

# United Nuclear

Scientific Equipment & Supplies

## SAFETY DATA SHEET

Preparation Date: 02/26/2019

Revision date 02/26/2019

Revision Number: G1

### 1. IDENTIFICATION

#### Product identifier

**Product Name:** CALCIUM METAL, PIECES, PURIFIED

#### Other means of identification

**Synonyms:** No information available  
**CAS #:** 7440-70-2  
**RTECS #** EV8040000  
**CI#:** Not available

#### Recommended use of the chemical and restrictions on use

**Recommended use:** No information available.  
**Uses advised against** No information available

**Supplier:** United Nuclear Scientific  
125 N. 8th Street  
Klamath Falls, OR 97601  
(541) 205-6855

**Order Online At:** [www.unitednuclear.com](http://www.unitednuclear.com)  
**Emergency telephone number** Chemtrec 1-800-424-9300

### 2. HAZARDS IDENTIFICATION

#### Classification

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

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Substances or mixtures which, in contact with water, emit flammable gases	Category 2

#### Label elements

**Danger**

#### **Hazard statements**

Causes severe skin burns and eye damage  
In contact with water releases flammable gases



#### **Hazards not otherwise classified (HNOC)**

Not Applicable

#### **Other hazards**

Not available

#### **Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling

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

Handle under inert gas. Protect from moisture

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

#### **Precautionary Statements - Response**

*Immediately call a POISON CENTER or doctor/physician*

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish.

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

Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

#### **Precautionary Statements - Storage**

Store locked up

Store in a dry place. Store in a closed container

#### **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Component</b>	<b>CAS No</b>	<b>Weight-%</b>
Calcium	7440-70-2	100

### **4. FIRST AID MEASURES**

#### **First aid measures**

#### **General Advice:**

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

#### **Skin Contact:**

Wash off immediately with soap and plenty of water. Remove all contaminated clothes and shoes. Continue flushing with plenty of water for at least 15 minutes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.

**Eye Contact:** Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

**Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

**Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

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

**Symptoms** Causes severe skin burns and eye damage  
 May cause digestive (gastrointestinal) tract irritation  
 May cause irritation of respiratory tract  
 May cause coughing and shortness of breath  
 Headache  
 Nausea

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

**Notes to Physician:** Treat symptomatically.

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

**5. FIRE-FIGHTING MEASURES**

**Extinguishing Media**

**Suitable Extinguishing Media:** Soda Ash. Limestone powder. Dry powder.

**Unsuitable Extinguishing Media:** Water.

**Specific hazards arising from the chemical**

**Hazardous combustion products** Carbon monoxide. Carbon dioxide (CO2). Metallic oxides.

**Specific hazards** Produces flammable gases on contact with water.

**Special Protective Actions for Firefighters**

**Specific Methods:** Do not use water on material itself

**Special Protective Equipment for Firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions:** Ensure adequate ventilation. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

### Methods and material for containment and cleaning up

**Methods for containment** Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

**Methods for cleaning up** Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

**Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Technical Measures/Storage Conditions:**

Moisture sensitive. Protect from moisture. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

**Incompatible Materials:**

Moisture  
Acids  
Strong oxidizing agents  
Alcohols  
Ammonia  
Halogens

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### National occupational exposure limits

##### United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Calcium	7440-70-2	None	None	None	None

##### Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
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Calcium	7440-70-2	None	None	None	None
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### Australia and Mexico

Component	CAS No	Australia	Mexico
Calcium	7440-70-2	None	None

### Appropriate engineering controls

**Engineering measures to reduce exposure:** Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Individual protection measures, such as personal protective equipment

