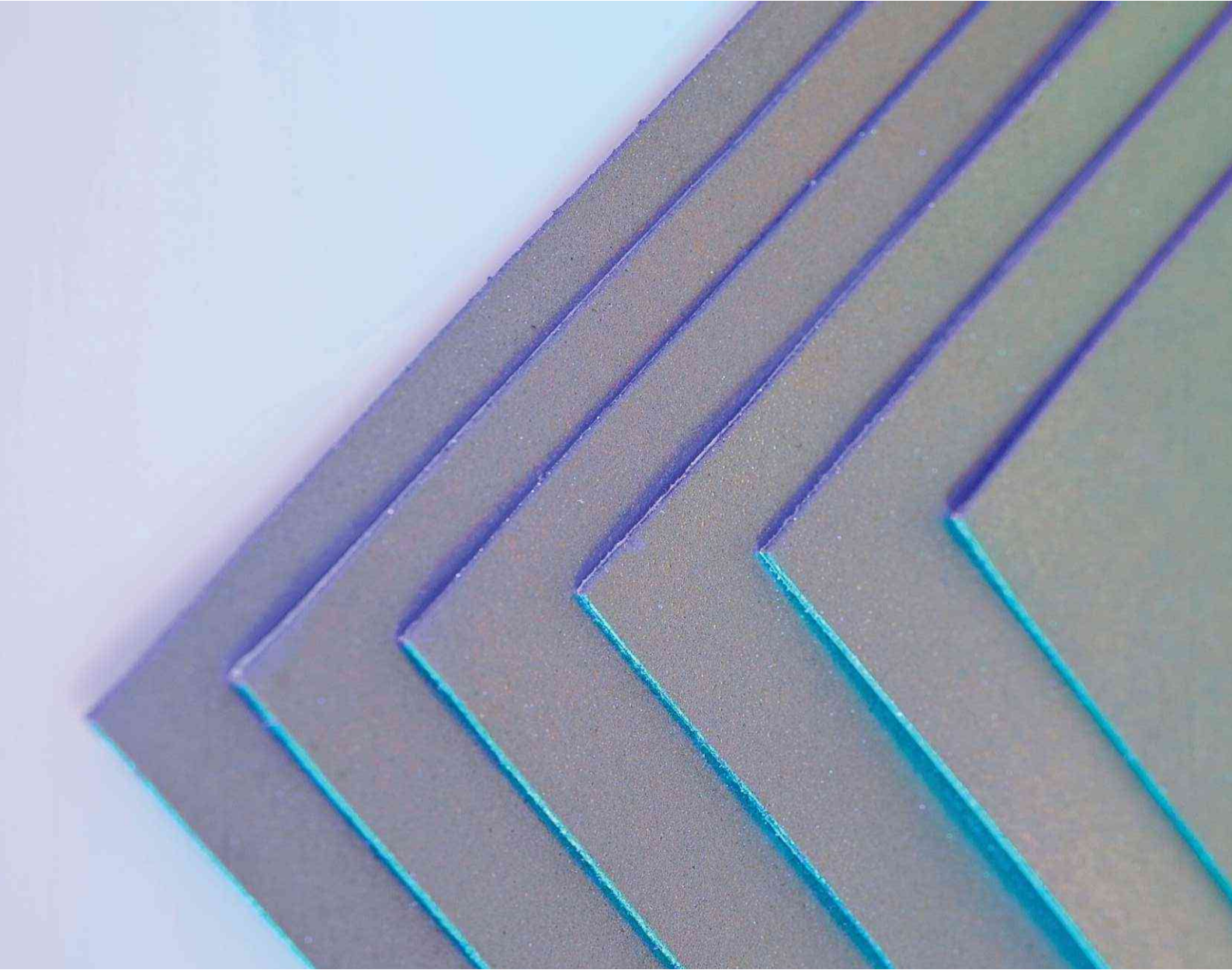


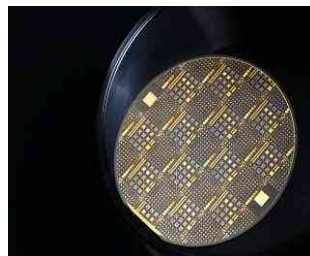


GlobalTop Technology Inc.
Applied Materials BU



Aluminum Nitride Granule Series

Product Datasheet



GS Series

Aluminum Nitride Granule

GS Series: Granule of well granulated materials and spheroidal shape

GS series ALN granule is consisted of our low impurity AlN020SS powder, and is well granulated with binders and additives by a state-of-the-art granulation. With its high degree of fluidity and excellent size distribution, it is easy to sinter a high thermally conductive AlN ceramics with its outstanding characteristics in compressing and molding.

