

# Magnesium Nitride (Mg<sub>3</sub>N<sub>2</sub>) Powder

**US Research Nanomaterials, Inc.**

[www.us-nano.com](http://www.us-nano.com)

## SAFTY DATA SHEET

Revised Date 12/12/2015

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifiers

Product name: Magnesium Nitride (Mg<sub>3</sub>N<sub>2</sub>) Powder  
Product Number : US1115M  
Magnesium Nitride (Mg<sub>3</sub>N<sub>2</sub>) CAS#: 12057-71-5

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Research

#### 1.3 Details of the supplier of the safety data sheet

Company: **US Research Nanomaterials, Inc.**  
3302 Twig Leaf Lane  
Houston, TX 77084  
USA  
Telephone: +1 832-460-3661  
Fax: +1 281-492-8628

#### 1.4 Emergency telephone number

Emergency Phone # : (832) 359-7887

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H260: In contact with water releases flammable gas.  
H302: Harmful if swallowed.  
H312: Harmful in contact with skin.  
H315: Causes skin irritation.  
H319: Causes serious eye irritation.  
H332: Harmful if inhaled.

H335: May cause respiratory irritation.

Precautionary statement(s)

P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire.

P231+P232 Handle under inert gas. Protect from moisture.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P332+P313 If skin irritation occurs: Get medical advice/ attention.

P402+P404 Store in a dry place. Store in a closed container.

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS**

None

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substances**

Magnesium Nitride (Mg<sub>3</sub>N<sub>2</sub>) CAS#: 12057-71-5

**4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed**

no data available

**5. FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable extinguishing media**

Use CO<sub>2</sub>, dry chemical, or foam for extinction.

**5.2 Special hazards arising from the substance or mixture**

May emit hazardous fumes under fire conditions.

### **5.3 Advice for firefighters**

Wear self contained breathing apparatus for firefighting if necessary.

### **5.4 Further information**

no data available

## **6. ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid dust formation. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

### **6.2 Environmental precautions**

Avoid release to the environment. See Section 12 for additional ecological information.

### **6.3 Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### **6.4 Reference to other sections**

For disposal see section 13.

## **7. HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection. For precautions see section 2.2.

### **7.2 Conditions for safe storage, including any incompatibilities**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Flammables area.

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1 Control parameters**

Not Available

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

#### **Personal protective equipment**

##### **Eye/face protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### **Skin protection**

For any handling steps where the substance is in particulate form or in a suspension with pure water where the substance is not solubilized, the gloves must be comprised of material that successfully passes ASTM F-1671. For any handling steps where the substance is part of a carrier liquid, other than the aqueous suspension noted in the previous paragraph, gloves must be comprised of material that successfully passes ASTM F-739 (continuous liquid contact method). Gloves must be changed before they show degradation and before the designated breakthrough time for the carrier liquid (as determined by the ASTM F-739 testing or by the manufacturer). Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### **Body Protection**

impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory protection**

The EPA mandates the use of full face respirators with minimum N100 grade cartridges if there is any risk of exposure to the dust. For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Control of environmental exposure**

Do not let product enter drains.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1 Information on basic physical and chemical properties**

- a) Appearance: solid
- b) Odour: Odorless
- c) Odour Threshold:
- d) pH: no data available
- e) Melting point/freezing point: 800 °C
- f) Initial boiling point and boiling range: no data available
- g) Flash point: No information available
- h) Evaporation rate: no data available
- i) OSHA Flammability Class: no data available
- j) Upper/lower flammability or explosive limits: no data available
- k) Vapour pressure: no data available
- l) Vapour density (air = 1): no data available
- m) Relative density (water = 1): 2.71
- n) Water solubility: no data available
- o) Partition coefficient - noctanol/water: no data available
- p) Auto-ignition temperature: no data available
- q) Decomposition temperature: no data available
- r) Viscosity: no data available
- s) Explosive properties: no data available
- t) Molecular Weight: 100.93

### **9.2 Other safety information**

no data available

## **10. STABILITY AND REACTIVITY**

### **10.1 Reactivity**

None known, based on information available.

**10.2 Chemical stability**

Moisture/oxygen sensitive.

**10.3 Possibility of hazardous reactions**

None under normal processing.

**10.4 Conditions to avoid**

Avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Avoid inhalation of material or combustion by-products. Keep out of water supplies and sewers. Do not store at elevated temperatures.

**10.5 Incompatible materials**

Strong oxidizing agents, water, alcohol, acids, bases.

**10.6 Hazardous decomposition products**

Magnesium oxides, Nitrogen oxides, Releases ammonia gas when in contact with water.  
In the event of fire: see section 5

**11. TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects****Acute toxicity**

No information available

**Skin corrosion/irritation**

No information available

**Serious eye damage/eye irritation**

No information available

**Respiratory or skin sensitisation**

No information available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

Not listed

**Reproductive toxicity**

no data available

**Specific target organ toxicity - single exposure**

no data available

**Specific target organ toxicity - repeated exposure**

no data available

**Aspiration hazard**

Product may be an aspiration hazard

**Additional Information**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**12. ECOLOGICAL INFORMATION****12.1 Ecotoxicity**

No information available

**12.2 Persistence and degradability**

No information available

**12.3 Bioaccumulative potential**

No information available

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

Do not allow product to enter surface waters, wastewater or soil.

**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging****14. TRANSPORT INFORMATION****US DOT Information**

Shipping Name: Water-Reactive Solid, N.O.S.

Hazard Class: 4.3

UN/NA #: UN2813

Packing Group: I

**IMDG Information**

Shipping Name: Water-Reactive Solid, N.O.S.

Hazard Class: 4.3

UN/NA #: UN2813

Packing Group: I

**IATA Information**

Shipping Name: Water-Reactive Solid, N.O.S.

Hazard Class: 4.3

UN/NA #: UN2813

Packing Group: I

**15. REGULATORY INFORMATION****United States:**

Toxic Substance Control Act (TSCA): Listed

Superfund Amendments and Reauthorization Act (SARA 302): Not listed

Superfund Amendments and Reauthorization Act (SARA 311/312): Listed

Superfund Amendments and Reauthorization Act (SARA 313): Not listed

**European Union:**

European Inventory of Existing Chemical Substances (EINECS): No. 235-022-1

Hazard Codes: Not Available

Risk Statements: Not Available

Safety Statements: Not Available

**Canada**

Canadian Domestic Substances List (DSL): Not listed

Canadian Domestic Substances List (NDSL): Listed

## **16. OTHER INFORMATION**

### **Full text of H-Statements referred to under sections 2 and 3.**

H228 Highly flammable solid.

### **HMIS Rating**

Health hazard: 2

Flammability: 2

Physical Hazard 2

### **NFPA Rating**

Health hazard: 2

Fire Hazard: 0

Reactivity Hazard: 2

### **Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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 Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.