
CTE, -40°C to 40°C, flow	9.7E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	9.2E-05	1/°C	ASTM E831

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, flow	9.7E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	9.2E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	151	°C	ISO 306
Vicat Softening Temp, Rate B/120	151	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	139	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	119	°C	ISO 75/Af
PHYSICAL ⁽¹⁾			
Specific Gravity	1.119	-	ASTM D792
Density	1.11	g/cm ³	ISO 1183
Water Absorption, (23°C/24hrs)	0.5	%	ISO 62-1
Melt Volume Rate, MVR at 330°C/2.16kg	6	cm ³ /10 min	ISO 1133
Mold Shrinkage, flow ⁽²⁾	1.2 – 1.7	%	SABIC method
Mold Shrinkage, xflow ⁽²⁾	1.5 – 2	%	SABIC method
Wear Factor Washer	35	10 ⁻¹⁰ in ⁴ 5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.15	-	ASTM D3702 Modified: Manual
Static COF	0.14	-	ASTM D3702 Modified: Manual
INJECTION MOLDING ⁽³⁾			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Melt Temperature	315 – 330	°C	
Front - Zone 3 Temperature	325 – 340	°C	
Middle - Zone 2 Temperature	315 – 325	°C	
Rear - Zone 1 Temperature	310 – 320	°C	
Mold Temperature	150 – 170	°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.

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