LNP™ THERMOCOMP™ Compound DX10311X

DESCRIPTION

LNP THERMOCOMP DX10311X compound is based on Polycarbonate (PC) resin containing 30% glass fiber. Added features of this grade include: High Modulus and Good Ductility.

GENERAL INFORMATION	
Features	High stiffness/Strength, Impact resistant, 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 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	114	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.5	%	ASTM D638
Tensile Modulus, 5 mm/min	8690	MPa	ASTM D638
Flexural Stress	180	MPa	ASTM D790
Flexural Modulus	7410	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	115	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.5	%	ISO 527
Tensile Modulus, 1 mm/min	8610	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	172	MPa	ISO 178
Flexural Stress, break, 2 mm/min	180	MPa	ISO 178
Flexural Modulus, 2 mm/min	7450	MPa	ISO 178
IMPACT [1]			
Charpy Impact, unnotched, 23°C	45	kJ/m²	ISO 179/2C
Izod Impact, unnotched, 23°C	715	J/m	ASTM D4812
Izod Impact, notched, 23°C	165	J/m	ASTM D256
Charpy Impact, notched, 23°C	17	kJ/m²	ISO 179/2C
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	125	°C	ASTM D648
CTE, -40°C to 40°C, flow	2.1E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.8E-05	1/°C	ASTM E831
PHYSICAL [1]			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Specific Gravity	1.43	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm [2]	0.1 – 0.4	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm [2]	0.2 – 0.5	%	SABIC method
Melt Volume Rate, MVR at 300°C/2.16 kg	9	cm³/10 min	ISO 1133
INJECTION MOLDING [3]			
Drying Temperature	90 – 110	°C	
Drying Time	3 – 5	Hrs	
Melt Temperature	280 – 320	°C	
Nozzle Temperature	280 – 320	°C	
Front - Zone 3 Temperature	280 – 320	°C	
Middle - Zone 2 Temperature	280 – 320	°C	
Rear - Zone 1 Temperature	250 – 280	°C	
Mold Temperature	90 – 120	°C	
Back Pressure	1 – 5	MPa	
Screw Speed	30 – 100	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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