

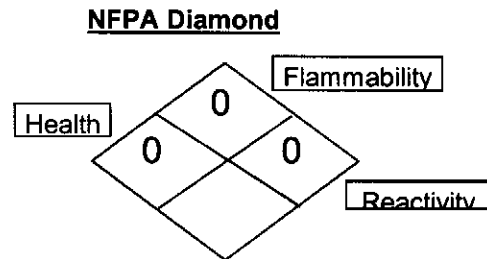
Material Safety Data Sheet

Product: Titanium Aluminum Nitride
MSDS No: MSDS-002-A

Section I - Identification

Common Name: Titanium Aluminum Nitride **Formula:** $Ti_xAl_yN_z$
Synonyms: 7-22A Titanium Aluminum Nitride; ION BOND^(R)
PVD Titanium Aluminum Nitride; TiAlN.

CAS Name: None
CAS #: None
Chemical Family: Inorganic Crystals



Section II - Hazardous Ingredients Information

Hazardous Components	OSHA PEL-TWA	ACGIH TLV-TWA	Other Limits Recommended
None	None	None	None

This product exhibits none of the 9 physical hazards that define an "OSHA Hazardous Chemical" (29 CFR 1910.1200c). Titanium Aluminum Nitride is not listed on OSHA's Toxic and Hazardous Substances (29 CFR 1910, subpart Z) nor is it listed as having a Threshold Limit Value (TLV) by the American Conference of Government Industrial Hygienists. Titanium Aluminum Nitride is considered to be non toxic and is FDA allowed for use on medical instruments and devices.

Section III - Physical/Chemical Characteristics

Boiling Point: (760 mm Hg)	N/A	Specific Gravity:	N/A
Vapor Pressure: (25C)	N/A	Evaporation Rate:	N/A
Vapor Density: (Air=1)	N/A	Freezing Rate:	N/A
Solubility in Water:	N/A		

Appearance and Odor: Bronze to light golden brown, Odorless

Section IV - Fire and Explosion Data

Flash Point:	None	Extinguishing Media:	N/A
Flammable Limits (In air, % by volume):	None		
Special Fire Fighting Procedures:	None	Unusual Fire Fighting Procedures:	None

Section V - Reactivity Data

Stability:	Stable	Conditions to Avoid:	Stable under accepted use conditions
Hazardous Polymerization:	Does Not Occur	Conditions to Avoid:	None
Incompatibility (Materials to Avoid):			Strong oxidizers, acids with strong oxidation potentials, strong alkalis
Hazardous Decomposition or By-Products:			None

Section VI - Health Hazard Data

Routes of Entry **Inhalation:** No **Skin:** No **Ingestion:** No

Acute Health Hazards

Inhalation:	Not a Known Hazard
Skin Contact:	Not a Known Hazard
Skin Absorption:	Not a Known Hazard
Eye Contact	Not a Known Hazard
Ingestion:	Not a Known Hazard

Chronic Health Hazards

Toxicity	Not a Known Hazard
Carcinogenicity	Not a known or listed carcinogen

Emergency First Aid Procedures

Inhalation:	N/A
Eyes:	N/A
Ingestion:	N/A
Skin:	N/A

Section VII - Precautions for Safe Handling and Use

Steps To Be Taken In Case Of Release Or Spills	N/A
Waste Disposal Method	Not a hazardous or controlled waste. Follow applicable regulations for the disposal of the coated substrate, tool, object or part.
Precautions To Be Taken In Handling and Storage	No special precautions for this product. Follow precautions appropriate for coated substrate, tool, object or part.

Section VIII - Control Measures

Ventilation:	Not required for this product. Use measures appropriate for the use of the coated substrate, tool, object or part.
Protective Gloves:	Not required for this product. Use measures appropriate for the use of the coated substrate, tool, object or part.
Eye Protection:	Not required for this product. Use measures appropriate for the use of the coated substrate, tool, object or part.
Respiratory Protection	Not required for this product. Use measures appropriate for the use of the coated substrate, tool, object or part.
Other Protective Clothing/Equipment:	Not required for this product. Use measures appropriate for the use of the coated substrate, tool, object or part.
Work / Hygienic Practices:	Not required for this product. Use measures appropriate for the use of the coated substrate, tool, object or part.

Section IX - Regulatory Information

Product not listed as a SARA Title III, Section 302 Extremely Hazardous Material (40 CFR Part 355)

Product not listed as a SARA Title III, Section 313 Toxic Chemical (40 CFR Part 372.65)

Product not listed as a CERCLA Hazardous Substance (40 CFR Part 302.4)

Section X - Other Information

Under normal circumstances of application and use, the technical requirements of the production process for the product noted above dictate that it can not exist in any state that is independent of the substrate, part, tool or object to which it is applied. This product as created is an end product in its final use form and is not subsequently further processed or modified. Consequently, an MSDS is not typically required for this product. This MSDS has been prepared on a voluntary basis for information purposes only and does not in any way, shape or form acknowledge a requirement to do so or that the product above is a hazardous material requiring the creation of an MSDS.

This information relates to the specific product designated and may not be valid for such products used in combination with any other materials or process. Such information is to the best of knowledge and belief and is accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. IonBond does not accept liability for any loss or damage that may occur from the use of this product either singly or in combination with other substances.