LNP™ LUBRICOMP™ COMPOUND WFL36

WFL-4036

DESCRIPTION

LNP LUBRICOMP WFL36 is a compound based on PBT resin containing 30% Glass Fiber, 15% PTFE. Added features of this material include: Wear Resistant.

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Under the Hood
Building and Construction	Construction
Consumer	Commercial Appliance
Electrical and Electronics	Electrical Devices and Displays, Electrical Components and Infrastructure
Healthcare	Pharmaceutical
Hydrocarbon and Energy	Fossil
Industrial	Defense, Industrial Material Handling
Mass Transportation	Specialty Vehicles

TYPICAL PROPERTY VALUES

Revision 20191223

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Modulus, 5 mm/min	9900	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.6	%	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	115	MPa	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	8600	MPa	ASTM D 790
Flexural Strength, 1.3 mm/min, 50 mm span	180	MPa	ASTM D 790
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
IMPACT			
Izod Impact, notched, 23°C	90	J/m	ASTM D 256
Izod Impact, unnotched, 23°C	750	J/m	ASTM D 4812
Instrumented Impact Energy @ peak, 23°C	13	J	ASTM D 3763

© 2019 Copyright by SABIC. All rights reserved

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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			
HDT, 1.82 MPa, 3.2mm, unannealed	210	°C	ASTM D 648
Vicat Softening Temp, Rate B/50	212	°C	ASTM D 1525
CTE, -40°C to 40°C, flow	3.8E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.7E-05	1/°C	ASTM E 831
Specific Heat	1751	J/kg-K	ASTM E 1269
Thermal Conductivity	0.26	W/m-K	ASTM D 5930
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 [1]	75	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	75	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	75	°C	UL 746B
PHYSICAL			
Density	1.68	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.05	%	ASTM D 570
Water Absorption, 24 hours	0.1	%	ASTM D 570
Melt Flow Rate, 250°C/5.0 kgf	22	g/10 min	ASTM D 1238
Dynamic COF	0.57	-	ASTM D 3702 Modified: Manual
Static COF	0.41	-	ASTM D 3702 Modified: Manual
Wear Factor Washer	42	10^-10 in^5-min/ft-lb-hr	ASTM D 3702 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	0.1 – 0.3	%	SABIC method
Mold Shrinkage, xflow	0.5 – 1.4	%	SABIC method
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E121562-101282605	-	-
UL Yellow Card Link 2	E207780-103093711	-	-
UL Yellow Card Link 3	E45329-101282616	-	-
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	4	hrs	

© 2019 Copyright by SABIC. All rights reserved

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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) 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.

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.

© 2019 Copyright by SABIC. All rights reserved