

LNPTM THERMOCOMPTM COMPOUND JF004EXP

JF-1004 EM REGION ASIA

DESCRIPTION

LNP THERMOCOMP JF004EXP is a compound based on Polyethersulfone resin containing 20% Glass Fiber. Added features of this material include: Easy Molding.

TYPICAL PROPERTY VALUES

Revision 20180131

MECHANICAL Tensile Stress, break 114 MPa ASTM D 638 Tensile Strain, break 2.9 % ASTM D 638 Tensile Modulus, 50 mm/min 7350 MPa ASTM D 638 Flexural Stress 186 MPa ASTM D 790 Tensile Stress, break 109 MPa ISO 527 Tensile Modulus, 1 mm/min 7590 MPa ISO 527 Flexural Stress 183 MPa ISO 178 Flexural Modulus 7590 MPa ISO 178 MPACT 247 J/m ASTM D 4812 Izod Impact, unnotched, 23°C 58 J/m ASTM D 256 Instrumented Impact Energy @ peak, 23°C 16 J ASTM D 3763 Izod Impact, unnotched 80°10°4 +23°C 73 kJ/m² ISO 180/14 Izod Impact, unnotched 80°10°4 +23°C 7 kJ/m² ISO 180/14 ItoHERMAL HDT, 1.82 MPa, 3.2mm, unannealed 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 205 °C ASTM D 792	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Tensile Strain, break 2.9 % ASTM D 638 Tensile Modulus, 50 mm/min 7350 MPa ASTM D 638 Flexural Stress 186 MPa ASTM D 790 Tensile Stress, break 109 MPa ISO 527 Tensile Strain, break 2.9 % ISO 527 Tensile Modulus, 1 mm/min 7590 MPa ISO 178 Flexural Stress 183 MPa ISO 178 Flexural Modulus 7590 MPa ISO 178 IMPACT J/m ASTM D 4812 ASTM D 4812 Izod Impact, unnotched, 23°C 58 J/m ASTM D 256 Instrumented Impact Energy @ peak, 23°C 16 J ASTM D 3763 Multiaxial Impact 4 J/m² ISO 180/10 Izod Impact, unnotched 80°10°4 +23°C 7 3 J/m² ISO 180/11 Izod Impact, unnotched 80°10°4 +23°C 7 3 J/m² ISO 180/11 Izod Impact, unnotched 80°10°4 +23°C 7 ASTM D 648 J/m² ASTM D 648 HDT, 1.8	MECHANICAL			
Tensile Modulus, 50 mm/min 7350 MPa ASTM D 638 Flexural Stress 186 MPa ASTM D 790 Tensile Stress, break 109 MPa ISO 527 Tensile Strain, break 2.9 % ISO 527 Tensile Modulus, 1 mm/min 7590 MPa ISO 178 Flexural Stress 183 MPa ISO 178 Flexural Modulus 7590 MPa ISO 178 Impact MPa ISO 178 ISO 178 Impact MPa ISO 178 ISO 178 Impact 427 J/m ASTM D 4812 ASTM D 286 Instrumented Impact Energy @ peak, 23°C 16 J/m ASTM D 3763 ASTM D 3763 Izod Impact, unnotched 80°10°4 +23°C 73 KJ/m² ISO 180/14 ISO 6603 ISO 6603 ISO 180/14 ISO 18	Tensile Stress, break	114	MPa	ASTM D 638
Flexural Stress 186 MPa ASTM D 790 Tensile Stress, break 109 MPa ISO 527 Tensile Strain, break 2.9 % ISO 527 Tensile Modulus, 1 mm/min 7590 MPa ISO 178 Flexural Stress 183 MPa ISO 178 Flexural Modulus 7590 MPa ISO 178 IMPACT Load Impact, unnotched, 23°C 427 J/m ASTM D 4812 Izod Impact, notched, 23°C 58 J/m ASTM D 256 Instrumented Impact Energy @ peak, 23°C 16 J ASTM D 3763 Izod Impact, unnotched 80°10°4 + 23°C 73 KJ/m² ISO 180/10 Izod Impact, unnotched 80°10°4 + 23°C 7 KJ/m² ISO 180/10 Izod Impact, notched 80°10°4 + 23°C 7 KJ/m² ISO 180/10 Instrumented Impact Energy @ peak, 23°C 7 KJ/m² ISO 180/10 Izod Impact, notched 80°10°4 + 23°C 7 KJ/m² ISO 180/10 Izod Impact, notched 80°10°4 + 23°C 7 KJ/m² ISO 180/10 <tr< td=""><td>Tensile Strain, break</td><td>2.9</td><td>%</td><td>ASTM D 638</td></tr<>	Tensile Strain, break	2.9	%	ASTM D 638
Tensile Stress, break 109 MPa ISO 527 Tensile Strain, break 2.9 % ISO 527 Tensile Modulus, 1 mm/min 7590 MPa ISO 527 Flexural Stress 183 MPa ISO 178 Flexural Modulus 7590 MPa ISO 178 IMPACT Jona ASTM D 4812 Izod Impact, unnotched, 23°C 427 J/m ASTM D 4812 Izod Impact, notched, 23°C 58 J/m ASTM D 256 Instrumented Impact Energy@peak, 23°C 16 J ASTM D 3763 Multiaxial Impact 4 J ISO 6603 Izod Impact, unnotched 80*10*4 +23°C 73 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 7 kJ/m² ISO 180/1A THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 205 °C ISO 75/Af PHYSICAL Smith ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 ASTM D 792 <td>Tensile Modulus, 50 mm/min</td> <td>7350</td> <td>MPa</td> <td>ASTM D 638</td>	Tensile Modulus, 50 mm/min	7350	MPa	ASTM D 638
