LNP™ THERMOCOMP™ Compound OFC08V

DESCRIPTION

LNP THERMOCOMP OFC08V is a glass fiber reinforced Polyphenylene sulfide (PPS) compound. Added features include: high heat and chemical resistance, good warpage control and inherently flame-retardant, low flash and good processability, excellent LDS capability and plating performance, stable dielectric properties at various temperatures. Applications of this grade include 5G infrastructure and electronic components.

GENERAL INFORMATION	
Features	Flame Retardant, Chemical Resistance, Low Warpage, Dielectrics, Laser Direct Structuring, Dimensional stability, High stiffness/Strength, High temperature resistance, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Brands	LNP™ THERMOCOMP™
Polymer Types	Polyphenylene Sulfide, Linear (PPS, Linear)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20260407

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	131	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.5	%	ASTM D638
Tensile Modulus, 5 mm/min	13000	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	183	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	12000	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	130	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.5	%	ISO 527
Tensile Modulus, 1 mm/min	13200	MPa	ISO 527
Flexural Strength, 2 mm/min	180	MPa	ISO 178
Flexural Modulus, 2 mm/min	12000	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	55	J/m	ASTM D256
Izod Impact, unnotched, 23°C	420	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	30	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	5.2	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	29	kJ/m²	ISO 179/1eU
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	272	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	254	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	272	°C	ISO 75/Bf

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	255	°C	ISO 75/Af
CTE			
-40°C to 90°C, flow	1.9E-5	1/°C	ASTM E831
-40°C to 90°C, xflow	4.6E-5	1/°C	ASTM E831
-40°C to 40°C, flow	1.7E-5	1/°C	ISO 11359-2
-40°C to 40°C, xflow	4.2E-5	1/°C	ISO 11359-2
-40°C to 90°C, flow	1.9E-5	1/°C	ISO 11359-2
-40°C to 90°C, xflow	4.5E-5	1/°C	ISO 11359-2
PHYSICAL [1]			
Specific Gravity	1.69	-	ASTM D792
Density	1.69	g/cm³	ASTM D792
Water Absorption, (23°C/24hrs)	0.01	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.02	%	ISO 62-1
Water Absorption, (23°C/saturated)	0.03	%	ISO 62-1
Moisture Absorption, (23°C/50% RH/24hrs)	0.01	%	ISO 62-4
Moisture Absorption, (23°C/50% RH/Equilibrium)	0.01	%	ISO 62-4
Melt Flow Rate			
315°C/5.0 kgf	60	g/10 min	ASTM D1238
Melt Volume Rate			
316°C/5.0 kg	36	cm³/10 min	ASTM D1238
Mold Shrinkage, flow [2]	0.2 – 0.3	%	SABIC method
Mold Shrinkage, xflow [2]	0.4 – 0.5	%	SABIC method
ELECTRICAL [1]			
Dielectric Constant			
1.9 GHz	4.05	-	SABIC method
5 GHz	4.05	-	SABIC method
Dissipation Factor			
1.9 GHz	0.0045	-	SABIC method
5 GHz	0.0047	-	SABIC method
FLAME CHARACTERISTICS [3]			
UL Yellow Card Link	E207780-104580497	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.75	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	
Nozzle Temperature	310 – 330	°C	
Front - Zone 3 Temperature	310 – 320	°C	
Middle - Zone 2 Temperature	300 – 320	°C	
Rear - Zone 1 Temperature	290 – 310	°C	
Mold Temperature	135 – 160	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	50 – 100	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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