

LNPTM LUBRICOMPTM COMPOUND DFL32XXP

DFL-4032 REGION ASIA

DESCRIPTION

LNP LUBRICOMP DFL32XXP compound is based on Polycarbonate (PC) resin containing 10% glass fiber and 15% PTFE. Added features of this grade include: Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant
Fillers	Glass Fiber, PTFE
Polymer Types	Polycarbonate (PC)
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 20231109

MECHANICAL (*)Tensile Stress, break73MPaASTM DG38Tensile Strain, break3.1%ASTM DG38Tensile Modulus, 50 mm/min4350MPaASTM DG38Flexural Stress123MPaASTM D790Tensile Stress, break71MPaS0527Tensile Stress, break2.8%50527Tensile Modulus, 1 mm/min4100MPa50527Flexural Stress114MPa50178Flexural Modulus4170MPa50178Tensile Modulus, 1 mm/min4170MPa50178Flexural Modulus5017850178Tensile Modulus4170MPa50178Index (*)545450178Indulian Impact, unnotched, 23°C541/mASTM D4812Instrumented Dart Impact Energy@peak, 23°C113ASTM D3763Multiaxial Impact414506603Indulian Impact, unnotched 80°10°4 +23°C34150180/14IntermAL (*)50180/1450180/1450180/14	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Tensile Strain, break 3.1 % ASTM D638 Tensile Modulus, 50 mm/min 4350 MPa ASTM D638 Flexural Stress 123 MPa ASTM D790 Flexural Modulus 4350 MPa ASTM D790 Tensile Stress, break 71 MPa ISO 527 Tensile Strain, break 2.8 % ISO 527 Tensile Modulus, 1 mm/min 4100 MPa ISO 178 Flexural Stress 114 MPa ISO 178 Flexural Modulus 4170 MPa ISO 178 Flexural Stress 50 527 Tensile Modulus MPa ISO 178 Flexural Stress 417 417 MPa ISO 178 Flexural Modulus 50 527 Tensile Modulus MPa SO 178 Flexural Stress 50 178 Tensile Modulus MPa SO 178 Flexural Stress 50 180 180 MPa SO 178 Tensile Modulus MPa SO 178 Tensile Modulus SO 178 Tensile Modulus Tensile Modulus	MECHANICAL (1)			
Tensile Modulus, 50 mm/min 4350 MPa ASTM D638 Flexural Stress 123 MPa ASTM D790 Flexural Modulus 4350 MPa ASTM D790 Tensile Stress, break 71 MPa ISO 527 Tensile Modulus, 1 mm/min 4100 MPa ISO 527 Flexural Stress 114 MPa ISO 178 Flexural Modulus MPa ISO 178 Flexural Modulus MPa ISO 178 Impact (1) V ISO 178 Izod Impact, unnotched, 23°C 534 J/m ASTM D4812 Izod Impact, notched, 23°C 90 J/m ASTM D256 Instrumented Dart Impact Energy @ peak, 23°C 11 J ASTM D3763 Multiaxial Impact 4 4 ASTM D4812 ASTM D3763 Izod Impact, unnotched 80°10°4 + 23°C 34 ASTM D4812 ASTM D3763 Izod Impact, unnotched 80°10°4 + 23°C 34 ASTM D4812 ISO 180/1U	Tensile Stress, break	73	MPa	ASTM D638
Flexural Stress 123 MPa ASTM D790 Flexural Modulus 4350 MPa ASTM D790 Tensile Stress, break 71 MPa ISO 527 Tensile Strain, break 2.8 % ISO 527 Tensile Modulus, 1 mm/min 4100 MPa ISO 178 Flexural Stress 114 MPa ISO 178 Flexural Modulus 4170 MPa ISO 178 Impact *** **Invariant Modulus** 534 J/m ASTM D4812 Izod Impact, unnotched, 23°C 534 J/m ASTM D256 Instrumented Dart Impact Energy @ peak, 23°C 11 J/m ASTM D3763 Multiaxial Impact 4 4 4 5 5 6	Tensile Strain, break	3.1	%	ASTM D638
Flexural Modulus 4350 MPa ASTM D790 Tensile Stress, break 71 MPa ISO 527 Tensile Strain, break 2.8 % ISO 527 Tensile Modulus, 1 mm/min 4100 MPa ISO 527 Flexural Stress 114 MPa ISO 178 Flexural Modulus MPa ISO 178 Impact Instrumented Modulus 4170 MPa ISO 178 Impact Instrumented James Instrumented, 23°C 534 J/m ASTM D4812 Izod Impact, notched, 23°C 90 J/m ASTM D256 Instrumented Dart Impact Energy @ peak, 23°C 11 J ASTM D3763 Multiaxial Impact 4 J ISO 6603 Izod Impact, unnotched 80°10°4 + 23°C 34 I/m I/m ISO 180/1U Izod Impact, notched 80°10°4 + 23°C 34 I/m I/m	Tensile Modulus, 50 mm/min	4350	MPa	ASTM D638
