

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.

NF Series

NF Series aluminum nitride powders have reduced impurities, and a very low oxygen content.

NF 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. NF series is also available in water-resistant and surface-coated variants.

Key Applications

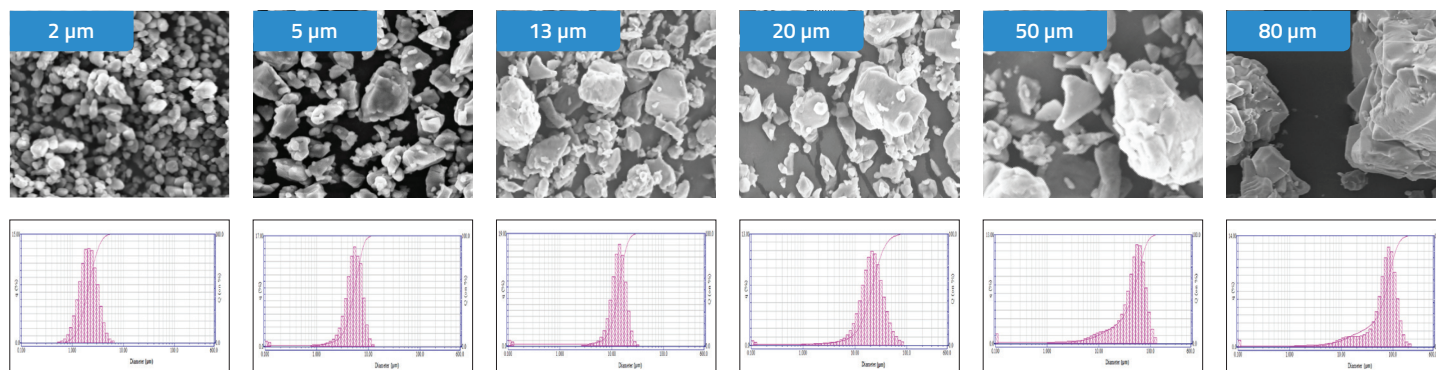
NF Series offers 2 μm to 80 μm D50 range. Smaller size AlN powders are ideal for sub-filler use, and to develop ultra-thin TIMs.

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

Properties		Available Grades					
		AlN020NF	AlN050NF	AlN130NF	AlN200NF	AlN500NF	AlN800NF
Particle Type		Polycrystalline					
Particle Shape		Roundish					
Surface Coating		None					
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	<200 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	No water resistance treatment applied.					
	Rated For	Untreated AlN powder hydrolyzes in water in <8 hours					
Application		Depending on the size, these grades can be used as sub-filler or main filler in epoxy resins or silicones					

Chemical Name Aluminum Nitride | **Formula** AlN | **CAS Number** 24304-00-5 | **Form** Powder | **Color** White | **Purity** $\geq 99\%$ | **Melting Point** > 2200 $^{\circ}\text{C}$ | **Density** 3.26 g/cm^3

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.