

LNPTM THERMOCOMPTM COMPOUND RF007SXQ

RF-1007 HR HS REGION EUROPE

DESCRIPTION

LNP THERMOCOMP RF007SXQ compound is based on Nylon 6/6 resin containing 35% glass fiber. Added features of this grade include: Heat Stabilized, Hydrolysis Resistant.

GENERAL INFORMATION	
Features	Heat Stabilized, Hydrolytic Stability, 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 20231109

MECHANICAL (¹¹) MPa ISO 527 Tensile Stress, break, 5 mm/min 3.3 % ISO 527 Tensile Modulus, 1 mm/min 10500 MPa ISO 527 Flexural Stress, break, 2 mm/min 290 MPa ISO 178 Flexural Modulus, 2 mm/min 10000 MPa ISO 178 Hardness, Rockwell L 115 - ISO 2039-2 IMPACT (¹¹) V ISO 180/1A ISO 180/1A Izod Impact, notched 80°10°4 +23°C 12 Id/m² ISO 180/1A Izod Impact, notched 80°10°4 +23°C 11 Id/m² ISO 180/1A Izod Impact, notched 80°10°4 +23°C 11 Id/m² ISO 180/1A Izod Impact, notched 80°10°4 +23°C 10 Id/m² ISO 180/1A Izod Impact, notched 80°10°4 +20°C 10 Id/m² ISO 180/1A Izod Impact, notched 80°10°4 +30°C 9 Id/m² ISO 180/1A Izod Impact, notched 80°10°4 sp=62mm 9 Id/m² ISO 179/1eA Charpy 30°C, V-notch Edgew 80°10°4 sp=62mm 85 Id/m² ISO 179/1eA <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 3.3 % ISO 527 Tensile Modulus, 1 mm/min 10500 MPa ISO 527 Flexural Stress, break, 2 mm/min 290 MPa ISO 178 Flexural Modulus, 2 mm/min 10000 MPa ISO 178 Hardness, Rockwell L 115 - ISO 2039-2 IMPACT ⁽¹⁾ IZ IX/m² ISO 180/1A Izod Impact, notched 80°10°4 -23°C 11 IX/m² ISO 180/1A Izod Impact, notched 80°10°4 -20°C 11 IX/m² ISO 180/1A Izod Impact, notched 80°10°4 -30°C 10 IX/m² ISO 180/1A Izod Impact, notched 80°10°4 -90°C 9 IX/m² ISO 180/1A Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm 9 IX/m² ISO 179/1eA Charpy 23°C, Unnotch Edgew 80°10°4 sp=62mm 85 IX/m² ISO 179/1eU Charpy 30°C, Unnotch Edgew 80°10°4 sp=62mm 85 IX/m² ISO 179/1eU Charpy 30°C, Unnotch Edgew 80°10°4 sp=62mm 85 IX/m² ISO 179/1eU Charpy 30°C, Unnotch Edgew 80°10°4 sp=62mm 85	MECHANICAL (1)			
Tensile Modulus, 1 mm/min 10500 MPa ISO 527 Flexural Stress, break, 2 mm/min 290 MPa ISO 178 Flexural Modulus, 2 mm/min 10000 MPa ISO 178 Hardness, Rockwell L 115 ISO 2039-2 ISO 2039-2 IMPACT (1) IXI/m2 ISO 180/1A ISO 180/1A Izod Impact, notched 80*10*4+23°C 11 IxI/m2 ISO 180/1A Izod Impact, notched 80*10*4-20°C 11 IxI/m2 ISO 180/1A Izod Impact, notched 80*10*4-90°C 10 IxI/m2 ISO 180/1A Izod Impact, notched 80*10*4-90°C 9 IxI/m2 ISO 180/1A Izod Impact, notched 80*10*4-90°C 9 IxI/m2 ISO 180/1A Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 9 IxI/m2 ISO 179/1eA Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm 85 IxI/m2 ISO 179/1eU Charpy 30°C, Unnotch Edgew 80*10*4 sp=62mm 65 IXI/m2 ISO 179/1eU Charpy 30°C, Unnotch Edgew 80*10*4 sp=62mm 65 IXI/m2 IXI/m2 IXI/m2 IXI/m2 IXI/m2 <th< td=""><td>Tensile Stress, break, 5 mm/min</td><td>200</td><td>MPa</td><td>ISO 527</td></th<>	Tensile Stress, break, 5 mm/min	200	MPa	ISO 527
Flexural Stress, break, 2 mm/min 290 MPa ISO 178 Flexural Modulus, 2 mm/min 10000 MPa ISO 178 Hardness, Rockwell L 115 - ISO 2039-2 IMPACT (1) V V ISO 180/1A Izod Impact, notched 80*10*4 + 23°C 12 kl/m² ISO 180/1A Izod Impact, notched 80*10*4 - 20°C 11 kl/m² ISO 180/1A Izod Impact, notched 80*10*4 - 30°C 10 kl/m² ISO 180/1A Izod Impact, notched 80*10*4 - 40°C 9 kl/m² ISO 180/1A Izod Impact, notched 80*10*4 sp=62mm 10 kl/m² ISO 180/1A Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 9 kl/m² ISO 179/1eA Charpy 30°C, Unnotch Edgew 80*10*4 sp=62mm 85 kl/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 65 kl/m² ISO 179/1eU THERMAL (1) X X X X X X X X X X X X X X X X X	Tensile Strain, break, 5 mm/min	3.3	%	ISO 527
Flexural Modulus, 2 mm/min 10000 MPa ISO 178 Hardness, Rockwell L 115 ∴ ISO 2039-2 IMPACT (¹) IMPACT (¹) IMPACT (¹) IMPACT (¹) IMPACT (¹) IXI m² ISO 180/1A Izod Impact, notched 80*10*4+23°C 11 IXI m² ISO 180/1A IXI m² ISO 180/1A Izod Impact, notched 80*10*4-30°C 10 IXI m² ISO 180/1A IXI m² ISO 180/1A Izod Impact, notched 80*10*4-40°C 9 IXI m² ISO 180/1A IXI m² ISO 179/1eA Charpy 23°C, V·notch Edgew 80*10*4 sp=62mm 9 IXI m² ISO 179/1eA IXI m² ISO 179/1eA Charpy 30°C, Unnotch Edgew 80*10*4 sp=62mm 85 IXI m² ISO 179/1eU IXI m² ISO 179/1eU IXI m²	Tensile Modulus, 1 mm/min	10500	MPa	ISO 527
Hardness, Rockwell L 115 ISO 2039-2 IMPACT (1) IMPACT (1) ISO 180/1A Izod Impact, notched 80*10*4+23°C 12 IsO 180/1A ISO 180/1A Izod Impact, notched 80*10*4-20°C 11 IsO 180/1A ISO 180/1A Izod Impact, notched 80*10*4-30°C 10 IsO 180/1A ISO 180/1A Charpy 23°C, V-notched 80*10*4-40°C 9 IsO 180/1A ISO 179/1eA Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 10 IsO 179/1eA ISO 179/1eA Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm 85 IsO 179/1eA ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 65 IsO 179/1eU ISO 179/1eU THERMAL (1) Image:	Flexural Stress, break, 2 mm/min	290	MPa	ISO 178
