

NITRIDE
GLOBAL



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High Purity AlN Materials
Polycrystalline, Powder

Nitride Global

Founded in 2009, Nitride Global Inc. is a privately held company with manufacturing in the US, and distribution across the globe. Headquartered in Wichita, KS, NGI's single focus is to see the world transformed by AlN materials and devices.

Our product portfolio consists of 3 different AlN products using NGI's patented manufacturing processes

- Single crystal AlN on sapphire templates
- High purity AlN powders, sintered agents, and polycrystalline pucks
- Pseudomorphic AlN coatings on metals and ceramics



High-purity AlN Materials

Nitride Global Inc. currently manufacturers the highest quality and purity of AlN materials for the bulk AlN market. Understanding that source materials for bulk growth of AlN require low impurity concentrations and high volumetric densities, NGI manufacturers 4 different AlN compounds specifically fit for PVT growth of AlN.





Starting with the highest purity AlN powder, NGI's unique purification and densification processes create source materials with purities > 5 N and the worlds leading grain size and volumetric density.

The NGI Method

Value Oriented Processes and Products

NGI is committed to making products where the value to the customer is the first priority. Our High Purity AlN Material (HPM) processes were designed with that idea in mind. NGI's proprietary process utilizes a 2-step purification/densification method in parallel with a high-temp CVD process, detailed on the right.

Process Flow

STAGE	VALUE	PRODUCTS
PCA-0	2N5 AlN powder	
PCA-1	10x decrease in O ₂	
PCA-2	100x decrease in O ₂ 2x increase in volumetric density	
PCA-3	1000x decrease in O ₂ 3x increase in volumetric density	

[PCA-0]



Physical Properties

Appearance

Colour	gray white
Mean Particle Size (μm)	< 12

Density

Grain (g/cm^3)	3.26
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Chemical Properties

Purity (%)	> 99.5
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Contaminants (wt%)

O	< 0.4
C	< 0.07
Si	< 0.07
Fe	< 0.01
Mg	< 0.01

[PCA-1]



Physical Properties

Appearance

Colour	gray white
Mean Particle Size (μm)	65

Density

Grain (g/cm^3)	3.26
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Chemical Properties

Purity (%)	> 99.99
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[PCA-2]



Physical Properties

Appearance

Colour	gray white (small brown inclusions)
Mean Particle Size (μm)	150

Density

Grain (g/cm^3)	3.26
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Chemical Properties

Purity (%)	> 99.999
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[PCA-3a]

Physical Properties

Appearance

Colour amber brown

Density

Grain (g/cm³) 3.26

Volumetric Density (%) > 97

Chemical Properties

Purity (%) > 99.9995

[PCA-3b]

Physical Properties

Appearance

Colour amber brown

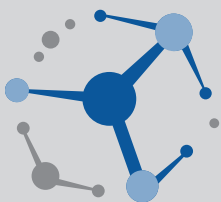
Density

Grain (g/cm³) 3.26

Volumetric Density (%) Application determined

Chemical Properties

Purity (%) > 99.999



For sales and business related inquiries please contact the following

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