

## NS6130-02-295

### Quick Facts

Product	: Titanium Aluminium Nitride Powder
Stock No	: NS6130-02-295
CAS	: 60317-94-4
Molecular Formula	: TiAlN
Form	: Powder

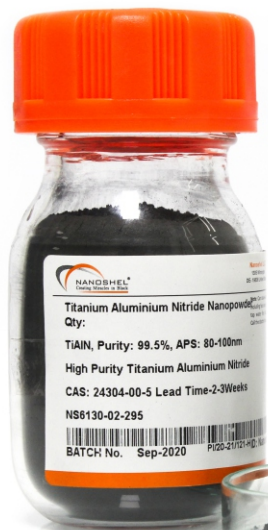
### Technical Specification

Molecular Weight	Density	Melting Point	Color
136.72g/mol	N/A	N/A	Gray to Black

The MAX phases are layered, hexagonal carbides and nitrides which have the general formula:  $Mn+1AX_n$ , (MAX) where  $n = 1$  to  $4$ , and  $M$  is an early transition metal,  $A$  is an A-group (mostly IIIA and IVA, or groups 13 and 14) element and  $X$  is either carbon and/or nitrogen.

In recent years, as one member of nanolaminated MAX-phase groups,  $Ti_2AlN$  max-phase materials has been synthesized by various techniques in bulk form or thin film form. MAX-phase exhibit an unique combination of typical ceramic properties high

melting point, good oxidation, corrosion resistance, good thermal, good electrical conductivity, easy machinability, excellent thermal shock resistance and damage tolerance. Titanium Aluminium Nitride ( $TiAlN$ ) are widely used for numerous metal cutting applications due to their high hardness, low friction, wear, and oxidation resistance protective coatings, electrical contacts etc.



# TiAlN



# TiAlN MAX PHASE

## Powder

## Purity 99.9%

### Properties

- ✓ High melting point
- ✓ Good oxidation
- ✓ Corrosion resistance
- ✓ Good thermal
- ✓ Good electrical conductivity
- ✓ Excellent thermal shock resistance
- ✓ Damage tolerance

### Application

- ✓ Aerospace engine (protective coating)
- ✓ Nuclear reactive system (protective coating)
- ✓ Protective Coating (High temperature components)
- ✓ Electrical contacts
- ✓ Energy storage, catalysis
- ✓ Microelectronics, sensors



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20ZICE4589C



19ZAZGO1274G



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