LNP™ LUBRICOMP™ COMPOUND DFL34

DFL-4034

DESCRIPTION

LNP LUBRICOMP DFL34 is a compound based on Polycarbonate resin containing 20% Glass Fiber, 15% PTFE. Added feature of this material is: Wear Resistant.

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electrical Devices and Displays, Electrical Components and Infrastructure
Healthcare	Surgical, Fluid and Blood Handling
Mass Transportation	Aircraft Interiors

TYPICAL PROPERTY VALUES

Revision 20191223

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Modulus, 5 mm/min	6600	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3.3	%	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	95	MPa	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	5600	MPa	ASTM D 790
Flexural Strength, 1.3 mm/min, 50 mm span	148	MPa	ASTM D 790
Tensile Modulus, 1 mm/min	6600	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.8	%	ISO 527
Tensile Stress, break, 5 mm/min	97	MPa	ISO 527
Flexural Modulus, 2 mm/min	6000	MPa	ISO 178
Flexural Strength, 2 mm/min	150	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	150	J/m	ASTM D 256
Izod Impact, unnotched, 23°C	700	J/m	ASTM D 4812
Instrumented Impact Energy @ peak, 23°C	22	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	15	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	49	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	21	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	61	kJ/m²	ISO 179/1eU
Multiaxial Impact	7	J	ISO 6603
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	147	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	143	°C	ASTM D 648
Vicat Softening Temp, Rate B/50	148	°C	ASTM D 1525
CTE, -40°C to 40°C, flow	2.8E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.6E-05	1/°C	ASTM E 831
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	142	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	146	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/50	148	°C	ISO 306

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B/120	150	°C	ISO 306
CTE, -40°C to 40°C, flow	2.8E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.6E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, flow	2.5E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	7.8E-05	1/°C	ISO 11359-2
Relative Temp Index, Elec	80	°C	UL 746B
Relative Temp Index, Mech w/impact	80	°C	UL 746B
Relative Temp Index, Mech w/o impact	80	°C	UL 746B
PHYSICAL			
Density	1.45	g/cm³	ASTM D 792
Specific Gravity	1.45	-	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.1 – 0.2	%	ASTM D 570
Water Absorption, 24 hours	0.1 – 0.2	%	ASTM D 570
Melt Flow Rate, 300°C/2.16 kgf	8.8	g/10 min	ASTM D 1238
Dynamic COF	0.48	-	ASTM D 3702 Modified: Manual
Static COF	0.64	-	ASTM D 3702 Modified: Manual
Wear Factor Washer	76	10^-10 in^5-min/ft-lb-hr	ASTM D 3702 Modified: Manual
Density	1.45	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.1 – 0.2	%	ISO 62
Water Absorption, 23°C/24hrs	0.1 – 0.2	%	ISO 62-1
Melt Volume Rate, MVR at 300°C/2.16 kg	5	cm³/10 min	ISO 1133
Mold Shrinkage, flow	0.2 – 0.4	%	SABIC method
Mold Shrinkage, xflow	0.3 – 0.6	%	SABIC method
ELECTRICAL			
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
High Amp Arc Ignition (HAI), PLC 2	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥3	mm	UL 746A
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E121562-101344537	-	-
UL Yellow Card Link 2	E45329-101344452	-	-
UL Recognized, 94V-1 Flame Class Rating	≥3	mm	UL 94
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	4	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	305 – 325	°C	
Rear - Zone 1 Temperature	295 – 305	°C	
Middle - Zone 2 Temperature	310 – 320	°C	
Front - Zone 3 Temperature	320 – 330	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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