LNP™ LUBRICOMP™ COMPOUND RAL22I

RAL-4022 HI

DESCRIPTION

LNP LUBRICOMP RAL22I compound is based on Nylon 6/6 resin containing 10% PTFE, 10% aramid fiber. Added features of this grade include: Wear Resistant, High Impact.

GENERAL INFORMATION	
Features	Wear resistant, Impact resistant
Fillers	Aramid Fiber, PTFE
Polymer Types	Polyamide 66 (Nylon 66)
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, break, 5 mm/min	72	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	8.3	%	ISO 527
Tensile Strain, break, 5 mm/min	8.6	%	ISO 527
Tensile Modulus, 1 mm/min	3430	MPa	ISO 527
Flexural Strength, 2 mm/min	95	MPa	ISO 178
Flexural Modulus, 2 mm/min	3220	MPa	ISO 178
Tensile Stress, yld, Type I, 5 mm/min	74	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	73	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	8.3	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	8.6	%	ASTM D638
Tensile Modulus, 5 mm/min	3200	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	3290	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	110	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	41	kJ/m²	ISO 180/1U
Multiaxial Impact	1	J	ISO 6603
Izod Impact, notched, 23°C	50	J/m	ASTM D256
Izod Impact, unnotched, 23°C	600	J/m	ASTM D4812
Instrumented Dart Impact Total Energy, 23°C	7	J	ASTM D3763

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL [1]			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	114	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	239	°C	ISO 75/Bf
HDT, 0.45 MPa, 3.2 mm, unannealed	243	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	156	°C	ASTM D648
CTE, -30°C to 30°C, flow	5.7E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	8.3E-05	1/°C	ASTM D696
PHYSICAL [1]			
Moisture Absorption (23°C / 50% RH)	0.91	%	ISO 62
Specific Gravity	1.22	-	ASTM D792
Density	1.2	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.57	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	1 – 3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	2 – 4	%	ASTM D955
Wear Factor Washer	12	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	0.33	-	ASTM D3702 Modified: Manual
Static COF	0.26	-	ASTM D3702 Modified: Manual
INJECTION MOLDING [3]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	275 – 290	°C	
Front - Zone 3 Temperature	295 – 305	°C	
Middle - Zone 2 Temperature	280 – 295	°C	
Rear - Zone 1 Temperature	265 – 275	°C	
Mold Temperature	80 – 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) 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