LNP™ THERMOCOMP™ Compound CX05470

CF-1004 ZS

DESCRIPTION

LNP THERMOCOMP CX05470 compound is based on Polystyrene (PS) resin containing 20% glass fiber.

GENERAL INFORMATION	
Features	No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polystyrene (PS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors
Building and Construction	Building Component
Consumer	Sport/Leisure
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Material Handling

TYPICAL PROPERTY VALUES

Revision 20240715

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Flexural Strength, 2 mm/min	85	MPa	ISO 178
Flexural Modulus, 2 mm/min	6320	MPa	ISO 178
Tensile Stress, break, 5 mm/min	52	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.1	%	ISO 527
Tensile Modulus, 1 mm/min	6800	MPa	ISO 527
Tensile Modulus, 5 mm/min	7100	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	56	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.2	%	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	90	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	6480	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	3	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	9	kJ/m²	ISO 180/1U
Multiaxial Impact	2	J	ISO 6603
Izod Impact, unnotched, 23°C	156	J/m	ASTM D4812
Izod Impact, notched, 23°C	36	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	8	J	ASTM D3763
THERMAL [1]			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	97	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	92	°C	ISO 75/Af

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	97	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	93	°C	ASTM D648
CTE, -30°C to 30°C, flow	5.60E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	6.90E-05	1/°C	ASTM D696
PHYSICAL (1)			
Moisture Absorption (23°C / 50% RH)	0.07	%	ISO 62
Density	1.18	g/cm³	ASTM D792
Specific Gravity	1.18	-	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.06	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.1 – 0.4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.2 – 0.5	%	ASTM D955
INJECTION MOLDING (3)			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Melt Temperature	250	°C	
Front - Zone 3 Temperature	265 – 275	°C	
Middle - Zone 2 Temperature	245 – 255	°C	
Rear - Zone 1 Temperature	220 – 230	°C	
Mold Temperature	40 – 65	°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) 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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