

LNPTM THERMOCOMPTM COMPOUND DF008ER

DF-1008 EM MR REGION AMERICAS

DESCRIPTION

LNP THERMOCOMP DF008ER compound is based on Polycarbonate (PC) resin containing 40% glass fiber. Added features of this grade include: Easy Molding, Mold Release.

GENERAL INFORMATION	
Features	Good Processability, Enhanced mold release, High stiffness/Strength
Fillers	Glass Fiber
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

MECHANICAL (¹) MPa ASTM DG38 Tensile Stress, break 136 MPa ASTM DG38 Tensile Strain, break 2.3 MPa ASTM DG38 Tensile Modulus, 50 mm/min 11810 MPa ASTM DG38 Flexural Stress 294 MPa ASTM D790 Flexural modulus MPa ASTM D790 Tensile Stress, break 136 MPa SOS 27 Tensile Strain, break 2.2 % ISO 527 Flexural Stress 10800 MPa ISO 527 Flexural Stress 1097 MPa ISO 178 Flexural Stress 1098 MPa ISO 527 Flexural Stress 1098 MPa ISO 178 Flexural Stress 1098 MPa ISO 189 Instrument Lorent Unine Lorence (a) 2°C 20 ASTM D4812	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Tensile Strain, break 2.3 % ASTM D638 Tensile Modulus, 50 mm/min 11810 MPa ASTM D638 Flexural Stress 204 MPa ASTM D790 Flexural modulus 11260 MPa ASTM D790 Tensile Stress, break 136 MPa ISO 527 Tensile Strain, break 2.2 % ISO 527 Tensile Modulus, 1 mm/min 10800 MPa ISO 178 Flexural Stress 203 MPa ISO 178 Flexural Modulus 10970 MPa ISO 178 Information London MPa ISO 178 ISO 178 Information London MPa ASTM D4812 ISO 178 Information London MPa ASTM D4812 ISO 178 Information London MPa ASTM D4812 ISO 180 Informat	MECHANICAL (1)			
Tensile Modulus, 50 mm/min 11810 MPa ASTM D638 Flexural Stress 204 MPa ASTM D790 Flexural modulus 11260 MPa ASTM D790 Tensile Stress, break 136 MPa ISO 527 Tensile Strain, break 2.2 % ISO 527 Tensile Modulus, 1 mm/min 10800 MPa ISO 178 Flexural Stress 203 MPa ISO 178 Flexural Modulus 10970 MPa ISO 178 Impact 10970 MPa SO 178 Internal Modulus 10970 ASTM D4812 ASTM D4812 Internal Modulus 20 MPa ASTM D4812 Internal Modulus 20 MPa ASTM D4812 Internal Modulus 20 ASTM D4812 ASTM D4812 Internal Modulus 20	Tensile Stress, break	136	MPa	ASTM D638
Flexural Stress 204 MPa ASTM D790 Flexural modulus 11260 MPa ASTM D790 Tensile Stress, break 136 MPa 150 527 Tensile Strain, break 2.2 % 150 527 Tensile Modulus, 1 mm/min 10800 MPa 150 527 Flexural Stress 203 MPa 150 178 Flexural Modulus 10970 MPa 150 178 Flexural MPa 150 178 Flexu	Tensile Strain, break	2.3	%	ASTM D638
Flexural modulus 1260	Tensile Modulus, 50 mm/min	11810	MPa	ASTM D638
Tensile Stress, break 136 MPa ISO 527 Tensile Strain, break 2.2 % ISO 527 Tensile Modulus, 1 mm/min 10800 MPa ISO 527 Flexural Stress 203 MPa ISO 178 Flexural Modulus 10970 MPa ISO 178 IMPACT (1) 1 J/m ASTM D4812 Izod Impact, unnotched, 23°C 450 J/m ASTM D256 Instrumented Dart Impact Energy @ peak, 23°C 13 J ASTM D3763 Multiaxial Impact 2 J SO 6603 Izod Impact, unnotched 80*10*4 + 23°C 60 kl/m² ISO 180/14 Izod Impact, notched 80*10*4 + 23°C 14 kl/m² ISO 180/1A	Flexural Stress	204	MPa	ASTM D790
Tensile Strain, break 2.2 % ISO 527 Tensile Modulus, 1 mm/min 10800 MPa ISO 527 Flexural Stress 203 MPa ISO 178 Flexural Modulus MPa ISO 178 ImpACT (*) V V Izod Impact, unnotched, 23°C 450 J/m ASTM D4812 Isod Impact, notched, 23°C 80 J/m ASTM D256 Instrumented Dart Impact Energy @ peak, 23°C 13 J ASTM D3763 Multiaxial Impact 2 J ISO 6603 Izod Impact, unnotched 80°10°4 + 23°C 60 kJ/m² ISO 180/1U Izod Impact, notched 80°10°4 + 23°C 14 KJ/m² ISO 180/1A	Flexural modulus	11260	MPa	ASTM D790
Tensile Modulus, 1 mm/min 10800 MPa ISO 527 Flexural Stress 203 MPa ISO 178 Flexural Modulus MPa ISO 178 IMPACT (¹) WPa ISO 178 Izod Impact, unnotched, 23°C 450 J/m ASTM D4812 Izod Impact, notched, 23°C 80 J/m ASTM D256 Instrumented Dart Impact Energy @ peak, 23°C 13 J/m ASTM D3763 Izod Impact, unnotched 80°10°4 +23°C 60 kJ/m² ISO 180/10 Izod Impact, notched 80°10°4 +23°C 14 kJ/m² ISO 180/1A IteRMAL (¹) 1 KJ/m² ISO 180/1A	Tensile Stress, break	136	MPa	ISO 527
