



GNP Graystar

Specialty Materials

TECHNICAL DATA SHEET

Aluminum Nitride (AlN) Fillers

Typical Properties

	M-G	F-10	F-30
Mean Particle Size (μm)	1.2-1.5	5-10	20-40
Particle Shape	Near Spherical	Near Spherical	Spherical
Real Density (g/cm^3)	3.26	3.26	> 3.30
Thermal Conductivity ($\text{W}/\text{m}\cdot\text{K}$)	> 170	> 170	> 170
Apparent Density (g/cm^3)	0.3-0.5	1.3-1.5	1.4-1.6
Tap Density (g/cm^3)	0.7-0.9	1.6-1.8	1.8-2.0

	F-50	F-80
Mean Particle Size (μm)	40-60	70-90
Particle Shape	Spherical	Spherical
Real Density (g/cm^3)	> 3.30	> 3.30
Thermal Conductivity ($\text{W}/\text{m}\cdot\text{K}$)	> 170	> 170
Apparent Density (g/cm^3)	1.6-1.8	1.6-1.8
Tap Density (g/cm^3)	1.8-2.0	1.8-2.0

Description:

GNP Graystar's Aluminum Nitride is a transparent, high purity AlN that exhibits high thermal conductivity (near $320 \text{ W}/\text{m}\cdot\text{K}$), high electrical insulation properties, near spherical particles, high solid loading, low thermal expansion coefficient, and sharp particle size distribution.

Applications:

GNP Graystar's High Purity Aluminum Nitride (AlN) Fillers are used in the production of IGBT driver boards, semiconductor manufacturing, parts such as etching mask, electrostatic chuck, and heater, in LED heat dissipation boards, in crucibles, and many other applications.

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