

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

### RWS Series

Spherical AlN powder makes it possible to achieve high thermal conductivity in fillers.

RWS Series Spherical Aluminum Nitride powder have high purity spherical shaped particles designed for excellent flowability and loading.

The larger mean particle size and spherical shape not only provides a higher filling rate but also much improved thermal conductivity.

RWS Series are surface coated for improved coupling with silicone polymers. Additionally, they are also treated for advanced water resistance and can withstand water/moisture for hundreds of hours.

### Key Applications

RWS Series can be used in a variety of silicone polymers to develop highly thermal conductive products such as adhesives, gels, grease, pads and tapes, etc.

### Features & Benefits

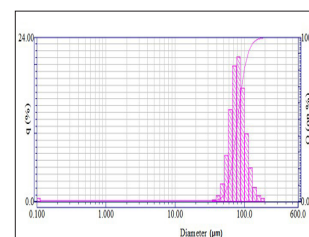
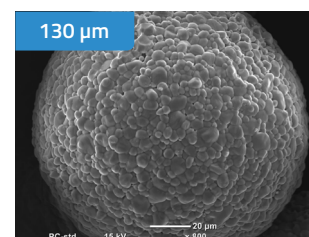
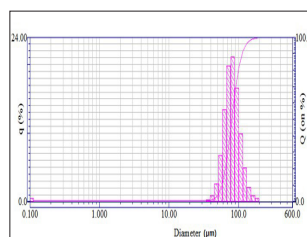
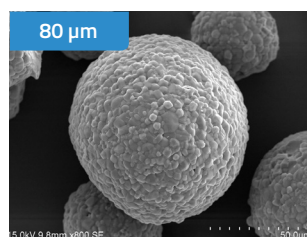
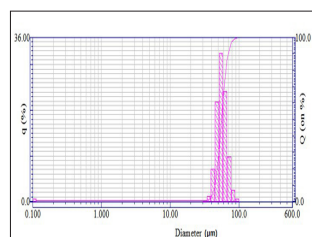
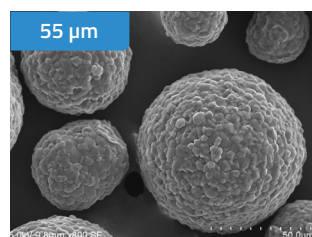
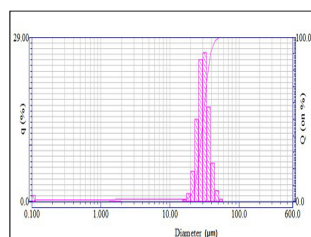
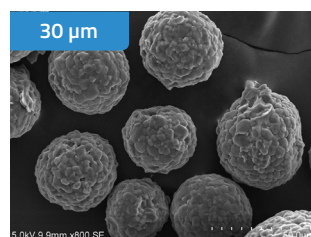
- Sharp PSD and Low impurities
- Surface-coated to bond with silicone
- Best-in-class Water Resistance
- Customizable PSD and surface coating

Properties		Available Grades			
		AlN300RWS	AlN550RWS	AlN800RWS	AlN13tRWS
Particle Type		Sintered Agglomerated			
Particle Shape		Spherical			
Surface Coating		Surface coated for improved bonding with silicone polymers			
Particle Size	D10	25 $\mu\text{m}$	40 $\mu\text{m}$	58 $\mu\text{m}$	100 $\mu\text{m}$
	D50	<b>30 <math>\mu\text{m}</math></b>	<b>55 <math>\mu\text{m}</math></b>	<b>80 <math>\mu\text{m}</math></b>	<b>130 <math>\mu\text{m}</math></b>
	D90	38 $\mu\text{m}$	72 $\mu\text{m}$	108 $\mu\text{m}$	170 $\mu\text{m}$
Specific Surface Area (SSA)		< 0.13 $\text{m}^2/\text{g}$	< 0.067 $\text{m}^2/\text{g}$	< 0.05 $\text{m}^2/\text{g}$	< 0.03 $\text{m}^2/\text{g}$
Impurities	Ca	< 100 ppm			
	Fe	< 150 ppm			
	Si	< 300 ppm			
	Pb	< 10 ppm			
	C	< 100 ppm			
Anti-Hydrolysis	Treatment	State-of-the-art 'Water Resistance' treatment applied			
	Rating	AlN Powder doesn't hydrolyze in water for up to >500 hours			
Application		Ideally used as main filler in silicone polymers			

Chemical Name Aluminum Nitride | Formula AlN | CAS Number 24304-00-5

Form Powder | Color Gray | Purity  $\geq 97\%$  | Melting Point > 2200  $^{\circ}\text{C}$  | Density 3.26  $\text{g}/\text{cm}^3$

### 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.