Flexural Stress Plexural Modulus Plexural Modu	Tensile Strain, break	2.2	%	ISO 527
Flexural Modulus MPa MPa SO 178 MPACT (1) Lood Impact, unnotched, 23°C Lood Impact, notched, 23°C Rostmand Energy @ peak, 23°C Multiaxial Impact Lood Impact, unnotched 80°10°4 +23°C Lood Impact, unnotched 80°10°4	Tensile Modulus, 1 mm/min	10800	MPa	ISO 527
IMPACT (1) Izod Impact, unnotched, 23°C 450 J/m ASTM D4812 Izod Impact, notched, 23°C 80 J/m ASTM D256 Instrumented Dart Impact Energy@peak, 23°C 13 J ASTM D3763 Multiaxial Impact 2 J ISO 6603 Izod Impact, unnotched 80*10*4 + 23°C 60 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 + 23°C 14 kJ/m² ISO 180/1A THERMAL (1) THERMAL (1) THERMAL (2) THERMAL (3) THERMAL (3) <t< td=""><td>Flexural Stress</td><td>203</td><td>MPa</td><td>ISO 178</td></t<>	Flexural Stress	203	MPa	ISO 178
Izod Impact, unnotched, 23°C 450 J/m ASTM D4812 Izod Impact, notched, 23°C 80 J/m ASTM D256 Instrumented Dart Impact Energy@peak, 23°C 13 J ASTM D3763 Multiaxial Impact 2 Iso 6603 Iso 180/1U Izod Impact, unnotched 80°10°4 +23°C 60 kJ/m² Iso 180/1A Izod Impact, notched 80°10°4 +23°C 14 kJ/m² Iso 180/1A THERMAL (¹) 1 Iso 180/1A Iso 180/1A	Flexural Modulus	10970	MPa	ISO 178
Izod Impact, notched, 23°C 80 J/m ASTM D256 Instrumented Dart Impact Energy @ peak, 23°C 13 J ASTM D3763 Multiaxial Impact 2 J ISO 6603 Izod Impact, unnotched 80*10*4 +23°C 60 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 14 kJ/m² ISO 180/1A THERMAL (¹¹) THERMAL (¹¹) THERMAL (¹¹) THERMAL (¹¹)	IMPACT (1)			
Instrumented Dart Impact Energy@ peak, 23°C 13 J ASTM D3763 Multiaxial Impact 2 J ISO 6603 Izod Impact, unnotched 80*10*4 + 23°C 60 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 + 23°C 14 kJ/m² ISO 180/1A THERMAL (1)	Izod Impact, unnotched, 23°C	450	J/m	ASTM D4812
Multiaxial Impact 2 ISO 6603 Izod Impact, unnotched 80*10*4 +23°C 60 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 14 kJ/m² ISO 180/1A THERMAL (1)	Izod Impact, notched, 23°C	80	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C 60 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 14 kJ/m² ISO 180/1A THERMAL (1)	Instrumented Dart Impact Energy @ peak, 23°C	13	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C 14 kJ/m² ISO 180/1A THERMAL (1)	Multiaxial Impact	2	J	ISO 6603
THERMAL (1)	Izod Impact, unnotched 80*10*4 +23°C	60	kJ/m²	ISO 180/1U
	Izod Impact, notched 80*10*4 +23°C	14	kJ/m²	ISO 180/1A
HDT, 1.82 MPa, 3.2mm, unannealed 136 °C ASTM D648	THERMAL (1)			
	HDT, 1.82 MPa, 3.2mm, unannealed	136	°C	ASTM D648



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, flow	3.25E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	3.5E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	3.26E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	3.51E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	139	°C	ISO 75/Af
Relative Temp Index, Elec ⁽²⁾	80	°C	UL 746B
Relative Temp Index, Mech w/impact (2)	80	°C	UL 746B
Relative Temp Index, Mech w/o impact (2)	80	°C	UL 746B
PHYSICAL (1)			
Moisture Absorption, (23°C/50% RH/24 hrs)	0.93	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽³⁾	0.2	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (3)	0.4	%	ASTM D955
Mold Shrinkage, flow, 24 hrs ⁽³⁾	0.16	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (3)	0.35	%	ISO 294
Moisture Absorption (23°C / 50% RH)	0.12	%	ISO 62
FLAME CHARACTERISTICS (1) (2)			
UL Yellow Card Link	E121562-101344608	-	
UL Recognized, 94V-1 Flame Class Rating	≥3	mm	UL 94
UL Recognized, 94V-2 Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING (4)			
Drying Temperature	120	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	305 – 325	°C	
Front - Zone 3 Temperature	320 – 330	°C	
Middle - Zone 2 Temperature	310 – 320	°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.

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⁽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.