Tensile Strain, break 2.9 % ISO 527 Tensile Modulus, 1 mm/min 7590 MPa ISO 527 Flexural Stress 183 MPa ISO 178 Flexural Modulus 7590 MPa ISO 178 IMPACT IMPACT Izod Impact, unnotched, 23°C 427 J/m ASTM D 4812 Izod Impact, notched, 23°C 58 J/m ASTM D 256 Instrumented Impact Energy@peak, 23°C 16 J ASTM D 3763 Izod Impact, unnotched 80°10°4 + 23°C 73 KJ/m² ISO 180/1U Izod Impact, notched 80°10°4 + 23°C 7 KJ/m² ISO 180/1A THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 1.51 g/cm³ ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	Flexural Stress	186	MPa	ASTM D 790
Tensile Modulus, 1 mm/min 7590 MPa ISO 527 Flexural Stress 183 MPa ISO 178 Flexural Modulus 7590 MPa ISO 178 IMPACT IMPACT Izod Impact, unnotched, 23°C 427 J/m ASTM D 4812 Izod Impact, notched, 23°C 58 J/m ASTM D 256 Instrumented Impact Energy @ peak, 23°C 16 J ASTM D 3763 Izod Impact, unnotched 80°10°4 + 23°C 73 kJ/m² ISO 180/1U Izod Impact, notched 80°10°4 + 23°C 7 kJ/m² ISO 180/1A THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 205 °C ASTM D 648 PHYSICAL PHYSICAL Physical ASTM D 792 Density 1.51 9/cm² ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	Tensile Stress, break	109	MPa	ISO 527
Flexural Stress 183 MPa ISO 178 Flexural Modulus 7590 MPa ISO 178 IMPACT IMPACT Izod Impact, unnotched, 23°C 427 J/m ASTM D 4812 Izod Impact, notched, 23°C 58 J/m ASTM D 256 Instrumented Impact Energy @ peak, 23°C 16 J ASTM D 3763 Izod Impact, unnotched 80*10*4 +23°C 73 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 7 kJ/m² ISO 180/1A THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 205 °C ISO 75/Af PHYSICAL Density 1.51 g/cm³ ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	Tensile Strain, break	2.9	%	ISO 527
Flexural Modulus 7590 MPa ISO 178 IMPACT Izod Impact, unnotched, 23°C 427 J/m ASTM D 4812 Izod Impact, notched, 23°C 58 J/m ASTM D 256 Instrumented Impact Energy @ peak, 23°C 16 J ASTM D 3763 Multiaxial Impact 4 J ISO 6603 Izod Impact, unnotched 80°10°4 +23°C 73 kJ/m² ISO 180/1U Izod Impact, notched 80°10°4 +23°C 7 kJ/m² ISO 180/1A THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm 205 °C ISO 75/Af PHYSICAL Density 1.51 g/cm³ ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	Tensile Modulus, 1 mm/min	7590	MPa	ISO 527
IMPACT Izod Impact, unnotched, 23°C 427 J/m ASTM D 4812 Izod Impact, notched, 23°C 58 J/m ASTM D 256 Instrumented Impact Energy @ peak, 23°C 16 J ASTM D 3763 Multiaxial Impact 4 J ISO 6603 Izod Impact, unnotched 80*10*4 +23°C 73 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 7 kJ/m² ISO 180/1A THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 205 °C ISO 75/Af PHYSICAL Density 1.51 g/cm³ ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	Flexural Stress	183	MPa	ISO 178
Izod Impact, unnotched, 23°C 427 J/m ASTM D 4812 Izod Impact, notched, 23°C 58 J/m ASTM D 256 Instrumented Impact Energy @ peak, 23°C 16 J ASTM D 3763 Multiaxial Impact 4 J ISO 6603 Izod Impact, unnotched 80*10*4 +23°C 73 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 7 kJ/m² ISO 180/1A THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 205 °C ISO 75/Af PHYSICAL Density 1.51 g/cm³ ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	Flexural Modulus	7590	MPa	ISO 178