For example, its use in sintered ceramic heat sink improves overall thermal conductivity as well as heat dissipation, which is ideal for high power consumption devices.

Features

- Well granulated with AlN/ Binder /Sintering Additives
- Low metal impurities
- Low oxygen content
- Good fluidity/sinterability
- Excellent size distribution

SEM Microphotograph of AlN 020GS Powders

Figure 1

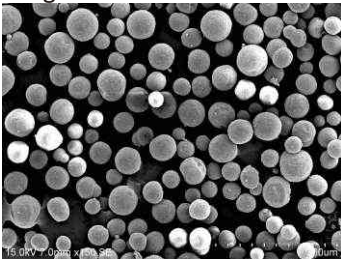
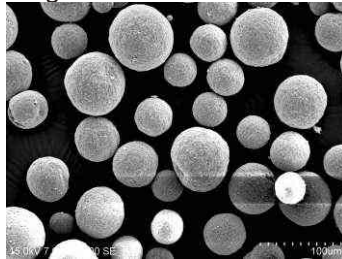


Figure 2



SEM Microphotograph of AlN 020GS Sintered Substrate(Fractured)

Figure 3

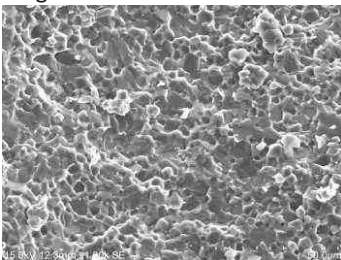
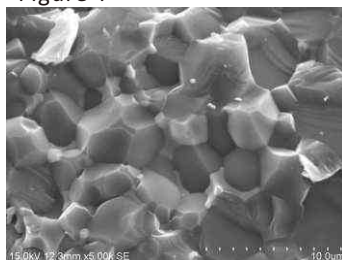


Figure 4



Applications

- Heat sink of high-power transistor /high-frequency boards/power control unit of electrical vehicle
- Thermally conductive/electric insulated semiconductor ceramics/Parts
- High thermally conductive & chemically resistant parts/HTCC ceramics

Product Selector

Part Number	Mean Size	Inorganic	Binder	Repose Angle	Bulk Density	ICP Analysis* (Unit: ppm)				O (wt%)
	D50 (um)	(wt%)	(wt%)	(Degree)	(g/cm ³)	Ca	Fe	Si	Pb	
AlN020GS	60~70	93~95	3.5~4.5	<30°	>1.0	<100	<150	<200	<10	<2.3

* The impurities were analyzed from raw AlN material without any additives

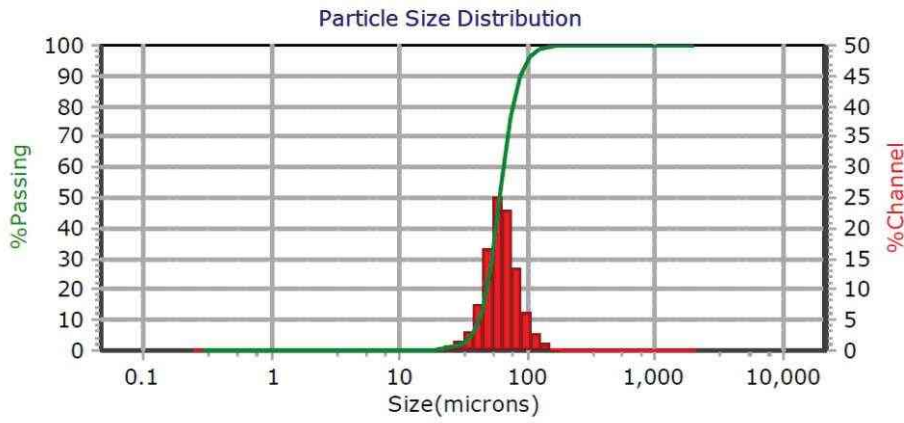


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Particle Size Distribution of AlN020GS



