

LNPTTM THERMOCOMPTM COMPOUND QBF16

DESCRIPTION

LNP THERMOCOMP QBF16 compound is based on Nylon 6/10 resin containing glass fiber. Added feature of this grade include: low specific gravity, high stiffness, low warpage, low moisture absorption, low dielectric constant.

GENERAL INFORMATION	
Features	Low Warpage, Low Moisture Absorption, Low Specific Gravity, High stiffness/Strength
Fillers	Glass Fiber
Polymer Types	Polyamide 610 (Nylon 610)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electronic Components, Drone Solutions, Mobile Phone - Computer - Tablets

TYPICAL PROPERTY VALUES

Revision 20260408

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, brk, Type I, 5 mm/min	87	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	4.3	%	ASTM D638
Tensile Modulus, 5 mm/min	4200	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	132	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	3800	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	89	MPa	ISO 527
Tensile Strain, break, 5 mm/min	4.2	%	ISO 527
Tensile Modulus, 1 mm/min	4200	MPa	ISO 527
Flexural Strength, 2 mm/min	130	MPa	ISO 178
Flexural Modulus, 2 mm/min	3850	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	36	J/m	ASTM D256
Izod Impact, unnotched, 23°C	520	J/m	ASTM D4812
Izod Impact, notched, -30°C	22	J/m	ASTM D256
Izod Impact, unnotched, -30°C	390	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	4.3	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	38	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 -30°C	3.3	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 -30°C	25	kJ/m ²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	3.6	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	41	kJ/m ²	ISO 179/1eU
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	2.5	kJ/m ²	ISO 179/1eA
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	32	kJ/m ²	ISO 179/1eU
THERMAL ⁽¹⁾			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	207	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	180	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	205	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	180	°C	ISO 75/Af
CTE			
-40°C to 40°C, flow	4.0E-05	1/°C	ASTM E831
-40°C to 40°C, xflow	5.5E-05	1/°C	ASTM E831
-40°C to 90°C, flow	4.5E-05	1/°C	ASTM E831
-40°C to 90°C, xflow	7.3E-05	1/°C	ASTM E831
-40°C to 40°C, flow	4.0E-05	1/°C	ISO 11359-2
-40°C to 40°C, xflow	5.6E-05	1/°C	ISO 11359-2
-40°C to 90°C, flow	4.6E-05	1/°C	ISO 11359-2
-40°C to 90°C, xflow	7.5E-05	1/°C	ISO 11359-2
PHYSICAL ⁽¹⁾			
Specific Gravity	0.86	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.19	%	ISO 62-1
Moisture Absorption, (23°C/50% RH/24hrs)	0.08	%	ISO 62-4
Mold Shrinkage, flow ⁽²⁾	0.8 – 0.9	%	SABIC method
Mold Shrinkage, xflow ⁽²⁾	0.9 – 1.1	%	SABIC method
ELECTRICAL ⁽¹⁾			
Dielectric Constant			
1.9 GHz	2.46	-	SABIC method
5 GHz	2.44	-	SABIC method
Dissipation Factor			
1.9 GHz	0.0094	-	SABIC method
5 GHz	0.0087	-	SABIC method
INJECTION MOLDING ⁽³⁾			
Drying Temperature	80 – 100	°C	
Drying Time	5 – 6	Hrs	
Melt Temperature	300 – 320	°C	
Nozzle Temperature	300 – 320	°C	
Front - Zone 3 Temperature	300 – 320	°C	
Middle - Zone 2 Temperature	290 – 310	°C	
Rear - Zone 1 Temperature	280 – 300	°C	
Mold Temperature	80 – 100	°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) 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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