Izod Impact, notched, 23°C 58 J/m ASTM D 256 Instrumented Impact Energy @ peak, 23°C 16 J ASTM D 3763 Multiaxial Impact 4 J ISO 6603 Izod Impact, unnotched 80*10*4 +23°C 73 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 7 kJ/m² ISO 180/1A ITHERMAL THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 205 °C ISO 75/Af PHYSICAL Density 1.51 g/cm³ ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	IMPACT			
Instrumented Impact Energy @ peak, 23°C 16 J ASTM D 3763 Multiaxial Impact 4 J ISO 6603 Izod Impact, unnotched 80*10*4 +23°C 73 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 7 kJ/m² ISO 180/1A THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 205 °C ISO 75/Af PHYSICAL PHYSICAL 9/cm³ ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	Izod Impact, unnotched, 23°C	427	J/m	ASTM D 4812
Multiaxial Impact 4 J ISO 6603 Izod Impact, unnotched 80*10*4 +23°C 73 kJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 7 kJ/m² ISO 180/1A THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 205 °C ISO 75/Af PHYSICAL PHYSICAL g/cm³ ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	Izod Impact, notched, 23°C	58	J/m	ASTM D 256
Izod Impact, unnotched 80*10*4 +23°C 73 KJ/m² ISO 180/1U Izod Impact, notched 80*10*4 +23°C 7 KJ/m² ISO 180/1A THERMAL	Instrumented Impact Energy @ peak, 23°C	16	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C 7 kJ/m² ISO 180/1A THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 205 °C ISO 75/Af PHYSICAL Density 1.51 g/cm³ ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	Multiaxial Impact	4	J	ISO 6603
THERMAL HDT, 1.82 MPa, 3.2mm, unannealed 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 205 °C ISO 75/Af PHYSICAL Density 1.51 g/cm³ ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	Izod Impact, unnotched 80*10*4 +23°C	73	kJ/m²	ISO 180/1U
HDT, 1.82 MPa, 3.2mm, unannealed 205 °C ASTM D 648 HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 205 °C ISO 75/Af PHYSICAL Density 1.51 g/cm³ ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	Izod Impact, notched 80*10*4 +23°C	7	kJ/m²	ISO 180/1A
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm 205 °C ISO 75/Af PHYSICAL Density 1.51 g/cm³ ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	THERMAL			
PHYSICAL Density 1.51 g/cm³ ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	HDT, 1.82 MPa, 3.2mm, unannealed	205	°C	ASTM D 648
Density 1.51 g/cm³ ASTM D 792 Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	205	°C	ISO 75/Af
Moisture Absorption, 50% RH, 24 hrs 0.4 % ASTM D 570	PHYSICAL			
	Density	1.51	g/cm³	ASTM D 792
Mold Shrinkage, flow, 24 hrs (5) 0.5 – 0.7 % ASTM D 955	Moisture Absorption, 50% RH, 24 hrs	0.4	%	ASTM D 570
	Mold Shrinkage, flow, 24 hrs (5)	0.5 - 0.7	%	ASTM D 955



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, xflow, 24 hrs (5)	0.6 - 0.8	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs (5)	0.5 - 0.7	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (5)	0.6 - 0.8	%	ISO 294
Density	1.51	g/cm³	ISO 1183
MECHANICAL PROPERTIES			
Flexural modulus	6690	MPa	ISO 178/1A
INJECTION MOLDING			
Drying Temperature	120 – 150	°C	
Drying Time	4	hrs	
Maximum Moisture Content	0.05	%	
Melt Temperature	355 – 370	°C	
Front - Zone 3 Temperature	370 – 380	°C	
Middle - Zone 2 Temperature	360 – 370	°C	
Rear - Zone 1 Temperature	345 – 355	°C	
Mold Temperature	140 – 150	°C	
Back Pressure	0.3 - 0.7	MPa	
Screw Speed	60 – 100	rpm	

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