

NFS 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.

NFS Series

NFS Series aluminum nitride powders have reduced impurities and a very low oxygen content. NFS Series powders are surface coated with a silane coupling agent for improved bonding with silicones.

NFS 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

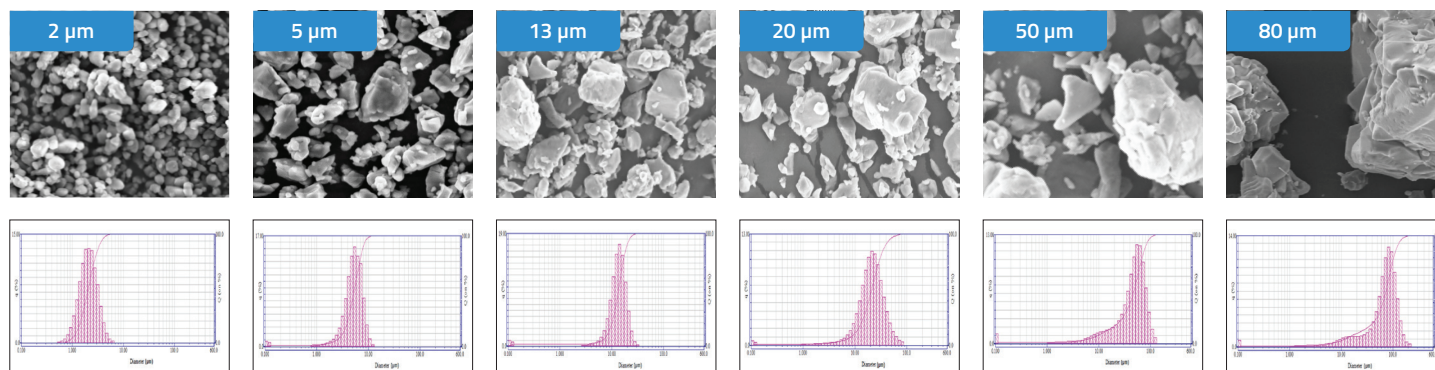
NFS Series offers 2 μm to 80 μm D50 range. Smaller size AlN powders are ideal for sub-filler use, and to develop ultra-thin TIMs.

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

Properties		Available Grades					
		AlN020NFS	AlN050NFS	AlN130NFS	AlN200NFS	AlN500NFS	AlN800NFS
Particle Type		Polycrystalline					
Particle Shape		Roundish					
Surface Coating		Surface coated for improved bonding with silicone polymers					
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	Basic water resistance from surface coating. Additional water resistance treatment not applied					
	Rated For	Surface-coated AlN powder hydrolyzes in water in 24 to 72 hours					
Application		Recommended for use as filler in silicone polymers					

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.