#### Personal Protective Equipment

- Eye protection:** Goggles
- Skin and body protection:** Long sleeved clothing  
Chemical resistant apron  
Gloves
- Respiratory protection:** Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Solid	<b>Appearance:</b> Metal.	<b>Color:</b> No information available.
<b>Odor:</b> No information available.	<b>Taste</b> No information available.	<b>Formula</b> Ca
<b>Molecular/Formula weight (g/mole):</b> 40.08	<b>Flammability (solid, gas)</b> no data available	<b>Flashpoint (°C/°F):</b> No information available
<b>Flash Point Tested according to:</b> Not available	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> 839-850°C/ 1542.2-1562°F	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> 1484°C/ 2703.2°F	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> No information available
<b>Specific gravity:</b> 1.54	<b>pH</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available

**Evaporation rate:**  
No information available

**Vapor density:**  
No information available

**VOC content (g/L):**  
No information available

**Odor threshold (ppm):**  
No information available

**Partition coefficient  
(n-octanol/water):**  
No information available

**Viscosity:**  
No information available

**Miscibility:**  
No information available

**Solubility:**  
Reacts with water  
Insoluble in Benzene

## 10. STABILITY AND REACTIVITY

### Reactivity

Reacts with water  
Produces flammable gases on contact with water

### Chemical stability

**Stability:** Moisture Sensitive. Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Exposure to moisture. Exposure to moist air. Incompatible materials.

**Incompatible Materials:** Moisture  
Acids  
Strong oxidizing agents  
Alcohols  
Ammonia  
Halogens

**Hazardous decomposition products:** Calcium oxides.

### Other Information

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Skin. Eyes. Inhalation. Ingestion.

### Acute Toxicity

### Component Information

Calcium	
CAS No	7440-70-2

**LD50/oral/rat =** No information available  
**LD50/oral/mouse =** No information available  
**LD50/dermal/rabbit =** No information available

LD50/dermal/rat = No information available  
 LC50/inhalation/rat = No information available  
 LC50/inhalation/mouse = No information available  
 Other LD50 or LC50 information = No information available

**Product Information**

LD50/oral/rat =  
 Value - Acute Tox = No information available

LD50/oral/mouse =  
 Value - Acute Tox Oral = No information available

LD50/dermal/rabbit  
 Value - Acute Tox = No information available

LD50/dermal/rat  
 VALUE - Acute Tox Dermal = No information available

LC50/inhalation/rat  
 VALUE-Vapor = No information available  
 VALUE-Gas = No information available  
 VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse  
 VALUE-Vapor = No information available  
 VALUE - Gas = No information available  
 VALUE - Dust/Mist = No information available

Symptoms

**Skin Contact:** Causes severe irritation and burns.  
**Eye Contact:** Causes severe irritation and burns.  
**Inhalation** May cause irritation of respiratory tract.  
**Ingestion** May be harmful if swallowed. May cause digestive (gastrointestinal) tract irritation.  
**Aspiration hazard** No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Chronic Toxicity** No information available.

**Sensitization:** No information available.

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Calcium	7440-70-2	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available  
**Developmental Effects:** No information available  
**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Target Organs:** No information available.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** No data available.

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available.

**Mobility in soil** No information available  
**Other adverse effects** No information available.

**13. DISPOSAL CONSIDERATIONS**

**Disposal Methods**

**Waste from residues / unused products:**  
Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**  
Empty containers should be taken for local recycling, recovery or waste disposal

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Calcium	7440-70-2	None	None	None	None

**14. TRANSPORT INFORMATION**

**DOT**

**UN-No:** UN1401  
**Proper Shipping Name:** Calcium  
**Hazard Class** 4.3  
**Subsidiary Class** No information available  
**Packing group:** II



**Emergency Response Guide 138****Number**

**Marine Pollutant** Severe Marine Pollutant  
**DOT RQ (lbs):** No information available  
**Special Provisions** IB7, IP2, IP21, T3, TP33, W31, W40  
**Symbol(s):** No information available  
**Description:** UN1401, Calcium, 4.3, II

**TDG (Canada)**

**UN-No:** UN1401  
**Proper Shipping Name:** Calcium  
**Hazard Class** 4.3  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Marine Pollutant** No Information available  
**Description:** UN1401, Calcium, 4.3, II

