LNP™ THERMOCOMP™ COMPOUND YF004

YF-1004

DESCRIPTION

LNP THERMOCOMP YF004 compound is based on Thermoplastic Polyester Elastomer (TPE) resin containing 20% 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 20240201

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	47	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	11.9	%	ASTM D638
Tensile Modulus, 50 mm/min	2640	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	55	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	1920	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	48	MPa	ISO 527
Tensile Strain, break, 5 mm/min	12.7	%	ISO 527
Tensile Modulus, 1 mm/min	2160	MPa	ISO 527
Flexural Stress	25	MPa	ISO 178
Flexural Modulus, 2 mm/min	310	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	nobreak	J/m	ASTM D4812
Izod Impact, notched, 23°C	401	J/m	ASTM D256
Multiaxial Impact	10	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	14	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	nobreak	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	37	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	186	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	151	°C	ASTM D648
CTE, -30°C to 30°C, flow	3.20E-05	1/°C	ASTM D696

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -30°C to 30°C, xflow	1.21E-04	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	184	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	129	°C	ISO 75/Af
PHYSICAL [1]			
Specific Gravity	1.35	-	ASTM D792
Density	1.35	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.71	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.2 – 0.4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.6 – 0.8	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.71	%	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.

DISCLAIMER