LNP™ THERMOCOMP™ Compound DF004RXP

DF004RXP

DESCRIPTION

LNP THERMOCOMP DF004RXP compound is based on Polycarbonate (PC) resin containing 20% glass fiber. Added features of this grade include: Mold Release.

GENERAL INFORMATION	
Features	Enhanced mold release, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
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 20260804

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	105	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	102	MPa	ASTM D638
Tensile Strain, Yield			
Type I, 5 mm/min	2.9	%	ASTM D638
5 mm/min	3	%	ISO 527
Tensile Strain, Break			
Type I, 5 mm/min	3.2	%	ASTM D638
5 mm/min	3.3	%	ISO 527
Tensile Modulus, 50 mm/min	6100	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	173	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	169	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	6070	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	105	MPa	ISO 527
Tensile Stress, break, 5 mm/min	103	MPa	ISO 527
Tensile Modulus, 1 mm/min	5720	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	163	MPa	ISO 178
Flexural Stress, break, 2 mm/min	163	MPa	ISO 178
Flexural Strain, break, 2 mm/min	3.7	%	ISO 178
Flexural Modulus, 2 mm/min	5880	MPa	ISO 178
IMPACT [1]			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, Unnotched			
23°C	895	J/m	ASTM D4812
80*10*4 +23°C	53	kJ/m²	ISO 180/1U
Izod impact, notched			
23°C	125	J/m	ASTM D256
23°C (Natural & Black Colors)	125	J/m	ASTM D256
23°C (Light & White Colors)	98	J/m	ASTM D256
80*10*4 +23°C	12	kJ/m²	ISO 180/1A
Instrumented Dart Impact Energy @ peak, 23°C	24	J	ASTM D3763
Multiaxial Impact	5	J	ISO 6603
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	141	°C	ASTM D648
CTE, -30°C to 30°C, flow	2.89E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	5.39E-05	1/°C	ASTM D696
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	140	°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	1.352	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.13	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [3]	0.2 – 0.4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [3]	0.6 – 0.8	%	ASTM D955
Density	1.35	g/cm³	ISO 1183
Water Absorption, (23°C/24hrs)	0.17	%	ISO 62-1
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-101345271	-	-
UL Yellow Card Link 2	E207780-101282820	-	-
UL Recognized, 94HB Flame Class Rating	≥0.75	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	110	°C	
Drying Time	3 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	285 – 310	°C	
Nozzle Temperature	285 – 305	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.1 – 0.3	MPa	
Screw Speed	50 – 90	rpm	

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(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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