

# Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 02/03/2000

Reviewed on 09/14/1999

## 1 Identification of substance:

### o Product details:

o Trade name: Calcium nitride

o Stock number: 13124

### o Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company  
Johnson Matthey Catalog Company, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Emergency Phone: (978) 521-6300  
CHEMTREC: (800) 424-9300  
Web Site: [www.alfa.com](http://www.alfa.com)

o Information department: Health, Safety and Environmental  
Department

### o Emergency information:

During normal hours the Health, Safety and Environmental  
Department. After normal hours call Chemtrec at (800) 424-9300.

## 2 Composition/Data on components:

### o Chemical characterization:

Description: (CAS#)

Calcium nitride (CAS# 12013-82-0), 100%

### o Identification number(s):

o EINECS Number: 2345929

• **3 Hazards identification**

○ **Hazard description:**

Xi Irritant

F Highly flammable

○ **Information pertaining to particular dangers for man and environment**

R 11 Highly flammable.

R 36/37/38 Irritating to eyes, respiratory system and skin.

• **4 First aid measures**

○ **After inhalation**

Supply fresh air. If required, provide artificial respiration.

Keep patient warm.

Seek immediate medical advice.

○ **After skin contact**

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

○ **After eye contact**

Rinse opened eye for several minutes under running water. Then consult a doctor.

○ **After swallowing** Seek immediate medical advice.

• **5 Fire fighting measures**

○ **Suitable extinguishing agents**

CO2, sand, extinguishing powder. Do not use water.

○ **For safety reasons unsuitable extinguishing agents** Water

○ **Special hazards caused by the material, its products of combustion or**

**resulting gases:**

In case of fire, the following can be released:

Ammonia

○ **Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

## • **6 Accidental release measures**

### ○ **Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

### ○ **Measures for environmental protection:**

Do not allow material to be released to the environment without proper governmental permits.

### ○ **Measures for cleaning/collecting:**

Ensure adequate ventilation.

Keep away from ignition sources.

### ○ **Additional information:**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## • **7 Handling and storage**

### ○ **Handling**

#### ○ **Information for safe handling:**

Handle under dry protective gas.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

#### ○ **Information about protection against explosions and fires:**

Keep ignition sources away.

Protect against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

### ○ **Storage**

#### ○ **Requirements to be met by storerooms and receptacles:**

Store in a cool location.

#### ○ **Information about storage in one common storage facility:**

Store away from water/moisture.

Store away from air.

Do not store together with oxidizing and acidic materials.

#### ○ **Further information about storage conditions:**

Store under dry inert gas.

Protect from humidity and water.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

## • **8 Exposure controls and personal protection**

### ◦ **Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

### **Components with limit values that require monitoring at the workplace:**

Not required.

### ◦ **Additional information:** No data

### ◦ **Personal protective equipment**

### ◦ **General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

### ◦ **Breathing equipment:**

Use suitable respirator when high concentrations are present.

### ◦ **Protection of hands:** Impervious gloves

### ◦ **Eye protection:**

Safety glasses

Tightly sealed goggles

Full face protection

### ◦ **Body protection:** Protective work clothing.

## • **9 Physical and chemical properties:**

### ◦ **Form:** Chunks

### ◦ **Color:** Brown

### ◦ **Odor:** Ammonia-like

	<u>Value/Range</u>	<u>Unit</u>
<u>Method</u>		

### ◦ **Change in condition**

### ◦ **Melting point/Melting range:** 1195 ° C

### ◦ **Boiling point/Boiling range:** Not determined

### ◦ **Sublimation temperature / start:** Not determined

- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Highly flammable.
- **Ignition temperature:** Not determined
- **Decomposition temperature:** Not determined
- **Explosion limits:**
- **Lower:** Not determined
- **Upper:** Not determined
- **Vapor pressure:** Not determined
- **Density:** at 20 ° C 2.63 g/cm3
- **Solubility in / Miscibility with**
- **Water:** Reacts

## • 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**  
Decomposition will not occur if used and stored according to specifications.
- **Materials to be avoided:**  
Water/moisture  
Air  
Acids  
Oxidizing agents  
Halogens
- **Dangerous reactions** Contact with water releases flammable gases
- **Dangerous products of decomposition:**  
Ammonia  
Nitrogen oxides

• **11 Toxicological information**

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:**  
Other than potential irritation (see above), no information on illness or injury from acute or chronic exposure to this product is available.
- **Additional toxicological information:**  
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

• **12 Ecological information:**

- **General notes:**  
Do not allow material to be released to the environment without proper governmental permits.

• **13 Disposal considerations**

- **Product:**
- **Recommendation**  
Consult state, local or national regulations for proper disposal.
- **Uncleaned packagings:**
- **Recommendation:**  
Disposal must be made according to official regulations.

**14 Transport information**

- **DOT regulations:**
- **Hazard class:** 4.3
- **Identification number:** UN2813
- **Packing group:** II
- **Proper shipping name (technical name):**  
Water-reactive solid, n.o.s., calcium nitride
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** 4.3 Substances that develop flammable gases  
in contact with water.
- **Item:** 20b
- **Danger code (Kemler):** 423
- **UN-Number:** 2813
- **Description of goods:** Water-reactive solid, n.o.s., calcium nitride
- **Maritime transport IMDG:**
- **IMDG Class:** 4.3
- **UN Number:** 2813
- **Packaging group:** II
- **Proper shipping name:** Water-reactive solid, n.o.s., calcium nitride
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 4.3
- **UN/ID Number:** 2813
- **Packaging group:** II
- **Proper shipping name:** Water-reactive solid, n.o.s., calcium nitride

## • **15 Regulations**

- **Product related hazard informations:**

- **Hazard symbols:**

Xi Irritant F Highly flammable

- **Risk phrases:**

11 Highly flammable.

36/37/38 Irritating to eyes, respiratory system and skin.

- **Safety phrases:**

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

- **National regulations**

All components of this product are listed in the U.S.

Environmental Protection Agency Toxic Substances Control Act  
Chemical Substance Inventory.

- **Information about limitation of use:**

For use only by technically qualified individuals.

## • **16 Other information:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

- **Department issuing MSDS:** Health, Safety and Environmental Department.

- **Contact:** Darrell R. Sanders