**ADR**

**UN Number** UN1401  
**Proper Shipping Name:** Calcium  
**Transport hazard class(es)** 4.3  
**Packing group** II  
**Subsidiary Risk:** No information available  
**Description:** UN1401, Calcium, 4.3, II

**IMDG**

**UN-No:** UN1401  
**Proper Shipping Name:** Calcium  
**Hazard Class:** 4.3  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Marine Pollutant** No information available  
**EMS:** F-G  
**Description** UN1401, Calcium, 4.3, II

**RID**

**UN Number** UN1401  
**Proper Shipping Name:** Calcium  
**Transport hazard class(es)** 4.3  
**Subsidiary Risk:** No information available  
**Packing group** II  
**Description:** UN1401, Calcium, 4.3, II

**ICAO (air)**

**UN-No:** UN1401  
**Proper Shipping Name:** Calcium  
**Hazard Class** 4.3  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Description:** UN1401, Calcium, 4.3, II

**IATA**

**UN Number** UN1401  
**Proper Shipping Name:** Calcium  
**Transport hazard class(es)** 4.3  
**Subsidiary Risk:** No information available  
**Packing group** II  
**Precautionary Statements -** 4W

**Response**  
**Special Provisions** No information available  
**Description:** UN1401, Calcium, 4.3, II

**15. REGULATORY INFORMATION**

**International Inventories**

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia AICS	EINECS-No.
Calcium	7440-70-2	PresentACTIVE	Present KE-04462	Present	Not present	Present	Present	Present 231-179-5

**U.S. Regulations**

*Calcium*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 0309  
**Pennsylvania RTK:** Present  
**California Directors List of Hazardous Substances:** Present

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

**Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Calcium	7440-70-2	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Calcium	7440-70-2	None	None	None	None	None

**U.S. TSCA**

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Calcium	7440-70-2	Not Applicable	Not Applicable

**Canada**

**WHMIS 2015 - GHS Classifications**

WHMIS 2015 Hazard Classification Information:

Component  
 Calcium  
 7440-70-2 ( 100 )

WHMIS 2015 Hazard Classification  
 Substances and mixtures which in contact with water emit flammable gases - Category 2: H261 In contact with water releases flammable gases.; Combustible Dust - Category 1: May

form combustible dust concentrations in air (factors such as combustibility and explosiveness of dusts including composition and shape and size of particles could cause substance to belong to 'Combustible dust' hazard class)

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

#### DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Calcium	7440-70-2	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Calcium	7440-70-2	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Calcium	7440-70-2	Not listed

#### EU Classification

##### EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Calcium	7440-70-2	Substances and mixtures which in contact with water emit flammable gases - Water-react. 2: H261 In contact with water releases flammable gases.020-001-00-X

##### EU - CLP (1272/2008)

#### R-phrase(s)

R15 - Contact with water liberates extremely flammable gases  
R34 - Causes burns

#### S -phrase(s)

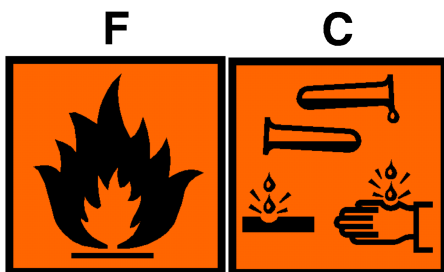
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)  
S43 - In case of fire, use dry chemical. Never use water  
S36 - Wear suitable protective clothing

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Calcium	7440-70-2	F; R15	No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

#### Indication of danger:

F - Highly flammable  
C - Corrosive



## 16. OTHER INFORMATION

**Preparation Date:** 02/26/2019  
**Revision date** 02/26/2019  
**Prepared by:** United Nuclear Scientific

**Disclaimer:** All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. United Nuclear Scientific assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, United Nuclear Scientific assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**