Tensile Stress, break 71 MPa ISO 527 Tensile Strain, break 2.8 % ISO 527 Tensile Modulus, 1 mm/min 4100 MPa ISO 527 Flexural Stress 114 MPa ISO 178 Impact Induction 4170 MPa ISO 178 Impact (II) J/m ASTM D4812 Izod Impact, unnotched, 23°C 534 J/m ASTM D256 Instrumented Dart Impact Energy @ peak, 23°C 11 J/m ASTM D3763 Instrumented Dart Impact Energy @ peak, 23°C 11 J/m ISO 6603 Inditional Impact, unnotched 80°10°4 + 23°C 34 I/m² ISO 180/1U Izod Impact, unnotched 80°10°4 + 23°C 10 I/m² ISO 180/1U	Flexural Stress	123	MPa	ASTM D790
Tensile Strain, break 2.8 ISO 527 Tensile Modulus, 1 mm/min 4100 MPa ISO 527 Flexural Stress 114 MPa ISO 178 Flexural Modulus MPa ISO 178 ImpAct (1) WPa ISO 178 Izod Impact, unnotched, 23°C 534 J/m ASTM D4812 Instrumented Dart Impact Energy@peak, 23°C 11 J/m ASTM D256 Multiaxial Impact 4 4 J SO 6603 Izod Impact, unnotched 80*10*4 + 23°C 34 kJ/m² ISO 180/1U Izod Impact, unnotched 80*10*4 + 23°C 34 kJ/m² ISO 180/1U	Flexural Modulus	4350	MPa	ASTM D790
Tensile Modulus, 1 mm/min 4100 MPa ISO 527 Flexural Stress 114 MPa ISO 178 Flexural Modulus MPa ISO 178 IMPACT (¹) WPa ISO 178 Izod Impact, unnotched, 23°C 534 J/m ASTM D4812 Izod Impact, notched, 23°C 90 J/m ASTM D256 Instrumented Dart Impact Energy @ peak, 23°C 11 J ASTM D3763 Multiaxial Impact 4 J ISO 6603 Izod Impact, unnotched 80*10*4 + 23°C 34 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 + 23°C 10 kJ/m² ISO 180/1A	Tensile Stress, break	71	MPa	ISO 527
Flexural Stress 114 MPa ISO 178 Flexural Modulus 4170 MPa ISO 178 IMPACT (1) ***********************************	Tensile Strain, break	2.8	%	ISO 527
Flexural Modulus 4170 MPa ISO 178 IMPACT (1) Izod Impact, unnotched, 23°C 534 J/m ASTM D4812 Izod Impact, notched, 23°C 90 J/m ASTM D256 Instrumented Dart Impact Energy@peak, 23°C 11 J ASTM D3763 Multiaxial Impact 4 J ISO 6603 Izod Impact, unnotched 80*10*4 + 23°C 34 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 + 23°C 10 kJ/m² ISO 180/1A	Tensile Modulus, 1 mm/min	4100	MPa	ISO 527
IMPACT (1) Izod Impact, unnotched, 23°C 534 J/m ASTM D4812 Izod Impact, notched, 23°C 90 J/m ASTM D256 Instrumented Dart Impact Energy@peak, 23°C 11 J ASTM D3763 Multiaxial Impact 4 J ISO 6603 Izod Impact, unnotched 80*10*4 + 23°C 34 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 + 23°C 10 kJ/m² ISO 180/1A	Flexural Stress	114	MPa	ISO 178
Izod Impact, unnotched, 23°C 534 J/m ASTM D4812 Izod Impact, notched, 23°C 90 J/m ASTM D256 Instrumented Dart Impact Energy@peak, 23°C 11 J ASTM D3763 Multiaxial Impact J ISO 6603 Izod Impact, unnotched 80*10*4 + 23°C 34 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 + 23°C 10 kJ/m² ISO 180/1A	Flexural Modulus	4170	MPa	ISO 178
Izod Impact, notched, 23°C 90 J/m ASTM D256 Instrumented Dart Impact Energy @ peak, 23°C 11 J ASTM D3763 Multiaxial Impact 4 J ISO 6603 Izod Impact, unnotched 80*10*4 + 23°C 34 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 + 23°C 10 kJ/m² ISO 180/1A	IMPACT (1)			
Instrumented Dart Impact Energy@peak, 23°C 11 J ASTM D3763 Multiaxial Impact 4 J ISO 6603 Izod Impact, unnotched 80*10*4 +23°C 34 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 10 kJ/m² ISO 180/1A	Izod Impact, unnotched, 23°C	534	J/m	ASTM D4812
Multiaxial Impact 4 J ISO 6603 Izod Impact, unnotched 80*10*4 +23°C 34 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 10 kJ/m² ISO 180/1A	Izod Impact, notched, 23°C	90	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C 34 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 10 kJ/m² ISO 180/1A	Instrumented Dart Impact Energy @ peak, 23°C	11	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C 10 kJ/m² ISO 180/1A	Multiaxial Impact	4	J	ISO 6603
	Izod Impact, unnotched 80*10*4 +23°C	34	kJ/m²	ISO 180/1U
THERMAL (1)	Izod Impact, notched 80*10*4 +23°C	10	kJ/m²	ISO 180/1A
	THERMAL (1)			
HDT, 1.82 MPa, 3.2mm, unannealed 141 °C ASTM D648	HDT, 1.82 MPa, 3.2mm, unannealed	141	°C	ASTM D648



