

LNPTM THERMOCOMPTM COMPOUND RFOOCSXS

RF-100-12 HS REGION EUROPE

DESCRIPTION

LNP THERMOCOMP RF00CSXS compound is based on Nylon 6/6 resin containing 60% glass fiber. Added features of this grade include: Heat Stabilized.

GENERAL INFORMATION	
Features	Heat Stabilized, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber
Polymer Types	Polyamide 66 (Nylon 66)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20230607

MECHANICAL (¹) 223 MPa ISO 527 Tensile Stras, yield, 5 mm/min 2.3 % ISO 527 Tensile Modulus, 1 mm/min 20700 MPa ISO 527 Flexural Stras, break, 2 mm/min 270 MPa ISO 178 Flexural Strain, break, 2 mm/min 2.4 % ISO 178 Flexural Modulus, 2 mm/min 15000 MPa ISO 178 IMPACT (¹) V ISO 180/10 Izod Impact, unnotched 80*10*4+23°C 45 I/m² ISO 180/10 Izod Impact, notched 80*10*4+23°C 45 I/m² ISO 180/10 IterRMAL (¹) I <t< th=""><th>PROPERTIES</th><th>TYPICAL VALUES</th><th>UNITS</th><th>TEST METHODS</th></t<>	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Tensile Strain, break, 5 mm/min 2.3 % 150.527 Tensile Modulus, 1 mm/min 20700 MPa 150.527 Flexural Stress, break, 2 mm/min 270 MPa 150.178 Flexural Strain, break, 2 mm/min 2.4 % 150.178 Flexural Modulus, 2 mm/min 15000 MPa 150.178 IMPACT (1) Impact (1) </td <td>MECHANICAL (1)</td> <td></td> <td></td> <td></td>	MECHANICAL (1)			
Tensile Modulus, 1 mm/min 20700 MPa ISO 527 Flexural Stress, break, 2 mm/min 270 MPa ISO 178 Flexural Strain, break, 2 mm/min 2.4 % ISO 178 Flexural Modulus, 2 mm/min 15000 MPa ISO 178 IMPACT ⁽¹⁾ USO 178 IMPACT ISO 180/18 Izod Impact, unnotched 80*10*4 +23°C 45 kJ/m² ISO 180/10 Izod Impact, notched 80*10*4 +23°C 10 kJ/m² ISO 180/10 ITERMAL (¹¹) USO 180/1A ISO 180/1A CTE, 23°C to 60°C, flow 2.3E-05 1/°C ISO 11359-2 CTE, 23°C to 60°C, xflow 4.9E-05 1/°C ISO 175/8f HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 258 °C ISO 75/8f HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 244 °C ISO 75/Af PHYSICAL (¹¹) 10 20 SABIC method Mold Shrinkage, flow (²¹) 3.17 3.01 3.02 3.02 Boshit 4.9E-05 3.02 3.02 3.02 3.02	Tensile Stress, yield, 5 mm/min	223	MPa	ISO 527
Flexural Stress, break, 2 mm/min 270 MPa 150 178 Flexural Strain, break, 2 mm/min 2.4 % 150 178 Flexural Modulus, 2 mm/min 15000 MPa 150 178 IMPACT 15000 MPa 150 178 IMPACT 15000 MPa 150 178 IMPACT 150 178 150 178 IMPA	Tensile Strain, break, 5 mm/min	2.3	%	ISO 527
Flexural Strain, break, 2 mm/min 2.4 2.4 3.50 178 Flexural Modulus, 2 mm/min 15000 15000 15001 1	Tensile Modulus, 1 mm/min	20700	MPa	ISO 527
Flexural Modulus, 2 mm/min 15000 MPa 150 178 180 178 180 179 180 179 180 179 180 179 180 179 180 179 180 179 179 180 179 179 179 179 179 179 179 179 179 179	Flexural Stress, break, 2 mm/min	270	MPa	ISO 178
IMPACT (1) Izod Impact, unnotched 80°10°4 +23°C 45 kJ/m² ISO 180/10 Izod Impact, notched 80°10°4 +23°C 10 kJ/m² ISO 180/1A THERMAL (1) CTE, 23°C to 60°C, flow 2.3E-05 1/°C ISO 11359-2 CTE, 23°C to 60°C, xflow 4.9E-05 1/°C ISO 1359-2 HDT/Bf, 0.45 MPa Flatw 80°10°4 sp=64mm 258 °C ISO 75/Bf PHYSICAL (1) PHYSICAL (1) Mold Shrinkage, flow (2) 0.1 – 0.3 % SABIC method Density 1,71 30 9/cm³ ISO 1183	Flexural Strain, break, 2 mm/min	2.4	%	ISO 178
