LNP™ THERMOCOMP™ COMPOUND PF006U

PF-1006 UV
REGION ASIA

DESCRIPTION

LNP THERMOCOMP* PF006U is a compound based on Nylon 6 resin containing 30% Glass Fiber. Added features of thie grade are: UV Stabilized.

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, break	129	MPa	ASTM D 638
Tensile Strain, break	2.8	%	ASTM D 638
Tensile Modulus, 5 mm/min	8750	MPa	ASTM D 638
Flexural Stress	201	MPa	ASTM D 790
Flexural modulus	8960	MPa	ASTM D 790
Tensile Stress, break, 5 mm/min	144	MPa	ISO 527
Tensile Strain, break, 5 mm/min	3.3	%	ISO 527
Tensile Modulus, 1 mm/min	9040	MPa	ISO 527
Flexural Stress	203	MPa	ISO 178
Flexural Modulus, 2 mm/min	8000	MPa	ISO 178
Hardness, Rockwell L	112	-	ISO 2039-2
IMPACT			
Izod Impact, notched, 23°C	117	J/m	ASTM D 256
Izod Impact, unnotched, 23°C	827	J/m	ASTM D 4812
Instrumented Impact Energy @ peak, 23°C	9	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	11	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -20°C	10	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -40°C	9	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	55	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	11	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	90	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	75	kJ/m²	ISO 179/1eU
Multiaxial Impact	2	J	ISO 6603
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	219	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	206	°C	ASTM D 648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	203	°C	ISO 75/Af
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	210	°C	ISO 75/Ae
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	220	°C	ISO 75/Be
Vicat Softening Temp, Rate B/120	215	°C	ISO 306
Vicat Softening Temp, Rate B/50	215	°C	ISO 306
CTE, -40°C to 40°C, flow	3.05E-05	1/°C	ASTM E 831

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	6.73E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	3.06E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.72E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, flow	2.5E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	8.5E-05	1/°C	ISO 11359-2
Thermal Conductivity	0.33	W/m-°C	ISO 8302
PHYSICAL			
Density	1.36	g/cm³	ISO 1183
Density	1.36	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.86	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs	0.2 – 0.5	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	1 – 1.2	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs	0.17 – 0.5	%	ISO 294
Mold Shrinkage, xflow, 24 hrs	1 – 1.2	%	ISO 294
Mold Shrinkage on Tensile Bar, flow	0.2 – 0.4	%	SABIC method
Moisture Absorption (23°C / 50% RH)	1.53	%	ISO 62
Water Absorption, (23°C/sat)	6.5	%	ISO 62
ELECTRICAL			
Surface Resistivity, ROA	>1.E+16	Ohm	IEC 60093
Volume Resistivity	>1.E+16	Ohm-cm	IEC 60093
Comparative Tracking Index	500	V	IEC 60112
Comparative Tracking Index, M	375	V	IEC 60112
Dielectric Strength, in oil, 3.2 mm	20	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	3.4	-	IEC 60250
Dissipation Factor, 1 MHz	0.016	-	IEC 60250
Relative Permittivity, 50/60 Hz	3.6	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.0061	-	IEC 60250
FLAME CHARACTERISTICS			
UL Compliant, 94HB Flame Class Rating	1.5	mm	UL 94 by SABIC-IP
Oxygen Index (LOI)	25	%	ISO 4589
Glow Wire Flammability Index 650°C, passes at	2	mm	IEC 60695-2-12
INJECTION MOLDING			
Drying Temperature	80	°C	
Drying Time	4	hrs	
Maximum Moisture Content	0.2	%	
Hopper Temperature	60 – 80	°C	
Melt Temperature	260 – 290	°C	
Rear - Zone 1 Temperature	250 – 280	°C	
Middle - Zone 2 Temperature	260 – 290	°C	
Front - Zone 3 Temperature	260 – 290	°C	
Nozzle Temperature	250 – 280	°C	
Mold Temperature	80 – 100	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	30 – 60	rpm	

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