



LTS Research Laboratories, Inc.
Safety Data Sheet
Calcium Hydride

1. Product and Company Identification

Trade Name: Calcium Hydride
Chemical Formula: CaH₂
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 37 Ramland Road
City: Orangeburg
State: New York
Zip Code: 10962
Country: USA
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Danger



Hazard Statements: H260: In contact with water releases flammable gases which may ignite spontaneously
H315: Causes skin irritation
H319: Causes serious eye irritation

Precautionary Statements: 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
P264: Wash face, hands and any exposed skin thoroughly after handling
P280: Wear protective gloves/protective clothing/eye protection/face protection
P302+P352: IF ON SKIN: Wash with soap and water
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
P335+P334: Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages
P337+P313: If eye irritation persists get medical advice/attention
P362: Take off contaminated clothing and wash before reuse
P370 + P378: In case of fire: Use CO₂, dry chemical, or foam for extinction
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

EUH014: Reacts violently with water

HMIS Health Ratings (0-4):

Health:	2
Flammability:	3
Physical:	2

3. Composition

Chemical Family:	Ceramic
Additional Names:	Calcium dihydride

Calcium hydride (CaH ₂):	
Percentage:	100 wt%
CAS #:	7789-78-8
EC #:	232-189-2

4. First Aid Procedures

General Treatment:	Seek medical attention if symptoms persist. Move out of dangerous area.
Special Treatment:	None
Important Symptoms:	None
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult.
Ingestion:	Give one to two glasses of water. Never induce vomiting or give anything by mouth to an unconscious person. Seek medical attention if symptoms persist
Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing. Seek medical attention if symptoms persist
Eyes:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. Remove contact lenses if present and easy to do. Continue rinsing

5. Firefighting Measures

Flammability:	Flammable
Extinguishing Media:	Dry chemical, soda ash, lime, sand, foam, CO ₂
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.

6. Accidental Release Measures

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.

7. Handling and Storage

Handling Conditions:	Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container under an inert atmosphere . 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.

8. Exposure Controls and Personal Protection

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

9. Physical and Chemical Characteristics

Color	light grey
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Reacts with water
Boiling Point:	N/A
Melting Point:	816 °C
Flash Point:	N/A
Autoignition Temperature:	300 °C
Density:	1.900 g/cc
Molecular weight:	42.094 g/mol

10. Reactivity

Stability:	Water reactive. Air sensitive.
Reacts With:	Acids, Water, Strong acids, Alcohols, Halogens, Acid anhydrides, Reducing Agent, Ammonia
Incompatible Conditions:	Avoid dust formation. Keep away from open flames, hot surfaces and sources of ignition. Protect from water. Excess heat. Incompatible products. Exposure to moist air or water.
Hazardous Decomposition Products:	Calcium oxide

11. Toxicological Information

Potential Health Effects:

Eyes:	Cause serious irritation
Skin:	Cause irritation
Ingestion:	May cause irritation
Inhalation:	May cause irritation
Chronic:	N/A

Signs & Symptoms: N/A

Aggravated Medical Conditions: N/A

Median Lethal Dose: >2000 mg/kg (Rat)

Carcinogen: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

12. Ecological Information

Aquatic Toxicity: N/A

Persistent Bioaccumulation Toxicity: N/A

Very Persistent, Very Bioaccumulative: N/A

Notes: N/A

13. Disposal Considerations

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

14. Transportation Data

Hazardous: Hazardous for transportation



Hazard Class: 4.3 Dangerous when wet materials

Packing Group: I

UN Number: UN1404

Proper Shipping Name: Calcium hydride

15. Regulatory Information

Sec 302 Extremely Hazardous: No

Sec 304 Reportable Quantities: No

Sec 313 Toxic Chemicals: No

16. Other Information

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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