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	140	°C	ISO 75/Af
Relative Temp Index, Elec ⁽²⁾	125	°C	UL 746B
Relative Temp Index, Mech w/impact (2)	115	°C	UL 746B
Relative Temp Index, Mech w/o impact (2)	125	°C	UL 746B
PHYSICAL (1)			
Density	1.37	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.11	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽³⁾	0.2	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽³⁾	0.7	%	ASTM D955
Mold Shrinkage, flow, 24 hrs ⁽³⁾	0.23	%	ISO 294
Mold Shrinkage, xflow, 24 hrs ⁽³⁾	0.67	%	ISO 294
Moisture Absorption (23°C / 50% RH)	0.17	%	ISO 62
FLAME CHARACTERISTICS (2)			
FLAME CHARACTERISTICS ⁽²⁾ UL Yellow Card Link	E207780-101358149		
	E207780-101358149	- mm	UL 94
UL Yellow Card Link		- mm	- UL 94
UL Yellow Card Link UL Recognized, 94HB Flame Class Rating		- mm	- UL 94
UL Yellow Card Link UL Recognized, 94HB Flame Class Rating INJECTION MOLDING (4)	1.8		- UL 94
UL Yellow Card Link UL Recognized, 94HB Flame Class Rating INJECTION MOLDING (4) Drying Temperature	1.8	°C	- UL 94
UL Yellow Card Link UL Recognized, 94HB Flame Class Rating INJECTION MOLDING (4) Drying Temperature Drying Time	1.8 120 4	°C Hrs	- UL 94
UL Yellow Card Link UL Recognized, 94HB Flame Class Rating INJECTION MOLDING (4) Drying Temperature Drying Time Maximum Moisture Content	1.8 120 4 0.02	°C Hrs % °C °C	- UL 94
UL Yellow Card Link UL Recognized, 94HB Flame Class Rating INJECTION MOLDING (4) Drying Temperature Drying Time Maximum Moisture Content Melt Temperature	1.8 120 4 0.02 305 – 325	°C Hrs % °C °C °C	- UL 94
UL Yellow Card Link UL Recognized, 94HB Flame Class Rating INJECTION MOLDING (4) Drying Temperature Drying Time Maximum Moisture Content Melt Temperature Front - Zone 3 Temperature	1.8 120 4 0.02 305 - 325 320 - 330 310 - 320 295 - 305	°C Hrs % °C °C °C °C	- UL 94
UL Yellow Card Link UL Recognized, 94HB Flame Class Rating INJECTION MOLDING (4) Drying Temperature Drying Time Maximum Moisture Content Melt Temperature Front - Zone 3 Temperature Middle - Zone 2 Temperature Rear - Zone 1 Temperature Mold Temperature	1.8 120 4 0.02 305 – 325 320 – 330 310 – 320	°C Hrs % °C °C °C	- UL 94
UL Yellow Card Link UL Recognized, 94HB Flame Class Rating INJECTION MOLDING (4) Drying Temperature Drying Time Maximum Moisture Content Melt Temperature Front - Zone 3 Temperature Middle - Zone 2 Temperature Rear - Zone 1 Temperature	1.8 120 4 0.02 305 - 325 320 - 330 310 - 320 295 - 305	°C Hrs % °C °C °C °C	- UL 94

⁽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.

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.

⁽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.