

LNPT[™] LUBRICOMP[™] COMPOUND DL002ER

DL-4020 EM MR

DESCRIPTION

LNP LUBRICOMP DL002ER compound is based on Polycarbonate (PC) resin containing 10% PTFE. Added features of this grade include: Wear Resistant, Easy Molding, Mold Release.

GENERAL INFORMATION

Features	Good Processability, Wear resistant, Enhanced mold release
Fillers	Unreinforced, PTFE
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY

Building and Construction
Consumer
Electrical and Electronics
Industrial

SUB INDUSTRY

Building Component
Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Mobile Phone - Computer - Tablets
Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yield	55	MPa	ASTM D638
Tensile Stress, break	48	MPa	ASTM D638
Tensile Strain, yield	5.9	%	ASTM D638
Tensile Strain, break	66.3	%	ASTM D638
Tensile Modulus, 50 mm/min	2060	MPa	ASTM D638
Flexural Modulus	2060	MPa	ASTM D790
Tensile Stress, yield	56	MPa	ISO 527
Tensile Stress, break	46	MPa	ISO 527
Tensile Strain, yield	5.7	%	ISO 527
Tensile Strain, break	70.7	%	ISO 527
Tensile Modulus, 1 mm/min	2200	MPa	ISO 527
Flexural Stress	73	MPa	ISO 178
Flexural Modulus	2200	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	2488	J/m	ASTM D4812
Izod Impact, notched, 23°C	133	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	40	J	ASTM D3763
Multiaxial Impact	44	J	ISO 6603
Izod Impact, unnotched 80°10°4 +23°C	174	kJ/m ²	ISO 180/1U
Izod Impact, notched 80°10°4 +23°C	11	kJ/m ²	ISO 180/1A

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CHEMISTRY THAT MATTERS[™]

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	135	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	123	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.56E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.2E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.2E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	135	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	125	°C	ISO 75/Af
PHYSICAL ⁽¹⁾			
Density	1.24	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.1	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.6 – 0.8	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.7 – 0.9	%	ASTM D955
Mold Shrinkage, flow, 24 hrs ⁽²⁾	0.7	%	ISO 294
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	0.79	%	ISO 294
Wear Factor Washer	34	10 ⁻⁴ in ³ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.24	-	ASTM D3702 Modified: Manual
Static COF	0.07	-	ASTM D3702 Modified: Manual
Density	1.24	g/cm ³	ISO 1183
INJECTION MOLDING ⁽³⁾			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	300 – 315	°C	
Front - Zone 3 Temperature	310 – 320	°C	
Middle - Zone 2 Temperature	305 – 315	°C	
Rear - Zone 1 Temperature	295 – 305	°C	
Mold Temperature	80 – 110	°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) 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.

(3) 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.

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