LNP™ THERMOCOMP™ COMPOUND DF002

DF-1002

DESCRIPTION

LNP THERMOCOMP* DF002 is a compound based on Polycarbonate resin containing 10% Glass Fiber.

TYPICAL PROPERTY VALUES

Revision 20200108

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	81	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	75	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3.9	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	5.6	%	ASTM D 638
Tensile Modulus, 50 mm/min	4250	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	138	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	4110	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	80	MPa	ISO 527
Tensile Stress, break, 5 mm/min	74	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.8	%	ISO 527
Tensile Strain, break, 5 mm/min	5.7	%	ISO 527
Tensile Modulus, 1 mm/min	4170	MPa	ISO 527
Flexural Modulus, 2 mm/min	3950	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	883	J/m	ASTM D 4812
Izod Impact, notched, 23°C	81	J/m	ASTM D 256
Multiaxial Impact	10	J	ISO 6603
Instrumented Impact Total Energy, 23°C	18	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	54	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	8	kJ/m²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	146	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	141	°C	ASTM D 648
CTE, -30°C to 30°C, flow	4.5E+01	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	5.3E+01	1/°C	ASTM D 696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	146	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	141	°C	ISO 75/Af
Relative Temp Index, Elec [1]	125	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	115	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	125	°C	UL 746B
PHYSICAL			
Density	1.29	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.14	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs	0.4 – 0.6	%	ASTM D 955

© 2020 Copyright by SABIC. All rights reserved

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, xflow, 24 hrs	0.6 – 0.8	%	ASTM D 955
Density	1.29	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
ELECTRICAL [1]			
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 2	≥3	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 4	≥1.5	mm	UL 746A
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E121562-101344533	-	-
UL Recognized, 94V-1 Flame Class Rating	≥3	mm	UL 94
UL Recognized, 94V-2 Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	4	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	305 – 325	°C	
Front - Zone 3 Temperature	320 – 330	°C	
Middle - Zone 2 Temperature	310 – 320	°C	
Rear - Zone 1 Temperature	295 – 305	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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.

© 2020 Copyright by SABIC. All rights reserved