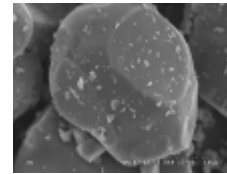


# ALN-Aluminum Nitride Powder

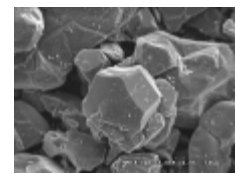
High thermal conductivity of Low iron impurity for Ceramics Substrate application can be improved by ALN powder

## AlN-AF series: Low iron impurity less than 200ppm

Aluminum Nitride (AlN) Powder has been increasingly used as substrate materials for electronic packaging and as fillers to improve the thermal conductivity of polymer composites due to its excellent thermal conductivity and the electrical insulation properties. Thrutek AlN-AF series AlN powder *Fe impurity is below 200ppm*. Thrutek AlN powder is used as fillers in compound material and ceramic substrate applications.



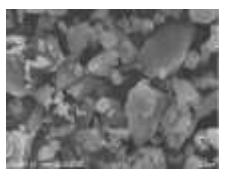
30 $\mu$ m AlN SEM (X3000)



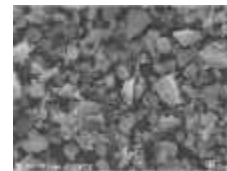
2 $\mu$ m AlN SEM (X1000)



10 $\mu$ m AlN SEM (X1000)



5 $\mu$ m AlN SEM (X5000)



2 $\mu$ m AlN SEM (X5000)

### ➤ Characteristic:

Ceramic material widely used in Semiconductor industry, Electronics industry, Electrical industry with fully function of **High thermal conductivity, High electrical resistance, High hardness, Corrosion resistant, Low dielectric loss and Low CTE**.

### ➤ Application: TIM(Thermal Interface Material)

#### ➤ Thermal Conductive Additives/Filler

- ✓ TIM thermal filler for EMC Additives, FCCL , MCPCB Dielectric layer.
- ✓ TIM thermal filler( Thermal grease, tape, adhesive, rubber)
- ✓ High thermal conductivity with low Iron impurity.

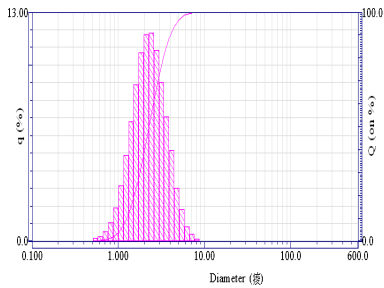
### ➤ Product Features

- Sharp size distribution
- Good dispersion
- Low metal impurities
- Low oxygen contents
- Low CTE (Coefficient of Thermal Expansion)
- Continuous volume production, monthly up to eight tonnage capacity

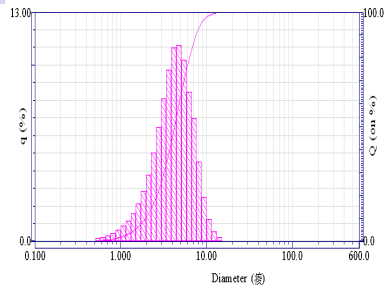
## ➤ Typical Specifications:

### ◆ Particle Size distribution

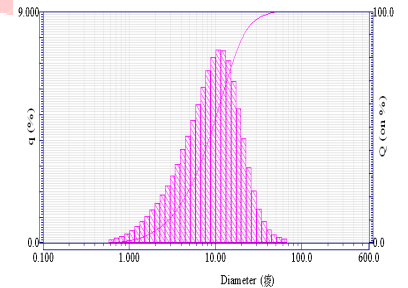
Type		AIN020AF	AIN050AF	AIN100AF	AIN200AF	AIN300AF
Size Distribution	D10(μm)	1	2.5	4.5	6	9
	D50(μm)	2.0	5.0	10	20	30
	D90(μm)	4	10	25	60	82



