LNP™ LUBRICOMP™ COMPOUND WFL36

WFL-4036

DESCRIPTION

LNP LUBRICOMP WFL36 compound is based on Polybutylene Terephthalate (PBT) resin containing 30% glass fiber, 15% PTFE. Added features of this grade include: Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant, High stiffness/Strength
Fillers	Glass Fiber, PTFE
Polymer Types	Polybutylene Terephthalate (PBT)
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 20241017

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Modulus, 5 mm/min	9900	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.6	%	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	115	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	8600	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	180	MPa	ASTM D790
Tensile Modulus, 1 mm/min	10100	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.8	%	ISO 527
Tensile Stress, break, 5 mm/min	114	MPa	ISO 527
Flexural Modulus, 2 mm/min	8900	MPa	ISO 178
Flexural Modulus, 2 mm/min, 60°C	5800	MPa	ISO 178
Flexural Modulus, 2 mm/min, 100°C	4700	MPa	ISO 178
Flexural Modulus, 2 mm/min, 150°C	3600	MPa	ISO 178
Flexural Strain, break, 2 mm/min	3.1	%	ISO 178
Flexural Strain, break, 2 mm/min, 60°C	4.6	%	ISO 178
Flexural Strain, break, 2 mm/min, 100°C	5.1	%	ISO 178
Flexural Strain, break, 2 mm/min, 150°C	5.5	%	ISO 178
Flexural Stress, yield, 2 mm/min	183	MPa	ISO 178
Flexural Stress, yield, 2 mm/min, 60°C	127	MPa	ISO 178
Flexural Stress, yield, 2 mm/min, 100°C	103	MPa	ISO 178
Flexural Stress, yield, 2 mm/min, 150°C	75	MPa	ISO 178

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
IMPACT [1]			
Izod Impact, notched, 23°C	90	J/m	ASTM D256
Izod Impact, unnotched, 23°C	750	J/m	ASTM D4812
Instrumented Dart Impact Energy @ peak, 23°C	13	J	ASTM D3763
Izod Impact, notched 80*10*3 -40°C	9	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 +23°C	9	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	50	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -40°C	60	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	9	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	55	kJ/m²	ISO 179/1eU
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	210	°C	ASTM D648
Vicat Softening Temp, Rate B/50	212	°C	ASTM D1525
CTE, -40°C to 40°C, flow	3.8E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.7E-05	1/°C	ASTM E831
Specific Heat	1751	J/kg-K	ASTM E1269
Thermal Conductivity	0.26	W/m-K	ASTM D5930
CTE, 23°C to 60°C, flow	2.8E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	7.6E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, flow	3.8E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.7E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	208	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	222	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/50	212	°C	ISO 306
Relative Temp Index, Elec [2]	75	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	75	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	75	°C	UL 746B
PHYSICAL [1]			
Density	1.68	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.05	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.1	%	ASTM D570
Melt Flow Rate, 250°C/5.0 kgf	22	g/10 min	ASTM D1238
Dynamic COF	0.57	-	ASTM D3702 Modified: Manual
Static COF	0.41	-	ASTM D3702 Modified: Manual
Wear Factor Washer	42	10^-10 in^5-min/ft-lb-hr	ASTM D3702 Modified: Manual
Melt Volume Rate, MVR at 250°C/5.0 kg	17	cm³/10 min	ISO 1133
Density	1.68	g/cm³	ISO 1183
Water Absorption, (23°C/24hrs)	0.1	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
Mold Shrinkage, flow [3]	0.1 – 0.3	%	SABIC method
Mold Shrinkage, xflow [3]	0.5 – 1.4	%	SABIC method
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-101282605	-	-
UL Yellow Card Link 2	E207780-103093711	-	-
UL Yellow Card Link 3	E45329-101282616	-	-

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.05	%	
Melt Temperature	240 – 265	°C	
Rear - Zone 1 Temperature	220 – 230	°C	
Middle - Zone 2 Temperature	245 – 255	°C	
Front - Zone 3 Temperature	260 – 270	°C	
Mold Temperature	80 – 100	°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) 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.
(3) 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.
(4) 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.

MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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