LNP™ THERMOCOMP™ COMPOUND D251

DESCRIPTION

LNP THERMOCOMP D251 compound is based on Polycarbonate (PC) resin containing 20% glass fiber. Added features of this grade include: High Modulus, Low Warpage, Good Ductility, Non-Brominated & Non-Chlorinated Flame Retardant.

GENERAL INFORMATION	
Features	Flame Retardant, Low Warpage, Non Cl/Br flame retardant, High stiffness/Strength, Impact resistant
Fillers	Glass Fiber
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20260722

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	110	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.7	%	ASTM D638
Tensile Modulus, 5 mm/min	6680	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	167	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	6150	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	112	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.6	%	ISO 527
Tensile Modulus, 1 mm/min	6800	MPa	ISO 527
Flexural Stress, break, 2 mm/min	165	MPa	ISO 178
Flexural Modulus, 2 mm/min	6240	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	13	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	9	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 +23°C	13	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	9	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	48	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	56	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 +23°C	48	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	54	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	15	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	10	kJ/m²	ISO 179/1eA

© 2026 Copyright by SABIC. All rights reserved

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	14	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	55	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	67	kJ/m²	ISO 179/1eU
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	59	kJ/m²	ISO 179/1eU
Izod Impact, unnotched, 23°C	715	J/m	ASTM D4812
Izod Impact, notched, 23°C	150	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	21	J	ASTM D3763
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	121	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	116	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	121	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	117	°C	ISO 75/Af
Vicat Softening Temp, Rate A/50	131	°C	ISO 306
Vicat Softening Temp, Rate B/50	123	°C	ISO 306
Vicat Softening Temp, Rate B/120	125	°C	ISO 306
CTE, 23°C to 80°C, flow	2.6E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.3E-05	1/°C	ISO 11359-2
Relative Temp Index, Elec [2]	80	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	80	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	80	°C	UL 746B
PHYSICAL [1]			
Density	1.35	g/cm³	ASTM D792
Mold Shrinkage, flow, 24 hrs [3]	0.2 – 0.4	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [3]	0.2 – 0.4	%	ASTM D955
Melt Flow Rate			
300°C/1.2 kgf	12	g/10 min	ASTM D1238
300°C/2.16 kgf	24	g/10 min	ASTM D1238
Water Absorption, (23°C/saturated)	0.07	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.03	%	ISO 62
Melt Volume Rate			
300°C/1.2 kg	10	cm³/10 min	ISO 1133
300°C/2.16 kg	20	cm³/10 min	ISO 1133
ELECTRICAL [1]			
High Amp Arc Ignition (HAI), PLC 0	≥0.6	mm	UL 746A
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	0	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥0.6	mm	UL 746A
Comparative Tracking Index	200	V	IEC 60112
Dielectric Strength, in oil, 1.0 mm	40	kV/mm	IEC 60243-1
Volume Resistivity	1E16 – 1E17	Ω.cm	IEC 62631-3-1
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D495
Dielectric Constant			
1.1 GHz	3.24	-	SABIC method
1.9 GHz	3.28	-	SABIC method
5 GHz	3.28	-	SABIC method

© 2026 Copyright by SABIC. All rights reserved

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
10 GHz	3.27	-	SABIC method
Dissipation Factor			
1.1 GHz	0.0067	-	SABIC method
1.9 GHz	0.0066	-	SABIC method
5 GHz	0.007	-	SABIC method
10 GHz	0.0072	-	SABIC method
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E207780-102099701	-	-
Glow Wire Ignitability Temperature, 0.6 mm	850	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	875	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	875	°C	IEC 60695-2-13
Glow Wire Flammability Index			
0.6 mm	960	°C	IEC 60695-2-12
1.5 mm	960	°C	IEC 60695-2-12
3.0 mm	960	°C	IEC 60695-2-12
UL Recognized, 94V-0 Flame Class Rating	≥0.6	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	≥0.4	mm	UL 94
UL Recognized, 94V-2 Flame Class Rating	≥0.3	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	110	°C	
Drying Time	3 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	285 – 310	°C	
Nozzle Temperature	285 – 305	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.1 – 0.3	MPa	
Screw Speed	50 – 90	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) 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.

(3) 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.

(4) 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.

MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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