LNP™ THERMOCOMP™ COMPOUND TF002

TF-1002

DESCRIPTION

LNP* THERMOCOMP* TF002 is a compound based on Polyurethane resin containing 10% Glass Fiber.

TYPICAL PROPERTY VALUES

Revision 20191218

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	42	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	38	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	32.5	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	53	%	ASTM D 638
Tensile Modulus, 50 mm/min	1460	MPa	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	900	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	43	MPa	ISO 527
Tensile Stress, break, 5 mm/min	40	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	33.6	%	ISO 527
Tensile Strain, break, 5 mm/min	55.4	%	ISO 527
Tensile Modulus, 1 mm/min	1260	MPa	ISO 527
Flexural Stress	26	MPa	ISO 178
Flexural Modulus, 2 mm/min	950	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	1230	J/m	ASTM D 4812
Izod Impact, notched, 23°C	334	J/m	ASTM D 256
Multiaxial Impact	24	J	ISO 6603
Instrumented Impact Total Energy, 23°C	29	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	129	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	31	kJ/m²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	152	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	67	°C	ASTM D 648
CTE, -30°C to 30°C, flow	8.93E+01	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	1.72E+02	1/°C	ASTM D 696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	148	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	61	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.31	-	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.4	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs	0.6 – 0.8	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	0.7 – 0.9	%	ASTM D 955
Density	1.31	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.61	%	ISO 62

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
INJECTION MOLDING			
Drying Temperature	95 – 105	°C	
Drying Time	2	hrs	
Maximum Moisture Content	0.03	%	
Melt Temperature	210	°C	
Nozzle Temperature	205 – 225	°C	
Front - Zone 3 Temperature	200 – 220	°C	
Middle - Zone 2 Temperature	195 – 215	°C	
Rear - Zone 1 Temperature	195 – 210	°C	
Mold Temperature	15 – 45	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	
Shot to Cylinder Size	40 – 80	%	

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