IMPACT (1) Izod Impact, notched 80°10°4 +23°C 12 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 -20°C 11 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 -30°C 10 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 -40°C 9 kJ/m² ISO 180/1A Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm 10 kJ/m² ISO 179/1eA Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm 9 kJ/m² ISO 179/1eA Charpy 23°C, Unnotch Edgew 80°10°4 sp=62mm 85 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80°10°4 sp=62mm 65 kJ/m² ISO 179/1eU THERMAL (1) THERMAL (1) ISO 179/1eU ISO 179/1eU Thermal Conductivity 0.33 W/m.°C ISO 8302 CTE, 23°C to 60°C, flow 2.EO5 1/°C ISO 1335-2	Flexural Modulus, 2 mm/min	10000	MPa	ISO 178
Izod Impact, notched 80°10°4 +23°C 12 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 -20°C 11 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 -30°C 10 kJ/m² ISO 180/1A Izod Impact, notched 80°10°4 -40°C 9 kJ/m² ISO 180/1A Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm 10 kJ/m² ISO 179/1eA Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm 9 kJ/m² ISO 179/1eA Charpy 23°C, Unnotch Edgew 80°10°4 sp=62mm 85 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80°10°4 sp=62mm 65 kJ/m² ISO 179/1eU THERMAL (¹) THERMAL (¹) ISO 179/1eU ISO 179/1eU Thermal Conductivity 0.33 W/m-°C ISO 8302 CTE, 23°C to 60°C, flow 2.E-05 1/°C ISO 11359-2	Hardness, Rockwell L	115	-	ISO 2039-2
Izod Impact, notched 80*10*4-20°C 11 11 12 15 15 18 14 15 18 18 18 18 18 18 18	IMPACT (1)			
Izod Impact, notched 80*10*4-30°C 10 kJ/m² ISO 180/1A Izod Impact, notched 80*10*4-40°C 9 kJ/m² ISO 180/1A Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 10 kJ/m² ISO 179/1eA Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm 9 kJ/m² ISO 179/1eA Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 85 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 65 kJ/m² ISO 179/1eU THERMAL (1) THERMAL (1) Thermal Conductivity 0.33 W/m-°C ISO 8302 CTE, 23°C to 60°C, flow 2.E-05 1/°C ISO 11359-2	Izod Impact, notched 80*10*4 +23°C	12	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -40°C 9 kJ/m² ISO 180/1A Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 10 kJ/m² ISO 179/1eA Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm 9 kJ/m² ISO 179/1eA Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 85 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 65 kJ/m² ISO 179/1eU THERMAL (1) Thermal Conductivity 0.33 W/m-°C ISO 8302 CTE, 23°C to 60°C, flow 2.E-05 1/°C ISO 11359-2	Izod Impact, notched 80*10*4 -20°C	11	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm 10 kJ/m² ISO 179/1eA Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm 9 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 85 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 65 kJ/m² ISO 179/1eU THERMAL (1) Thermal Conductivity 0.33 W/m-°C ISO 8302 CTE, 23°C to 60°C, flow 2.E-05 1/°C ISO 11359-2	Izod Impact, notched 80*10*4 -30°C	10	kJ/m²	ISO 180/1A
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm 9 kJ/m² ISO 179/1eA Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm 85 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 65 kJ/m² ISO 179/1eU THERMAL (1) Thermal Conductivity 0.33 W/m-°C ISO 8302 CTE, 23°C to 60°C, flow 2.E-05 1/°C ISO 11359-2	Izod Impact, notched 80*10*4 -40°C	9	kJ/m²	ISO 180/1A
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm 85 kJ/m² ISO 179/1eU Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 65 kJ/m² ISO 179/1eU THERMAL (1) Thermal Conductivity 0.33 W/m-°C ISO 8302 CTE, 23°C to 60°C, flow 2.E-05 1/°C ISO 11359-2	Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m²	ISO 179/1eA
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm 65 kJ/m² ISO 179/1eU THERMAL (1) Thermal Conductivity 0.33 W/m-°C ISO 8302 CTE, 23°C to 60°C, flow 2.E-05 1/°C ISO 11359-2	Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	9	kJ/m²	ISO 179/1eA
THERMAL (1) Thermal Conductivity 0.33 W/m-°C ISO 8302 CTE, 23°C to 60°C, flow 2.E-05 1/°C ISO 11359-2	Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	85	kJ/m²	ISO 179/1eU
Thermal Conductivity 0.33 W/m-°C ISO 8302 CTE, 23°C to 60°C, flow 2.E-05 1/°C ISO 11359-2	Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	65	kJ/m²	ISO 179/1eU
CTE, 23°C to 60°C, flow 2.E-05 1/°C ISO 11359-2	THERMAL (1)			
	Thermal Conductivity	0.33	W/m-°C	ISO 8302
CTE, 23°C to 60°C, xflow 8.E-05 1/°C ISO 11359-2	CTE, 23°C to 60°C, flow	2.E-05	1/°C	ISO 11359-2
	CTE, 23°C to 60°C, xflow	8.E-05	1/°C	ISO 11359-2



