LNP™ THERMOCOMP™ Compound DX06411H

DF-1004 EM MR HC

DESCRIPTION

LNP THERMOCOMP DX06411H compound is based on Polycarbonate (PC) resin containing 20% glass fiber. Added features of this grade include: Easy Molding, Mold Release, Healthcare.

GENERAL INFORMATION	
Features	Good Processability, Healthcare/Formula lock, 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
Hygiene and Healthcare	Pharmaceutical Packaging and Drug Delivery, Surgical devices, General Healthcare, Patient Testing
Packaging	Industrial Packaging

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	104	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	101	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	3.1	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3.9	%	ASTM D638
Tensile Modulus, 50 mm/min	6960	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	174	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	174	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	6090	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	104	MPa	ISO 527
Tensile Stress, break, 5 mm/min	102	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.9	%	ISO 527
Tensile Strain, break, 5 mm/min	3.8	%	ISO 527
Tensile Modulus, 1 mm/min	6990	MPa	ISO 527
Flexural Stress	175	MPa	ISO 178
Flexural Modulus, 2 mm/min	6000	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	947	J/m	ASTM D4812
Izod Impact, notched, 23°C	118	J/m	ASTM D256
Multiaxial Impact	4	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	18	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	59	kJ/m²	ISO 180/1U

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*4 +23°C	11	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	140	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	136	°C	ASTM D648
CTE, -30°C to 30°C, flow	3.E-06	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	7.E-06	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	143	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	137	°C	ISO 75/Af
PHYSICAL [1]			
Specific Gravity	1.35	-	ASTM D792
Density	1.35	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.01	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.3 – 0.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.5 – 0.7	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.01	%	ISO 62
INJECTION MOLDING [3]			
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	

(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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