LNP™ THERMOCOMP™ COMPOUND 9F005P

DESCRIPTION

LNP THERMOCOMP 9F005P compound is based on Polycarbonate (PC) resin containing 25% glass fiber. Added features of this grade include: Exceptional Processing, CLTE close to Aluminum.

GENERAL INFORMATION	
Features	High Flow, Dimensional stability, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Exteriors
Building and Construction	Building Component
Consumer	Sport/Leisure, Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20241017

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	130	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	130	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.0	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.0	%	ASTM D638
Tensile Modulus, 5 mm/min	8245	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	166	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	7250	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	105	MPa	ISO 527
Tensile Stress, break, 5 mm/min	105	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2	%	ISO 527
Tensile Strain, break, 5 mm/min	3	%	ISO 527
Tensile Modulus, 1 mm/min	8277	MPa	ISO 527
Flexural Stress	168	MPa	ISO 178
Flexural Modulus, 2 mm/min	7987	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched 80*10*4 +23°C	27	kJ/m²	ISO 180/1U
Izod Impact, unnotched, 23°C	449	J/m	ASTM D4812
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	9	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	33	kJ/m²	ISO 179/1eU
Izod Impact, notched, 23°C	98	J/m	ASTM D256

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Instrumented Dart Impact Total Energy, 23°C	7	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	9	kJ/m²	ISO 180/1A
THERMAL [1]			
Vicat Softening Temp, Rate B/50	129	°C	ISO 306
CTE, -40°C to 40°C, flow	2.68E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	5.67E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	2.68E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, flow	2.47E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	5.67E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	6.6E-05	1/°C	ISO 11359-2
HDT, 0.45 MPa, 3.2 mm, unannealed	135	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	130	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	135	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	130	°C	ISO 75/Af
PHYSICAL [1]			
Moisture Absorption (23°C / 50% RH)	.01	%	ISO 62
Melt Volume Rate, MVR at 260°C/5.0 kg	47	cm³/10 min	ISO 1133
Specific Gravity	1.33	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.06	%	ASTM D570
Water Absorption, (23°C/saturated)	0.06	%	ISO 62-1
Mold Shrinkage, flow, 24 hrs [2]	0.34 – 0.44	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	0.53	%	ISO 294
Mold Shrinkage, flow, 24 hrs [2]	0.34 – 0.44	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.53	%	ASTM D955
Melt Flow Rate, 260°C/5.0 kgf	56	g/10 min	ASTM D1238
Density	1.32	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.01	%	ASTM D570
ELECTRICAL [1]			
Comparative Tracking Index	200	V	IEC 60112
FLAME CHARACTERISTICS [3]			
UL Yellow Card Link	E121562-104050517	-	-
UL Recognized, 94HB Flame Class Rating	≥0.75	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	95 – 105	°C	
Drying Time	2	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 280	°C	
Nozzle Temperature	250 – 280	°C	
Front - Zone 3 Temperature	250 – 280	°C	
Middle - Zone 2 Temperature	250 – 280	°C	
Rear - Zone 1 Temperature	250 – 280	°C	
Mold Temperature	90	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	65	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) 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) 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.

(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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