



Calcium hydride

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Version: 1.4

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1. Product Identifier

Product Form: Substance

Product Name: Calcium hydride

CAS No: 7789-78-8

Product Code: VOLO10058

Standard InChI: InChI=1S/Ca.2H

1.2. Intended Use of the Product

Use of the substance/mixture: For laboratory research purposes.

1.3. Name, Address, and Telephone of the Responsible Party

Manufacturer

Volochem, Inc.

2600 Hilltop Dr.

Bldg B #C211

Richmond, CA 94806

T 510.748.0159

www.volochem.com

1.4. Emergency Telephone Number

Emergency Number : 510-748-0159 (9a-5p M-F)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Substances, which in contact with water, emit flammable gases (Category 1)

2.2. Label Elements

GHS-US Labeling

Pictogram(s): GHS02



Signal word: Danger

Hazard statement(s)

H260 In contact with water releases flammable gas, which may ignite spontaneously.

Precautionary statement(s)

P223 Do not allow contact with water.

P231+P232 Handle and store contents under inert gas. Protect from moisture.

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

P302+P335+P334 IF ON SKIN: Brush off loose particles from skin and immerse in cool water.

P370+P378 In case of fire: Use dry sand, carbon dioxide, or powdered extinguishing agent to extinguish.

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

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

No additional information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Name	Synonym(s)	Product Identifiers
Calcium Hydride	None	VOLO10058 CAS No. 7789-78-8 EC No. 232-189-2 Index No. 001-004-00-5

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes.

First-aid Measures After Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting.

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

Symptoms/Injuries: Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

Symptoms/Injuries After Inhalation: Overexposure may be irritating to the respiratory system.

Symptoms/Injuries After Skin Contact: May cause skin irritation. Exposure may produce an allergic reaction.

Symptoms/Injuries After Eye Contact: May cause eye irritation. May cause serious damage to eyes. Redness.

Symptoms/Injuries After Ingestion: May be harmful if swallowed.

Chronic Symptoms: The chronic effects of this substance are unknown.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container or label at hand.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing Media

Sand, carbon dioxide, or powdered extinguishing agent. Do NOT use water or hydrous agents.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products: Hydrogen, calcium oxide

Fire Hazard: Product is flammable. Contact with water release hydrogen.

Explosion Hazard: Contact with water releases hydrogen, which can form an explosive atmosphere.

5.3. Advice for Firefighters

Firefighting Instructions: Exercise caution when fighting any chemical fire.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Wear self contained breathing apparatus for fire fighting if necessary.

5.4. NFPA Rating

Health hazard: 0

Fire: 4

Reactivity Hazard: 2

Special Hazard: W

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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid.

Methods for Cleaning Up: Collect spillage. Avoid generation of dust during clean-up of spills. Clear up spills immediately and dispose of waste safely.

6.4. Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking.

7.2. Conditions for Safe Storage

Keep container tightly closed in a dry and well-ventilated place.

Never allow product to get in contact with water during storage.

Keep in a dry place.

7.3. Specific End Use(s) For laboratory research purposes

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

Contains no substances with established occupational exposure limit values.

8.2. Exposure Controls

Appropriate Engineering Controls:

Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Avoid high dust concentration. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment:

Gloves. Protective goggles. Insufficient ventilation: wear respiratory protection.



Hand Protection:

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.

Eye 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).

Respiratory Protection:

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

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Skin and body protection: (EU).
Flame retardant protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State:	Solid
Appearance:	No data available
Odor:	Odorless
Odor Threshold:	No data available
pH:	No data available
Relative Evaporation Rate (butylacetate=1):	No data available
Melting Point:	Melting point/range: 190 °C (374 °F) - lit.
Boiling Point:	600 °C (1,112 °F) at 1,013 hPa (760 mmHg)
Flash Point:	No data available
Ignition temperature:	> 300 °C (> 572 °F)
Auto-ignition Temperature:	No data available
Decomposition Temperature:	No data available
Flammability (solid, gas):	No data available
Vapor Pressure:	No data available
Relative Vapor Density at 20 °C:	No data available
Relative Density:	1.900 g/cm ³
Specific Gravity:	No data available
Solubility:	No data available
Log Pow:	No data available
Log Kow:	No data available
Viscosity, Kinematic:	No data available
Viscosity, Dynamic:	No data available
Explosive Properties:	No data available
Oxidizing Properties:	No data available
Explosive Limits:	No data available
Bulk Density	No data available

9.2. Other Information

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity	No data available
10.2. Chemical Stability	Stable under recommended storage conditions
10.3. Possibility of Hazardous Reactions	Reacts violently with water.
10.4. Conditions to Avoid	Exposure to moisture.
10.5. Incompatible Materials	Alcohols, oxidizing agents, acids
10.6. Hazardous Decomposition Products	Hazardous decomposition products formed under fire conditions. - Calcium oxide

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SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity:	Oral LD50 No data available	
	Inhalation LC50 no data available	
	Dermal LD50 No data available	
	Other information on acute toxicity no data available	
Skin Corrosion/Irritation:		No data available
Serious Eye Damage/Irritation:		No data available
Respiratory or Skin Sensitization:		No data available
Germ Cell Mutagenicity:		No data available
Carcinogenicity:		Not classified
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:		No data available
Signs and symptoms of exposure:		Cough, Shortness of breath, Headache, Nausea, Vomiting

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

No data available

12.2. Persistence and Degradability

No data available.

12.3. Bio accumulative Potential

No data available

12.4. Mobility in Soil

No data available

12.5. Other Adverse Effects

No data available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Contact a licensed professional waste disposal service to dispose of this material. Dispose of waste material in accordance with all local, regional, national, and international regulations

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SECTION 14: TRANSPORT INFORMATION

In Accordance With ICAO/IATA/IMDG/DOT

14.1.	UN Number	1404
14.2.	UN Proper Shipping Name	Calcium hydride
14.3.	Transport hazard class(es)	4.3
14.4.	Packing group	I
14.5.1.	Marine Pollutant	No
14.5.2.	Reportable Quantity	No
14.6.1.	Toxic Inhalation Hazard	No
14.6.2.	Mode specific comments	See below
14.6.3.	Ground transportation - DOT (US)	No comments
14.6.4.	Marine transportation - IMDG	EMS-No: F-G, S-O
14.6.5.	Air transportation - IATA/ICAO	CARGO AIRCRAFT ONLY

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

EPA TSCA Inventory

Listed

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Components

Reactivity Hazard

15.2. US State Regulations

California Proposition 65 List 2014

Not listed

Maine Chemicals of High Concern List 2012

Not listed

Massachusetts Right to Know Hazardous Substance List 2014

Not listed

New Jersey Right to Know Hazardous Substance List 2010

Listed

Pennsylvania Right to Know Hazardous Substance List 2010

Not listed

SECTION 16: OTHER INFORMATION

16.1. Other Classifications

HMIS

Health hazard:	0
Chronic Health Hazard	*
Flammability:	4
Physical hazard:	2

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Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Volochem chemicals are for research purposes only and are NOT intended for use as drugs, food additives, household goods, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.

SDS US (GHS HazCom) - US Only