



Material Safety Data Sheet

Calcium hydride

MSDS# 03970

Section 1 - Chemical Product and Company Identification

MSDS Name: Calcium hydride

Catalog Numbers: AC196790000, AC196790050, AC196791000, AC196795000, AC199900000, AC199901000, AC199905000, AC199960000, AC199961000, AC199965000, AC403840000, AC403840000, AC403841000, C94-100

Synonyms: Calcium dihydride.

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 7789-78-8

Chemical Name: Calcium hydride

%: 93+

EINECS#: 232-189-2

Hazard Symbols: F



Risk Phrases: 15

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Flammable solid. Water-reactive. Causes burns by all exposure routes. May ignite on contact with water or moist air. Contact with water liberates extremely flammable gases. Target Organs: Respiratory system, gastrointestinal system, eyes, skin.

Potential Health Effects

Eye: Causes eye burns. Causes redness and pain.

Skin: Causes skin burns. Causes redness and pain. May be harmful if absorbed through the skin.

Ingestion: Causes gastrointestinal tract burns. May be harmful if swallowed.

Inhalation: Causes chemical burns to the respiratory tract. May be harmful if inhaled.

Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. Get medical aid immediately. Call a poison control center. Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is

Inhalation: difficult, give oxygen. 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.

Notes to
Physician:

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Will burn if involved in a fire. Water reactive. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion. Flammable solid. May ignite on contact with water or moist air. Contact with water liberates highly flammable gases.

Extinguishing Media: DO NOT USE WATER! Contact professional fire-fighters immediately. Use sand, sodium chloride, sodium carbonate, or dry chemical.

Autoignition Temperature: 300 deg C (572.00 deg F)

Flash Point: Not available

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: ; Special Hazard: -W-

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Avoid generating dusty conditions. Remove all sources of ignition. Use a spark-proof tool. Do not expose spill to water. Do not get water inside containers. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Do not allow water to get into the container because of violent reaction. Minimize dust generation and accumulation. Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Keep away from heat, sparks and flame. Do not ingest or inhale. Do not allow contact with water. Use only in a chemical fume hood.

Storage: Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Keep under a nitrogen blanket. Water free area.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Calcium hydride	none listed	none listed	none listed

OSHA Vacated PELs: Calcium hydride: None listed

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Color: grey

Odor: odorless

pH: Not available

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: 675 deg C (1,247.00°F)

Decomposition Temperature:

Solubility in water: Reacts

Specific Gravity/Density: 1.900

Molecular Formula: CaH₂

Molecular Weight: 42.09

Section 10 - Stability and Reactivity

Chemical Stability:	Moisture sensitive. Reacts with water. Water contact produces hydrogen gas.
Conditions to Avoid:	Incompatible materials, ignition sources, dust generation, excess heat, exposure to moist air or water.
Incompatibilities with Other Materials	Water, reducing agents, acids, alcohols, bromates, carbonyl compounds, chlorates, halogens, perchlorates, silver fluoride, acid anhydrides.
Hazardous Decomposition Products	Calcium oxide, hydrogen gas.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 7789-78-8: None listed
LD50/LC50:	RTECS: Not available.
Carcinogenicity:	Calcium hydride - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	The toxicological properties have not been fully investigated.

Section 12 - Ecological Information

Other:	Do not empty into drains.
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Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: CALCIUM HYDRIDE

Hazard Class: 4.3

UN Number: UN1404

Packing Group: I

Canada TDG

Shipping Name: CALCIUM HYDRIDE

Hazard Class: 4.3

UN Number: UN1404

Packing Group: I

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: F

Risk Phrases:

R 15 Contact with water liberates extremely flammable gases.

Safety Phrases:

S 7/8 Keep container tightly closed and dry.

S 24/25 Avoid contact with skin and eyes.

S 43A In case of fire, use dry chemical (never use water).

WGK (Water Danger/Protection)

CAS# 7789-78-8: 1

Canada

CAS# 7789-78-8 is listed on Canada's DSL List

Canadian WHMIS Classifications: B4, B6, E, F

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7789-78-8 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 7789-78-8 is listed on the TSCA
Inventory.

Section 16 - Other Information

MSDS Creation Date: 2/04/1999

Revision #11 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
