



XI'AN FUNCTION MATERIAL GROUP CO., LTD  
Material Safety Data Sheet

Calcium Nitride

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1. Product and Company Identification

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Trade Name:	Calcium nitride
Chemical Formula:	Ca <sub>3</sub> N <sub>2</sub>
Recommended Use:	Scientific research and development
Manufacturer/Supplier:	XI'AN FUNCTION MATERIAL GROUP CO., LTD
Street:	No. 69, Gazelle Valley, High-Tech Zone
City:	XI'AN
State:	Shannxi
Zip Code:	710077
Country:	China
Tel #:	+86-29-88993870/+86-13519132051

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2. Hazards Identification

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Signal Word:

Danger



Hazard Statements:

H228: Flammable solid  
H314: Causes severe skin burns and eye damage

Precautionary Statements:

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking  
P260: Do not breathe dust/fume/gas/mist/vapours/spray  
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing  
P405: Store locked up  
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

Health:	2
Flammability:	2
Physical:	2

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3. Composition

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Chemical Family:	Ceramic
Additional Names:	Tricalcium dinitride

Calcium nitride (Ca<sub>3</sub>N<sub>2</sub>):

Percentage:	100 wt%
CAS #:	12013-82-0
EC #:	234-592-9

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#### 4. First Aid Procedures

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General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	Causes severe skin burns. Causes severe eye damage.
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult. Seek immediate medical attention.
Ingestion:	Seek immediate medical attention.
Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing. Seek immediate medical attention.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention.

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#### 5. Firefighting Measures

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Flammability:	Flammable
Extinguishing Media:	Do not use water for metal fires – use CO <sub>2</sub> , sand, extinguishing powder.
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

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#### 6. Accidental Release Measures

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If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

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#### 7. Handling and Storage

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Handling Conditions:	Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

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#### 8. Exposure Controls and Personal Protection

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Permissible Exposure Limits:	N/A
Threshold Limit Value:	N/A
Special Equipment:	None
Respiratory Protection:	Dust Respirator
Protective Gloves:	Rubber gloves
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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### 9. Physical and Chemical Characteristics

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Color	Brown
Form:	Granules
Odor:	Ammonia-like
Water Solubility:	Insoluble, contact with water releases toxic gases.
Boiling Point:	N/A
Melting Point:	1195 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	2.63 g/cc
Molecular weight:	148.25 g/mol

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### 10. Reactivity

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Stability:	Stable under recommended storage conditions
Reacts With:	Water, Acids, Oxidizing agents
Incompatible Conditions:	Air, Water/moisture
Hazardous Decomposition Products:	Calcium oxide, Nitrogen oxide, Ammonia

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### 11. Toxicological Information

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Potential Health Effects:	
Eyes:	May cause irritation
Skin:	May cause irritation
Ingestion:	Strong corrosive effect on mouth and throat to the danger of perforation of esophagus and stomach.
Inhalation:	May cause irritation
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	N/A
Carcinogen:	N/A

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### 12. Ecological Information

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Aquatic Toxicity:	Low
Persistent Bioaccumulation Toxicity:	No
Very Persistent, Very Bioaccumulative:	No
Notes:	N/A

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### 13. Disposal Considerations

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Dispose of in accordance with local, state, national, and international regulations.

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#### 14. Transportation Data

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Hazardous:

Hazardous.



Hazard Class:

4.1 Flammable solids, self-reactive substances and solid desensitized explosives.

Packing Group:

II

UN Number:

UN3178

Proper Shipping Name:

Flammable solid, inorganic, n.o.s. (Calcium nitride)

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#### 15. Regulatory Information

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Sec 302 Extremely Hazardous:

No

Sec 304 Reportable Quantities:

N/A

Sec 313 Toxic Chemicals:

No

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#### 16. Other Information

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This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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