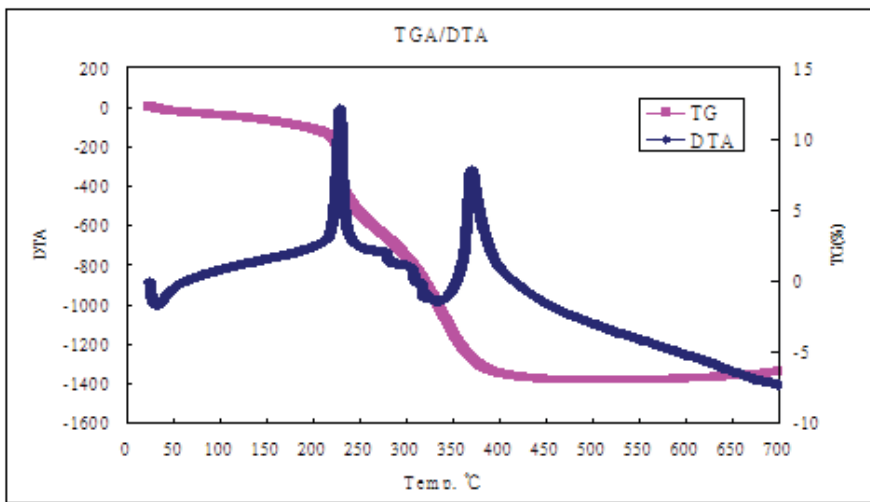
Debinding and Sintering Guideline

De-binding process: Recommend to de-bind it in air with the TGA/DTA information on the left-center figure

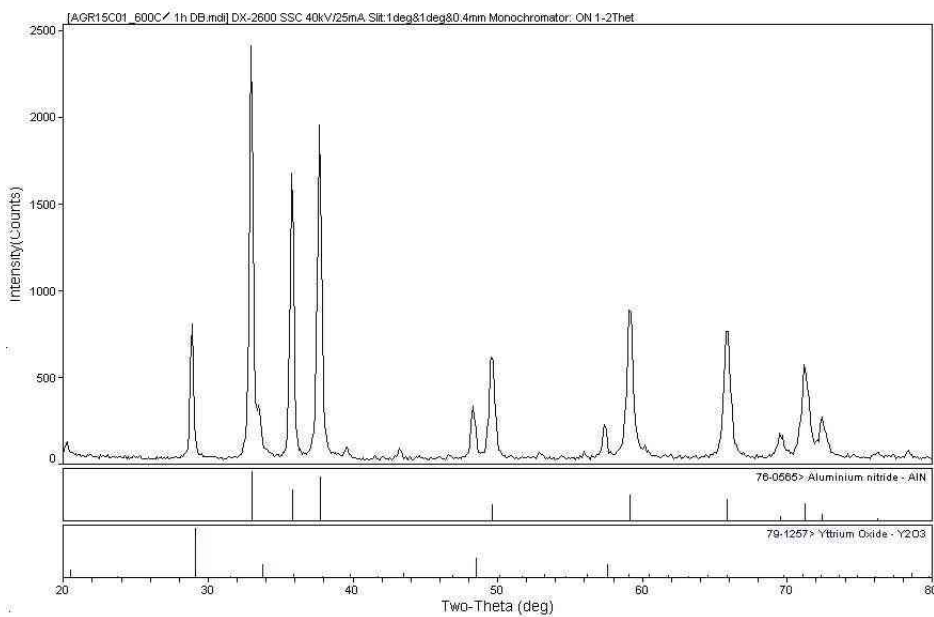
Sintering Process:

- Peak sintering temperature: 1800 ~ 1840°C in nitrogen atmosphere for 3 ~ 5 hours
- Temperature profile: For further details, please contact us.

Analysis of AlN020GS TGA/DTA in Air



XRD Analysis**



** The XRD was analyzed from AlN raw material without any additives



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