

NWE Series - Product Datasheet

Thrutek Applied Materials produces over 100 standard and customized grades of AlN powders to meet a wide range of application requirements. Thrutek has over 14 years of expertise in research and development of Aluminum Nitride powders.

NWE Series

NWE Series aluminum nitride powders are surface treated for outstanding water resistance. They are also surface coated with a silane coupling agent for improved bonding with epoxies.

NWE series have irregular shaped particles but with smoother and rounded edges. Significantly improved specific surface area (SSA) means you get a much higher filling rate and lower viscosity.

Key Applications

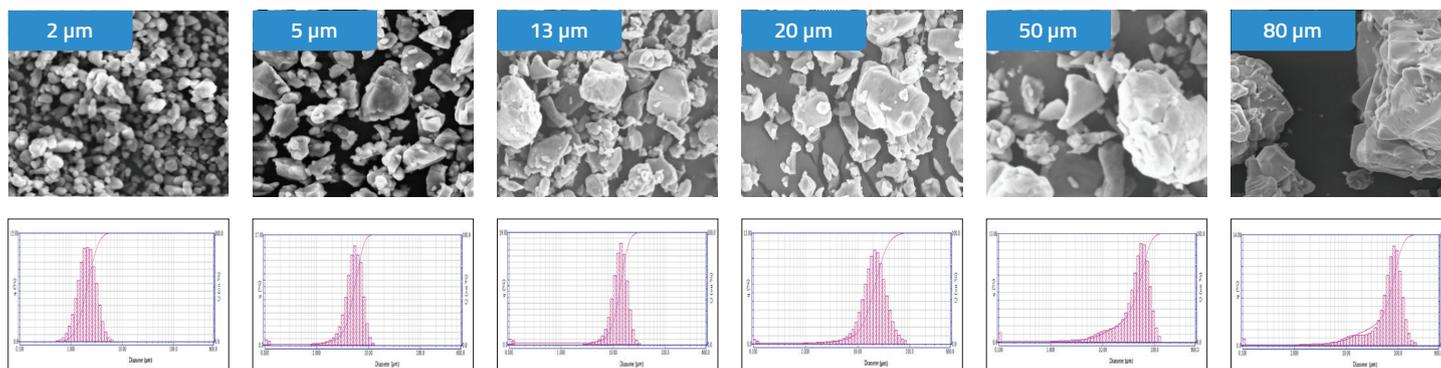
NWE Series offers 2 μm to 80 μm D50 range. Smaller size AlN powders are ideal for sub-filler use, and to develop ultra-thin TIMs.

NWE Series offers excellent fluidity and processability. All powder grades can be used in a variety of epoxy resins to develop highly thermal conductive products such as adhesives, gels, grease, pads and tapes, etc.

Properties		Available Grades					
		AlN020NWE	AlN050NWE	AlN130NWE	AlN200NWE	AlN500NWE	AlN800NWE
Particle Type		Polycrystalline					
Particle Shape		Roundish					
Surface Coating		Surface coated for improved bonding with epoxy resins					
Particle Size	D10	1.1 μm	3 μm	6 μm	9 μm	10 μm	15 μm
	D50	2 μm	5 μm	13 μm	20 μm	50 μm	80 μm
	D90	3.5 μm	9 μm	20 μm	40 μm	80 μm	120 μm
Specific Surface Area (SSA)		< 2.5 m ² /g	< 0.8 m ² /g	< 0.35 m ² /g	< 0.2 m ² /g	< 0.2 m ² /g	< 0.2 m ² /g
Impurities	Ca	<100 ppm					
	Fe	<200 ppm					
	Si	<1000 ppm					
	Pb	<10 ppm					
	C	<600 ppm					
	O	<0.9 wt%	<0.5 wt%	<0.5 wt%	<0.5 wt%	<0.5 wt%	<0.5 wt%
Anti-Hydrolysis	Water Resistant	State-of-the-art 'Water Resistance' treatment applied					
	Rated For	No hydrolysis after 1000+ hours of being directly submerged in water (under 85 °C / 85% conditions)					
Application		Recommended for use as filler in epoxy resins					

Chemical Name Aluminum Nitride | Formula AlN | CAS Number 24304-00-5 | Form Powder | Color White | Purity \geq 99% | Melting Point > 2200 °C | Density 3.26 g/cm³

SEM Photo & Particle Size Distribution



Disclaimer: Data represented in this document are typical values only and not guaranteed. Thrutek reserves the right to make changes to the product information contained herein without notice.