



LNP™ LUBRICOMP™ Compound IAL12

Americas: COMMERCIAL

Also known as: LNP™ LUBRICOMP™ Compound IAL-4012

Product reorder name: IAL12

LNP™ LUBRICOMP™ IAL12 is a compound based on Nylon 6/12 resin containing 5% PTFE, 10% Aramid Fiber. Added feature of this material is: Wear Resistant.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	660	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	8.1	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	8.6	%	ASTM D 638
Tensile Modulus, 50 mm/min	32200	kgf/cm ²	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	28900	kgf/cm ²	ASTM D 790
Tensile Stress, break, 5 mm/min	63	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	8.2	%	ISO 527
Tensile Strain, break, 5 mm/min	8.8	%	ISO 527
Tensile Modulus, 1 mm/min	2920	MPa	ISO 527
Flexural Stress	74	MPa	ISO 178
Flexural Stress, yield, 2 mm/min	0	MPa	ISO 178
Flexural Modulus, 2 mm/min	2630	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	50	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	4	cm-kgf/cm	ASTM D 256
Multiaxial Impact	11	cm-kgf	ISO 6603
Instrumented Impact Total Energy, 23°C	42	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	38	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	2	kJ/m ²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	187	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	92	°C	ASTM D 648
CTE, -30°C to 30°C, flow	8.59E+01	1/°C	ASTM D 696



LNP™ LUBRICOMP™ Compound IAL12

Americas: COMMERCIAL

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
CTE, -30°C to 30°C, xflow	1.07E+02	1/°C	ASTM D 696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	172	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	90	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.13	-	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.21	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	1 - 3	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	2 - 4	%	ASTM D 955
Wear Factor Washer	31	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D 3702 Modified
Wear Factor Ring	0	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D 3702 Modified
Dynamic COF	0.45	-	ASTM D 3702 Modified
Static COF	0.4	-	ASTM D 3702 Modified
Density	1.12	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.32	%	ISO 62



LNP™ LUBRICOMP™ Compound IAL12

Americas: COMMERCIAL

PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	80	°C
Drying Time	4	hrs
Maximum Moisture Content	0.12 - 0.2	%
Melt Temperature	270 - 275	°C
Front - Zone 3 Temperature	270 - 280	°C
Middle - Zone 2 Temperature	260 - 270	°C
Rear - Zone 1 Temperature	255 - 265	°C
Mold Temperature	65 - 95	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm