LNP™ THERMOCOMP™ Compound 9X22141

DESCRIPTION

LNP THERMOCOMP 9X22141 compound (also known as ER016141) is based on Polycarbonate (PC) and Acrylonitrile butadiene styrene (ABS) resins containing 20% glass fiber. Added features of this grade include: High Stiffness, Excellent Processing, Good Dimensional Stability, Good Impact Performance, UL94 HB Rating

GENERAL INFORMATION	
Features	Good Processability, Dimensional stability, High stiffness/Strength, Impact resistant, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polycarbonate + ABS (PC+ABS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive EV Batteries

TYPICAL PROPERTY VALUES

Revision 20241017

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Modulus, 1 mm/min	7000	MPa	ISO 527
Tensile Stress, break, 5 mm/min	114	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.7	%	ISO 527
Flexural Modulus, 2 mm/min	6200	MPa	ISO 178
Flexural Stress, yield, 2 mm/min	166	MPa	ISO 178
Flexural Stress, break, 2 mm/min	165	MPa	ISO 178
Tensile Modulus, 5 mm/min	7000	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	116	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	6600	MPa	ASTM D790
Flexural Stress, yld, 1.3 mm/min, 50 mm span	172	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	169	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	11	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 0°C	11	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	63	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	12	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	52	kJ/m²	ISO 179/1eU
Charpy 0°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m²	ISO 179/1eA
Izod Impact, notched, 23°C	110	J/m	ASTM D256
Izod Impact, notched, 0°C	110	J/m	ASTM D256
Izod Impact, unnotched, 23°C	700	J/m	ASTM D4812
Instrumented Dart Impact Energy @ peak, 23°C	18	J	ASTM D3763
THERMAL [1]			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Temp Index, Elec	60	°C	UL 746B
Relative Temp Index, Mech w/impact	60	°C	UL 746B
Relative Temp Index, Mech w/o impact	60	°C	UL 746B
Vicat Softening Temp, Rate B/50	136	°C	ISO 306
Vicat Softening Temp, Rate B/120	138	°C	ISO 306
CTE, -30°C to 80°C, flow	3.8E-5	1/°C	ISO 11359-2
CTE, -30°C to 80°C, xflow	5.8E-5	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	132	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	137	°C	ISO 75/Bf
HDT, 1.82 MPa, 3.2mm, unannealed	132	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	136	°C	ASTM D648
PHYSICAL (1)			
Density	1.29	g/cm³	ISO 1183
Melt Flow Rate, 260°C/2.16 kgf	5	g/10 min	ASTM D1238
Melt Flow Rate, 260°C/5.0 kgf	20	g/10 min	ASTM D1238
Mold Shrinkage, flow (2)	0.2 – 0.4	%	SABIC method
Mold Shrinkage, xflow (2)	0.3 – 0.5	%	SABIC method
FLAME CHARACTERISTICS (3)			
UL Yellow Card Link	E121562-104627828	-	-
UL Recognized, 94HB Flame Class Rating	≥0.75	mm	UL 94
INJECTION MOLDING (4)			
Drying Temperature	80 – 100	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	260 – 290	°C	
Rear - Zone 1 Temperature	250 – 280	°C	
Middle - Zone 2 Temperature	255 – 285	°C	
Front - Zone 3 Temperature	260 – 290	°C	
Nozzle Temperature	260 – 290	°C	
Mold Temperature	60 – 90	°C	
Back Pressure	0.2 – 0.7	MPa	

(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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