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	256	°C	ISO 306
Vicat Softening Temp, Rate B/120	255	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	260	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	258	°C	ISO 75/Ae
PHYSICAL (1)			
Mold Shrinkage on Tensile Bar, flow ⁽²⁾	0.15 – 0.3	%	SABIC method
Density	1.41	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	4.5	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	1.1	%	ISO 62
ELECTRICAL (1)			
Volume Resistivity	>1.E+16	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1,E+16	Ω	IEC 60093
Dielectric Strength, in oil, 3.2 mm	19	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	3.2	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.0068	-	IEC 60250
Dissipation Factor, 1 MHz	0.015	-	IEC 60250
Comparative Tracking Index	500	V	IEC 60112
Comparative Tracking Index, M	375	V	IEC 60112
Relative Permittivity, 50/60 Hz	3.4	-	IEC 60250
FLAME CHARACTERISTICS			
Glow Wire Flammability Index 650°C, passes at	2	mm	IEC 60695-2-12
Oxygen Index (LOI)	26	%	ISO 4589
FMVSS Burning Speed, thickness 2 mm	6	mm/min	FMVSS 302
FMVSS Burning Speed, thickness 3 mm	2	mm/min	FMVSS 302
INJECTION MOLDING (3)			
Drying Temperature	75 – 85	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.2	%	
Melt Temperature	260 – 290	°C	
Nozzle Temperature	250 – 270	°C	
Front - Zone 3 Temperature	260 – 280	°C	
Middle - Zone 2 Temperature	260 – 280	°C	
Rear - Zone 1 Temperature	270 – 290	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	70 – 120	°C	

⁽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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