LNP™ THERMOTUF™ Compound VF004S

VF-1004 HS
REGION AMERICAS

DESCRIPTION

LNP THERMOTUF VF004S compound is based on Super Tough Nylon resin containing 20% glass fiber. Added features of this grade include: Impact Modified, Heat Stabilized.

GENERAL INFORMATION	
Features	Heat Stabilized, High stiffness/Strength, Impact resistant, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polyamide 66 (Nylon 66)
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 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	102	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.8	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D638
Tensile Modulus, 50 mm/min	6470	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	156	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	5620	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	97	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.6	%	ISO 527
Tensile Strain, break, 5 mm/min	3	%	ISO 527
Tensile Modulus, 1 mm/min	6000	MPa	ISO 527
Flexural Modulus, 2 mm/min	5080	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	704	J/m	ASTM D4812
Izod Impact, notched, 23°C	128	J/m	ASTM D256
Multiaxial Impact	6	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	22	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	42	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	12	kJ/m²	ISO 180/1A
THERMAL [1]			

© 2026 Copyright by SABIC. All rights reserved

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	256	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	240	°C	ASTM D648
CTE, -30°C to 30°C, flow	2.99E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	8.12E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	248	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	235	°C	ISO 75/Af
PHYSICAL (1)			
Density	1.23	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.74	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.4 – 0.6	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.8 – 1	%	ASTM D955
Density	1.23	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	1.1	%	ISO 62
INJECTION MOLDING (3)			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Maximum Moisture Content	0.15	%	
Melt Temperature	280 – 295	°C	
Front - Zone 3 Temperature	295 – 305	°C	
Middle - Zone 2 Temperature	275 – 290	°C	
Rear - Zone 1 Temperature	260 – 270	°C	
Mold Temperature	95 – 110	°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

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.

© 2026 Copyright by SABIC. All rights reserved