LNP™ THERMOCOMP™ COMPOUND OF00AN

DESCRIPTION

LNP THERMOCOMP OF00AN compound is based Polyphenylene Sulfide (PPS) containing 50% glass fiber. Added features include: High Modulus, Impact Modified, Low Chloride content, Good Warpage Control, Inherently Flame Retardant. Excellent High Heat and Chemical Resistance and Good Metal Bonding Strength targeted for Nano-Molding Technology (NMT) applications.

GENERAL INFORMATION	
Features	Flame Retardant, Low Warpage, Thin Wall, Nano molding technology, Dimensional stability, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber
Polymer Types	Polyphenylene Sulfide, Linear (PPS, Linear)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Industrial	Electrical, Material Handling

TYPICAL PROPERTY VALUES

Revision 20241018

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	203	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.8	%	ASTM D638
Tensile Modulus, 5 mm/min	16700	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	285	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	15200	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	205	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.8	%	ISO 527
Tensile Modulus, 1 mm/min	16800	MPa	ISO 527
Flexural Strength, 2 mm/min	290	MPa	ISO 178
Flexural Modulus, 2 mm/min	15400	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	145	J/m	ASTM D256
Izod Impact, unnotched, 23°C	650	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	15	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	55	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 -40°C	13.5	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 -40°C	50	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	15	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	55	kJ/m²	ISO 179/1eU
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	268	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	275	°C	ASTM D648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	270	°C	ISO 75/Af

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	276	°C	ISO 75/Bf
CTE, -40°C to 90°C, flow	1.2E-05	1/°C	ASTM E831
CTE, -40°C to 90°C, xflow	4.1E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	1.3E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	4.0E-05	1/°C	ISO 11359-2
CTE, -40°C to 90°C, flow	1.3E-05	1/°C	ISO 11359-2
CTE, -40°C to 90°C, xflow	4.3E-05	1/°C	ISO 11359-2
Relative Temp Index, Elec (2)	130	°C	UL 746B
Relative Temp Index, Mech w/impact (2)	130	°C	UL 746B
Relative Temp Index, Mech w/o impact (2)	130	°C	UL 746B
PHYSICAL (1)			
Density	1.7	g/cm³	ASTM D792
Melt Flow Rate, 315°C/5.0 kgf	30	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 315°C/5.0 kg	18	cm³/10 min	ISO 1133
Specific Gravity	1.7	-	ASTM D792
Moisture Absorption, (23°C/50% RH/24hrs)	0.01	%	ISO 62-4
Water Absorption, (23°C/24hrs)	0.02	%	ISO 62-1
Water Absorption, (23°C/24hrs)	0.01	%	ASTM D570
Mold Shrinkage, flow (3)	0.2 – 0.3	%	SABIC method
Mold Shrinkage, xflow (3)	0.4 – 0.5	%	SABIC method
ELECTRICAL (1)			
Dielectric Constant, 1.9 GHz	4.3	-	SABIC method
Dissipation Factor, 1.9 GHz	0.005	-	SABIC method
Dielectric Constant, 5 GHz	4.3	-	SABIC method
Dissipation Factor, 5 GHz	0.0058	-	SABIC method
FLAME CHARACTERISTICS (2)			
UL Yellow Card Link	E207780-104548915	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.4	mm	UL 94
INJECTION MOLDING (4)			
Drying Temperature	120 – 140	°C	
Drying Time	3 – 4	Hrs	
Hopper Temperature	50 – 70	°C	
Melt Temperature	310 – 330	°C	
Front - Zone 3 Temperature	310 – 330	°C	
Middle - Zone 2 Temperature	300 – 320	°C	
Rear - Zone 1 Temperature	290 – 300	°C	
Mold Temperature	135 – 160	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	50 – 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) 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.

(3) 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.

(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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