

LNP* Thermocomp* Compound TH0300B

Americas: COMMERCIAL

LNP* Thermocomp* Th0300B is a compound based on Polyurethane containing proprietary fillers. Characteristics of this grade are High Specific Gravity.

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 5 mm/min	18	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	14	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	11.5	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	31.2	%	ASTM D 638
Tensile Modulus, 50 mm/min	1240	MPa	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	990	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	18	MPa	ISO 527
Tensile Stress, break, 5 mm/min	15	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	11.5	%	ISO 527
Tensile Strain, break, 5 mm/min	31.3	%	ISO 527
Tensile Modulus, 1 mm/min	1090	MPa	ISO 527
Flexural Stress	18	MPa	ISO 178
Flexural Modulus, 2 mm/min	1090	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, unnotched, 23°C	1530	J/m	ASTM D 4812
Izod Impact, notched, 23°C	158	J/m	ASTM D 256
Multiaxial Impact	15	J	ISO 6603
Instrumented Impact Total Energy, 23°C	22	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	118	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	15	kJ/m ²	ISO 180/1A
THERMAL	Value	Unit	Standard
HDT, 0.45 MPa, 3.2 mm, unannealed	92	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	49	°C	ASTM D 648
CTE, -30°C to 30°C, flow	9.9E-05	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	1.09E-04	1/°C	ASTM D 696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	92	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	48	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Specific Gravity	3.02	-	ASTM D 792
Density	3.01	g/cm ³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.14	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0.5 - 0.7	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	0.6 - 0.8	%	ASTM D 955
Moisture Absorption (23°C / 50% RH)	0.21	%	ISO 62

Source GMD, last updated:2010/07/19

Processing

Parameter

Injection Molding	Value	Unit
Drying Temperature	80	°C
Drying Time	4	hrs
Maximum Moisture Content	0.03	%
Melt Temperature	200 - 210	°C
Front - Zone 3 Temperature	195 - 205	°C
Middle - Zone 2 Temperature	190 - 200	°C
Rear - Zone 1 Temperature	180 - 195	°C
Mold Temperature	15 - 45	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm

Source GMD, last updated:2010/07/19

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) 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.

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