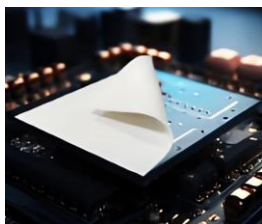


BORON NITRIDE THERMAL PAD

series: WG-BN Series

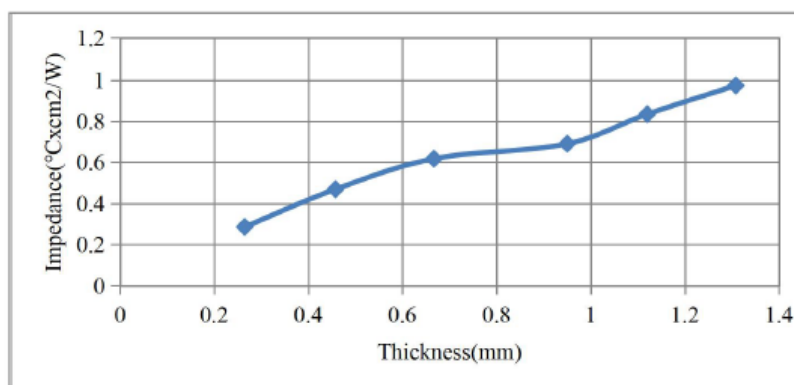


- Thermal conductivity: 16.0W/mk.
- High compressibility, flexibility and elasticity.
- Low thermal resistance.
- Eliminates air gaps between heating elements and heat sinks.
- Flammability rating: UL 94 V-0.
- Can be supplied in custom shapes and sizes.

Item	WG-160BN	Test Method
Thermal Conductivity (W/mk)	16.0	ASTM D5470
Thickness (mm)	1-2	
Thermal Resistance ($^{\circ}\text{C}\cdot\text{cm}^2/\text{W}$) @0.3mm @1.0mm @1.5mm	$\leq 0.4 (^{\circ}\text{C}\cdot\text{cm}^2/\text{W})$: 0.286 $\leq 1.0 (^{\circ}\text{C}\cdot\text{cm}^2/\text{W})$: 0.696 $\leq 1.2 (^{\circ}\text{C}\cdot\text{cm}^2/\text{W})$: 0.974	ASTM D5470
Compressive Stress (50% compression)	Instantaneous: 154psi Residual: 35psi	Factory testing
Rebound Rate (%)	27	Factory testing
Density (g/cm^3)	1.7	ASTM D792
Standard Hardness (Shore 00)	70 $\pm$ 10	ASTM D2240
Breakdown Voltage (KV) @0.3mm	4.6	ASTM D149
Dielectric Constant	4.2	ASTM D150
Volume Resistivity ($10^{13} \Omega\cdot\text{cm}$)	5.2	ASTM D257
Flammability Rating (UL)	V-0	UL 94
Oil Permeability (%)	1	Factory testing
Thermal Weight Loss (%)	0.27	Factory testing

Certification Standard	Compliant
ROHS 3 (EU 2015-863)	Yes
REACH SVHC	Yes
Halogen Free	Yes

Thermal Conductivity Test						
Original Thickness (mm)	0.3	0.5	0.7	1.0	1.2	1.5
Thickness after compression (mm)	0.265	0.458	0.667	0.95	1.12	1.308
Thermal Resistance ($^{\circ}\text{C}\cdot\text{cm}^2/\text{W}$)	0.286	0.469	0.618	0.691	0.835	0.975
Specimen: 25.4mm – square (@40psi)						



Test Method: Open the software, select calibration, set the parameters to 40psi and temperature to 80°C, set the thickness to zero and set to 15 minutes. After obtaining test results, perform a three-line fitting on the results.

Test Equipment: LW-9389 thermal conductivity tester.

Thermal Resistance Test				
Number	Original Thickness (mm)	Thickness after Compression (mm)	Thermal Resistance ($^{\circ}\text{C}\cdot\text{cm}^2/\text{W}$)	Thermal Resistance ($^{\circ}\text{C}\cdot\text{in}^2/\text{W}$)
0.3-1	0.302	0.265	0.286	0.044
0.3-2	0.301	0.266	0.294	0.046
0.3-3	0.303	0.260	0.278	0.043
Average	0.302	0.264	0.286	0.044
1.0-1	1.01	0.950	0.698	0.108
1.0-2	1.00	0.950	0.691	0.107
1.0-3	1.01	0.949	0.696	0.108
Average	1.00	0.950	0.695	0.108
1.5-1	1.51	1.308	0.975	0.151
1.5-2	1.50	1.310	0.980	0.152
1.5-3	1.51	1.306	0.968	0.150
Average	1.50	1.308	0.974	0.151
Specimen: 25.4mm – square (@40psi)				

Test Method: Open the software, select calibration, set the parameters to 40psi and temperature to 80°C, and perform thickness zeroing for 15 minutes.

Test Equipment: LW-9389 thermal conductivity tester.

Compression Stress Test						
Item	Sample	10%	20%	30%	40%	50%
Instantaneous stress/psi corresponding to 10-50% deformation.	1	21.80	38.51	69.42	101.14	168.26
	2	17.65	34.12	60.32	89.35	150.37
	3	16.35	31.28	54.36	78.24	142.35
	Average Value	18.60	34.63	61.36	89.57	153.66
Residual compressive stress at 50% deformation	Sample	1	2	3	Average Value	
		40.61	34.96	27.62	34.40	
Specimen: 25 x 25 x 2mm						

Test Method: Equipment was calibrated to zero and pressure set to 20N. Before testing zero the force value and apply a 2N force to the surface of the sample.

- Compressive Testing: Compression speed set to 0.5mm/min with deformation range of 10-50%.

- Residual Stress Testing: Compression speed set to 0.5mm/min with holding time of 600 seconds.

Test Equipment: Microcomputer controlled electronic universal testing machine (10KN).

Recommended Storage Condition: Store in a well-ventilated, cool and dry area away from direct sunlight.

Shelf Life: Minimum 12 months from date of manufacture.

For copy of SDS document or further test data please contact our [sales team](#).

ANNOTATION

All specifications shown herein are typical values and are not guaranteed. It is recommended to test in the application for suitability.