Izod Impact, unnotched 80°10°4 +23°C 45 kJ/m² ISO 180/1U Izod Impact, notched 80°10°4 +23°C 10 kJ/m² ISO 180/1A THERMAL ⁽¹⁾ CTE, 23°C to 60°C, flow 2.3E-05 1/°C ISO 11359-2 CTE, 23°C to 60°C, xflow 4.9E-05 1/°C ISO 1359-2 HDT/Bf, 0.45 MPa Flatw 80°10°4 sp=64mm 258 °C ISO 75/Bf PHYSICAL ⁽¹⁾ PHYSICAL ⁽¹⁾ Mold Shrinkage, flow ⁽²⁾ 0.1 – 0.3 % SABIC method Density 1,71 g/cm³ ISO 1183	Flexural Modulus, 2 mm/min	15000	MPa	ISO 178
Izod Impact, notched 80*10*4 +23°C 10 kJ/m² ISO 180/1A THERMAL ⁽¹⁾ CTE, 23°C to 60°C, flow 2.3E·05 1/°C ISO 11359-2 CTE, 23°C to 60°C, xflow 4.9E·05 1/°C ISO 1359-2 HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 258 °C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 244 °C ISO 75/Af PHYSICAL ⁽¹⁾ Mold Shrinkage, flow ⁽²⁾ 0.1 – 0.3 % SABIC method Density 1.71 g/cm³ ISO 1183	IMPACT (1)			
THERMAL (1) CTE, 23°C to 60°C, flow 2.3E-05 1/°C ISO 11359-2 CTE, 23°C to 60°C, xflow 4.9E-05 1/°C ISO 11359-2 HDT/Bf, 0.45 MPa Flatw 80°10°4 sp=64mm 258 °C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 244 °C ISO 75/Af PHYSICAL (1) Mold Shrinkage, flow (2) 0.1 – 0.3 % SABIC method Density 1.71 g/cm³ ISO 1183	Izod Impact, unnotched 80*10*4 +23°C	45	kJ/m²	ISO 180/1U
CTE, 23°C to 60°C, flow 2.3E-05 1/°C ISO 11359-2 CTE, 23°C to 60°C, xflow 4.9E-05 1/°C ISO 11359-2 HDT/Bf, 0.45 MPa Flatw 80°10°4 sp=64mm 258 °C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 244 °C ISO 75/Af PHYSICAL ⁽¹⁾ V V SABIC method Mold Shrinkage, flow ⁽²⁾ 0.1 – 0.3 % SABIC method Density 171 g/cm³ ISO 1183	Izod Impact, notched 80*10*4 +23°C	10	kJ/m²	ISO 180/1A
CTE, 23°C to 60°C, xflow 4.9E-05 1/°C ISO 11359-2 HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 258 °C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 244 °C ISO 75/Af PHYSICAL ⁽¹⁾ Mold Shrinkage, flow (2) 0.1 – 0.3 % SABIC method Density 1.71 g/cm³ ISO 1183	THERMAL (1)			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm 258 °C ISO 75/Bf HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 244 °C ISO 75/Af PHYSICAL (1) Mold Shrinkage, flow (2) 0.1 – 0.3 % SABIC method Density 1.71 g/cm³ ISO 1183	CTE, 23°C to 60°C, flow	2.3E-05	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 244 °C ISO 75/Af PHYSICAL (1) SABIC method Mold Shrinkage, flow (2) 0.1 – 0.3 % SABIC method Density 1.71 g/cm³ ISO 1183	CTE, 23°C to 60°C, xflow	4.9E-05	1/°C	ISO 11359-2
PHYSICAL (1) Mold Shrinkage, flow (2) 0.1 - 0.3 % SABIC method Density 1.71 g/cm³ ISO 1183	HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	258	°C	ISO 75/Bf
Mold Shrinkage, flow (2) 0.1 – 0.3 % SABIC method Density 1.71 g/cm³ ISO 1183	HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	244	°C	ISO 75/Af
Density 1.71 g/cm³ ISO 1183	PHYSICAL (1)			
•	Mold Shrinkage, flow (2)	0.1 – 0.3	%	SABIC method
	Density	1.71	g/cm³	ISO 1183
Water Absorption, (23°C/24hrs) 0.46 % ISO 62-1	Water Absorption, (23°C/24hrs)	0.46	%	ISO 62-1
INJECTION MOLDING (3)	INJECTION MOLDING (3)			



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15 – 0.25	%	
Melt Temperature	280 – 305	°C	
Front - Zone 3 Temperature	295 – 305	°C	
Middle - Zone 2 Temperature	280 – 295	°C	
Rear - Zone 1 Temperature	265 – 275	°C	
Mold Temperature	95 – 110	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	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.

MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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