LNP™ THERMOCOMP™ COMPOUND OFC08

DESCRIPTION

LNP THERMOCOMP OFC08 compound is based on Polyphenylene sulfide (PPS) resin containing 40% glass fiber. Added features of this grade include: High Modulus and Strength, Good Impact Strength and Ductility, Excellent Heat and Chemical Resistance, Good Electrical properties and Inherently Flame-Retardant. It is also an Easy Flow grade with Good Flash Control. Applications of this grade include electric and electronic components, and various parts requiring high strength and high heat resistant.

GENERAL INFORMATION	
Features	Flame Retardant, Chemical Resistance, Dielectrics, High stiffness/Strength, High temperature resistance, Impact resistant, No PFAS intentionally added
Fillers	Glass Fiber
Polymer Types	Polyphenylene Sulfide, Linear (PPS, Linear)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20241022

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	195	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.2	%	ASTM D638
Tensile Modulus, 5 mm/min	16000	MPa	ASTM D638
Tensile Stress, break, 5 mm/min	200	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.2	%	ISO 527
Tensile Modulus, 1 mm/min	16000	MPa	ISO 527
Flexural Strength, 1.3 mm/min, 50 mm span	295	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	15300	MPa	ASTM D790
Flexural Strength, 2 mm/min	295	MPa	ISO 178
Flexural Modulus, 2 mm/min	15000	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	100	J/m	ASTM D256
Izod Impact, unnotched, 23°C	480	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	10	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	50	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 -40°C	10	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*3 sp=62mm	10	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	55	kJ/m²	ISO 179/1eU
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	275	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	270	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	275	°C	ISO 75/Bf
CTE, -40°C to 95°C, flow	2E-5	1/°C	ASTM E831
CTE, -40°C to 95°C, xflow	5E-5	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	1.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	4.5E-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	1.66	g/cm³	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/saturated)	0.03	%	ISO 62-1
Water Absorption, (23°C/24hrs)	0.01	%	ASTM D570
Melt Flow Rate, 315°C/5.0 kgf	25	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 315°C/5.0 kg	15	cm³/10 min	ISO 1133
Mold Shrinkage, flow (3)	0.2 – 0.3	%	SABIC method
Mold Shrinkage, xflow (3)	0.4 – 0.6	%	SABIC method
ELECTRICAL (1)			
Dielectric Constant, 1.9 GHz	4	-	SABIC method
Dissipation Factor, 1.9 GHz	0.0042	-	SABIC method
FLAME CHARACTERISTICS (2)			
UL Yellow Card Link	E207780-104507898	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.8	mm	UL 94
INJECTION MOLDING (4)			
Drying Temperature	120 – 140	°C	
Drying Time	3 – 4	Hrs	
Nozzle Temperature	310 – 320	°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	0.2 – 0.5	MPa	
Injection Speed	100 – 250	mm/s	
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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