LNP™ LUBRICOMP™ COMPOUND RAL23S

RAL-4023 HS

DESCRIPTION

LNP LUBRICOMP RAL23S compound is based on Nylon 6/6 resin containing 10% PTFE, 15% aramid fiber. Added features of this grade include: Heat Stabilized, Wear Resistant.

GENERAL INFORMATION	
Features	Heat Stabilized, Wear 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

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, break	89	MPa	ASTM D638
Tensile Strain, break	5.9	%	ASTM D638
Tensile Modulus, 5 mm/min	3680	MPa	ASTM D638
Flexural Stress	131	MPa	ASTM D790
Flexural Modulus	3930	MPa	ASTM D790
Tensile Stress, break	85	MPa	ISO 527
Tensile Strain, break	6.3	%	ISO 527
Tensile Modulus, 1 mm/min	3800	MPa	ISO 527
Flexural Stress	107	MPa	ISO 178
Flexural Modulus	3500	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	534	J/m	ASTM D4812
Izod Impact, notched, 23°C	46	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	37	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	4	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	171	°C	ASTM D648
CTE, -40°C to 40°C, flow	6.7E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	9.7E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	6.8E-05	1/°C	ISO 11359-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	9.8E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	246	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	160	°C	ISO 75/Af
PHYSICAL [1]			
Density	1.24	g/cm³	ASTM D792
Mold Shrinkage, flow, 24 hrs [2]	1 – 1.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	1.2 – 1.7	%	ASTM D955
Wear Factor Washer	23	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.38	-	ASTM D3702 Modified: Manual
Static COF	0.32	-	ASTM D3702 Modified: Manual
Density	1.23	g/cm³	ISO 1183
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	