LNP™ THERMOCOMP™ COMPOUND YF005

YF-1005
REGION AMERICAS

DESCRIPTION

LNP THERMOCOMP YF005 compound is based on Thermoplastic Polyester Elastomer (TPE) resin containing 25% glass fiber.

GENERAL INFORMATION	
Features	Impact resistant, No PFAS intentionally added
Fillers	Glass Fiber
Polymer Types	Thermoplastic Polyester Elastomer (TPEE)
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 20260204

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	47	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	46	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	9.9	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	8.3	%	ASTM D638
Tensile Modulus, 50 mm/min	2370	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	1980	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	46	MPa	ISO 527
Tensile Stress, break, 5 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	9.5	%	ISO 527
Tensile Strain, break, 5 mm/min	10.3	%	ISO 527
Tensile Modulus, 1 mm/min	2360	MPa	ISO 527
Flexural Stress	53	MPa	ISO 178
Flexural Modulus, 2 mm/min	2120	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	998	J/m	ASTM D4812
Izod Impact, notched, 23°C	331	J/m	ASTM D256
Multiaxial Impact	7	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	15	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	76	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	29	kJ/m²	ISO 180/1A

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	186	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	152	°C	ASTM D648
CTE, -30°C to 30°C, flow	3.6E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	1.77E-04	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	180	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	142	°C	ISO 75/Af
PHYSICAL [1]			
Specific Gravity	1.4	-	ASTM D792
Density	1.4	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.31	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.5 – 0.7	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	1 – 3	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.41	%	ISO 62
INJECTION MOLDING [3]			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.1	%	
Melt Temperature	215 – 240	°C	
Front - Zone 3 Temperature	225 – 240	°C	
Middle - Zone 2 Temperature	205 – 215	°C	
Rear - Zone 1 Temperature	180 – 195	°C	
Mold Temperature	25 – 55	°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.

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