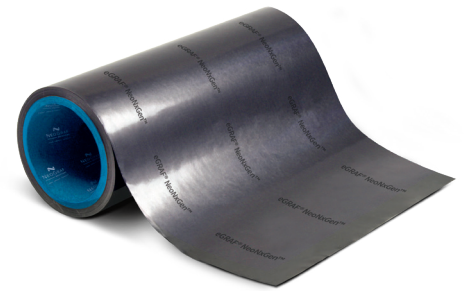


NeoNxGen™ Thermal Management Solutions

Product Overview

NeoNxGen is a high performance, thick graphite thermal management solution designed to be used in the most challenging applications. NeoNxGen is a reliable, easy to use, single layer solution eliminating the cost, complexity, and reliability concerns of multilayered solutions. NeoNxGen is designed to serve markets with demanding thermal challenges including:

- Consumer Electronics
- Energy Storage
- Aerospace
- Transportation
- Medical



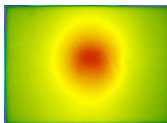
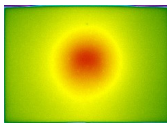
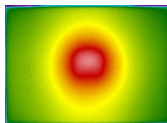
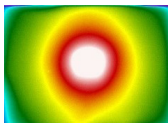
Applications

NeoNxGen is a continuous roll of flexible graphite that can be easily laminated with plastics and adhesive tapes. The graphite can also be die-cut to a desired shape for peel and stick application.

Typically, NeoNxGen will be used in the following applications:

- Heat spreading to eliminate a hot spot
- Shielding a temperature sensitive component
- Cooling a hot component

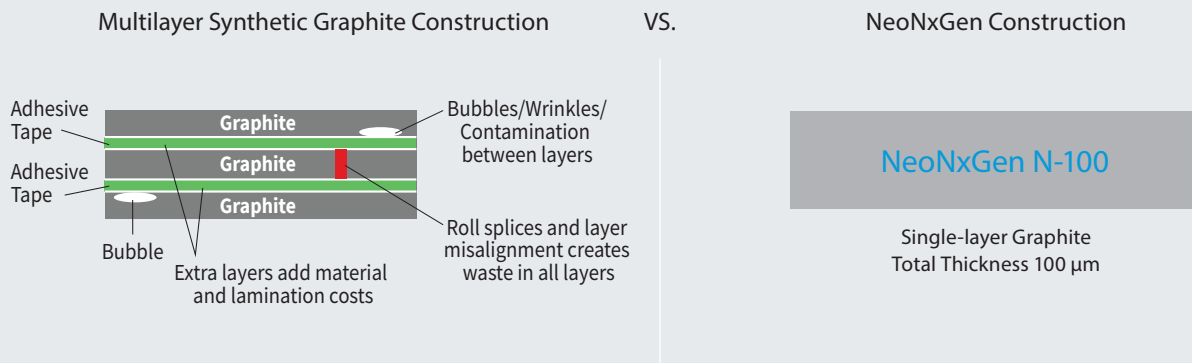
Solutions Comparison

CHARACTERISTIC		NEO GRAF PORTFOLIO			
		NeoNxGen	Synthetic Graphite	Natural Graphite	Metallic Solutions
Single Layer Thickness Range [µm]		80 – 200+	17 - 50	40 – 1000+	Infinite
Thickness > 80 Microns	Thermal Conductance	Highest	High	Medium	Low
	Cost per Unit Performance	\$\$	\$\$\$	\$	\$
	Reliability	✓✓	x	✓✓	✓✓
	Ease of Use Handling/Converting/Installing	✓✓	x	✓✓	✓
Thermal Performance					
		NeoNxGen N-100	3-layer 32µm Synthetic Graphite	SS600-0.102	100µm Aluminum
Total Thickness		100 µm	110 µm	100 µm	100 µm
Comparison to NeoNxGen		-	Higher cost and complexity, requiring multiple layers to increase thickness and thermal performance	Requires a thicker material to obtain the same thermal conductance	Low thermal performance, inflexible, heavy

NeoNxGen Advantage

Multi-layered synthetic graphite has become a widely used solution to create a high-performance, thick heat spreader. However, there are several challenges to using multilayer synthetic graphite including:

- Material losses due to roll splices and misalignment
- Reliability concerns with internal adhesive delamination
- Added thickness due to internal adhesive layers
- Quality concerns due to bubbles, wrinkles, delamination, and contamination between layers
- Added costs of lamination step(s), adhesive tapes, and multiple quality inspections



Commitment to Excellence

NeoNxGen is produced in North America and meets or exceeds all environmental and quality standards in a sustainable manner.

- ✓ ISO 9001:2015
- ✓ RoHS
- ✓ California Proposition 65 Compliant
- ✓ Lead-free
- ✓ ISO 14001:2015
- ✓ Conflict-Free Minerals
- ✓ REACH

Technical Support

Our global team of Applications Engineers specialize in providing technical support to a wide variety of applications, design and modeling for the latest high tech devices, fuel cells, industrial gaskets, fire-rated building materials, and LED lighting. With over 135 years of carbon and graphite innovation and leadership, we specialize in the development and manufacture of high quality flexible natural and synthetic graphite sheets as well as expanded and expandable graphite powders.

Regardless of your product design phase (concept, prototyping, or mass production), we offer technical answers and thermal modeling support to some of your most challenging problems with a fast response time.

Please contact NeoGraf Solutions today at neograf.com/contact.



LEAD. CREATE. CONNECT.

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