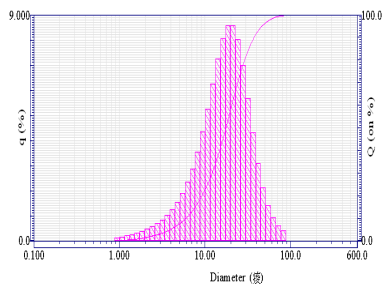
AIN020AF



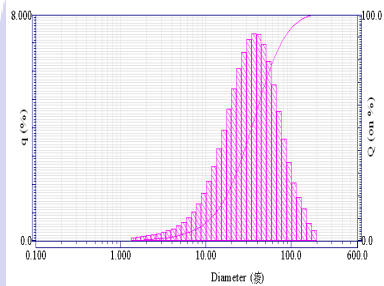
AIN050AF



AIN100AF



AIN200AF



AIN300AF

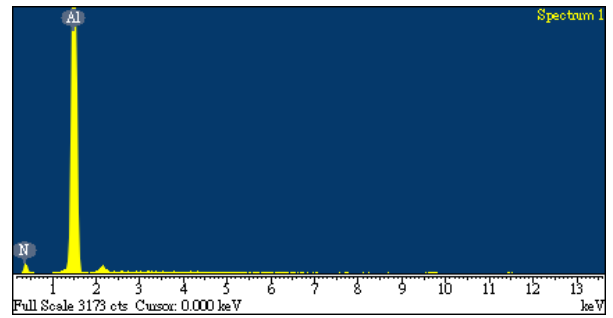
### ◆ Impurity :

ICP Analysis(unit : ppm)				
	Ca	Fe	Si	Pb
Impurities SPEC.	<100	<200	<200	<10

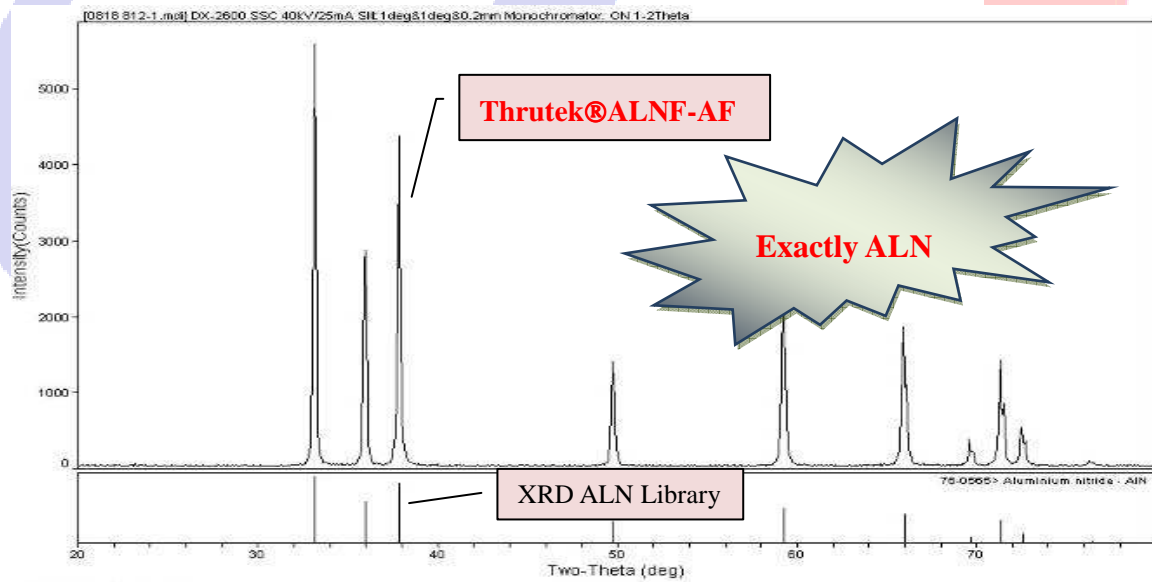
	AIN020AF	AIN050AF	AIN100AF	AIN200AF	AIN300AF
O2(%)	<1.5	<1	<0.75	<0.5	<0.5

## ◆ EDS Analysis

Element	Weight%	Atomic%
<b>N</b>	34.84	50.73
<b>Al</b>	65.16	49.27
Totals	100.00	



## ◆ XRD Analysis



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