LNP™ THERMOCOMP™ COMPOUND DX09402

DX09402

DESCRIPTION

LNP THERMOCOMP DX09402 compound is based on Polycarbonate (PC) resin containing glass fiber. Added features of this grade include: Low Temperature Ductility, Easy Processing, UV Stabilized, Non-Brominated, Non-Chlorinated Flame Retardant.

GENERAL INFORMATION	
Features	Flame Retardant, Good Processability, Non Cl/Br flame retardant, High stiffness/Strength, Impact resistant, Low temperature impact
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 20241018

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	56	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	45	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	5.3	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	36.8	%	ASTM D638
Tensile Modulus, 5 mm/min	2970	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	2810	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	55	MPa	ISO 527
Tensile Stress, break, 5 mm/min	47	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5.1	%	ISO 527
Tensile Strain, break, 5 mm/min	21.3	%	ISO 527
Tensile Modulus, 1 mm/min	2990	MPa	ISO 527
Flexural Stress	81	MPa	ISO 178
Flexural Modulus, 2 mm/min	2640	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	2260	J/m	ASTM D4812
Izod Impact, notched, 23°C	431	J/m	ASTM D256
Multiaxial Impact	43	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	41	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	201	kJ/m²	ISO 180/1U

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*4 +23°C	29	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	138	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	129	°C	ASTM D648
CTE, -30°C to 30°C, flow	5.4E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	7.8E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	136	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	125	°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]			
Specific Gravity	1.23	-	ASTM D792
Density	1.22	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.14	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [3]	0.2 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [3]	0.3 – 0.6	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.18	%	ISO 62
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E121562-101357512	-	-
UL Recognized, 94V-0 Flame Class Rating	≥3	mm	UL 94
UV-light, water exposure/immersion	F1	-	UL 746C
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	
STRUCTURAL FOAM MOLDING			
Blowing Agent, Physical System	Nirtogen	-	
Blowing Agent, Chemical System	FLC95	-	
Drying Time (Blowing Agent)	4	Hrs	

(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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