

Aluminum Nitride (AlN) Filler

AlN powder can improve thermal conductivity of thermal interface materials!

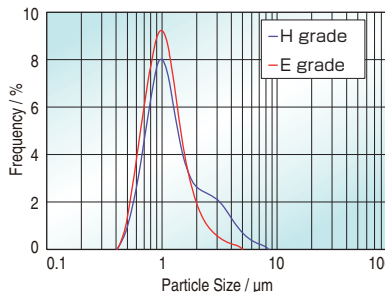
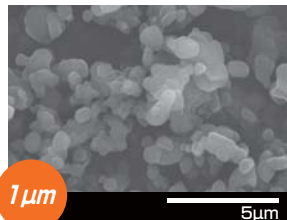
AlN powder

1. Fine Powder

- Primary particle size; 0.6 μ m, very sharp size distribution
- Good dispersiveness for fine and sharp size distribution

2. Purity

- Low metal impurities
- Low oxygen contents

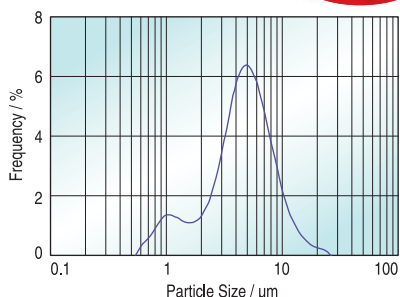
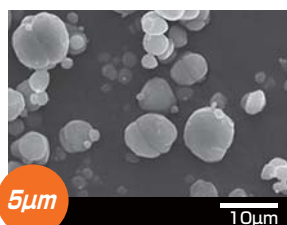


Item	H grade	E grade
Specific surface area (m ² /g)	2.50~2.68	3.27~3.47
Mean particle size (μm)	1.07~1.17	0.96~1.07
Impurity	O (wt%)	0.78~0.86
	C (ppm)	130~270
	Ca (ppm)	200~240
	Si (ppm)	39~48
Fe (ppm)	10~14	2~9

Values are typical; not for specification

Spherical AlN powder

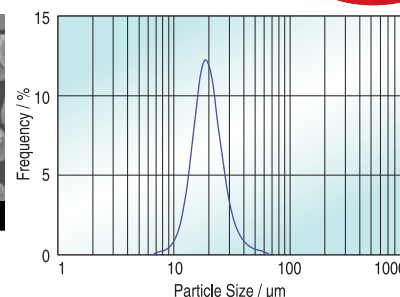
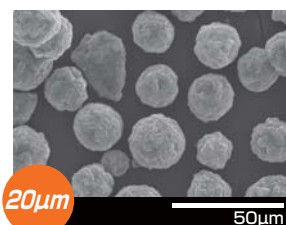
Under development



High filling content rate to resin is available due to its spherical shape and smooth surface.

Spherical AlN powder

Under development

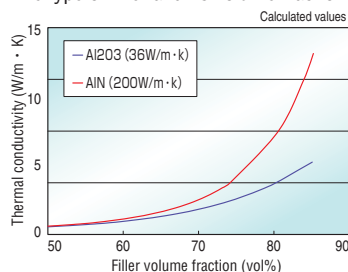


Volume fraction of filler in thermal interface materials is raised by mixing with some different particle size powders.

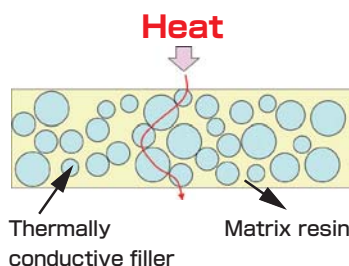
Effect of filler addition

Thermal conductivity of thermal interface materials

Thermal conductivity of thermal interface materials strongly depend on the type of filler and its volume fraction.

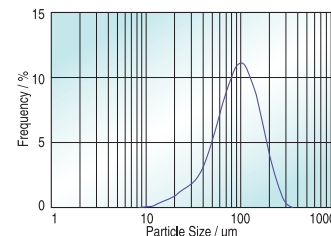
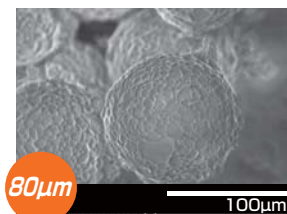
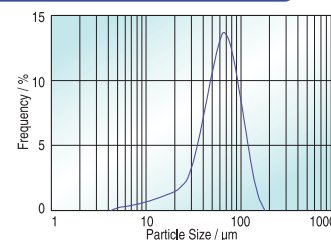
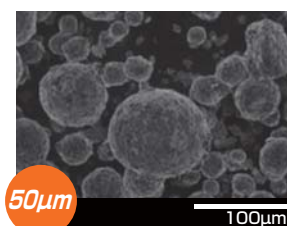


Structure of thermal interface materials



Thermally conductive filler Matrix resin

Sintered AlN powder



This sintered powder is obtained by sintering of AlN powder with some sintering aids.

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