

LNPT[™] THERMOCOMP[™] COMPOUND DF0046P

DF-1004 EP FR ECO

DESCRIPTION

LNP THERMOCOMP DF0046P compound is based on Polycarbonate (PC) resin containing 20% glass fiber. Added features of this grade include: Exceptional Processing, Non-Brominated & Non-Chlorinated Flame Retardant.

GENERAL INFORMATION

Features	Flame Retardant, High Flow, Non Cl/Br flame retardant, High stiffness/Strength
Fillers	Glass Fiber
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY

Building and Construction
Consumer
Electrical and Electronics
Industrial

SUB INDUSTRY

Building Component
Personal Accessory
Mobile Phone - Computer - Tablets
Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, break	95	MPa	ASTM D638
Tensile Strain, break	3.6	%	ASTM D638
Tensile Modulus, 50 mm/min	6160	MPa	ASTM D638
Flexural Stress	137	MPa	ASTM D790
Flexural Modulus	5970	MPa	ASTM D790
Tensile Stress, break	97	MPa	ISO 527
Tensile Strain, break	3.3	%	ISO 527
Tensile Modulus, 1 mm/min	6920	MPa	ISO 527
Flexural Stress	151	MPa	ISO 178
Flexural Modulus	6560	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, unnotched, 23°C	467	J/m	ASTM D4812
Izod Impact, notched, 23°C	74	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	10	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	8	kJ/m ²	ISO 180/1A
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	140	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	137	°C	ASTM D648
CTE, -40°C to 40°C, flow	4.68E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.13E-04	1/°C	ASTM E831

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CHEMISTRY THAT MATTERS[™]

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, flow	2.13E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.97E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	138	°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⁾			
Density	1.37	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.4	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽³⁾	0.2 – 0.4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽³⁾	0.3 – 0.5	%	ASTM D955
Density	1.37	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.1	%	ISO 62
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E207780-101284060	-	-
UL Recognized, 94V-0 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.

(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.

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