

MSDS for Calcium Carbide

Material Safety Data Sheet
Calcium Carbide

Section 1 - Chemical Product and Company Identification

MSDS Name: Calcium Carbide
Catalog Numbers: C/1000/53
Synonyms: Acetylenogen; calcium acetylide; calcium dicarbide
Factory Address: Lao Shidan Project Area of Hainan Industrial Park,Hainan District,Wuhai City,Inner Mongolia Autonomous Region, China
Tel & Fax: 022-28546072 ext.800,022-28546075

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
75-20-7	Calcium Carbide	>90	200-848-3

Hazard Symbols: F



Risk Phrases: 15

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Contact with water liberates extremely flammable gases.Corrosive.Water-reactive.

Potential Health Effects

Eye: Causes severe eye burns. May cause blindness. May cause opacity and scarring.
Skin: Contact with skin causes irritation and possible burns, especially if

the skin is wet or moist.

Ingestion: Causes gastrointestinal tract burns.

Inhalation: May cause severe irritation of the upper respiratory tract with pain, burns, and inflammation. Can produce delayed pulmonary edema.

Chronic: Repeated inhalation may cause chronic bronchitis.

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. Destroy contaminated shoes.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to
Physician:**

Section 5 - Fire Fighting Measures

General Information: Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Contact with moisture or water may generate sufficient heat to ignite nearby combustible materials. Contact with moisture to form flammable acetylene gas. Contact with acid or acid fumes evolves heat and flammable vapors.

Extinguishing Media: Do NOT use carbon dioxide. Do NOT use halogenated agents. Use approved class D extinguishing agents or smother with dry sand, clay, or sodium bicarbonate. DO NOT USE WATER! Use dry chemical.

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. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Remove all sources of ignition. Use a spark-proof tool. Do not expose spill to water.

Section 7 - Handling and Storage

- Handling:** Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Ground and bond containers when transferring material. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale.
- Storage:** Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from water. Keep containers tightly closed. Store in metal containers.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits

CAS# 75-20-7:

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 gloves to prevent skin exposure.
- Clothing:** Wear appropriate protective clothing to prevent skin exposure.
- Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Color: black-gray

Odor: garlic-like odor

pH: Not available

Vapor Pressure: Not applicable.

Viscosity: Not available

Boiling Point: Not applicable.

Freezing/Melting Point: 2300 °C (4,172°F)

Autoignition Temperature: Not applicable

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

Decomposition Temperature: Not available

Solubility in water: Reacts with water.

Specific Gravity/Density: 2.22

Molecular Formula: CaC₂

Molecular Weight: 64.08

Section 10 - Stability and Reactivity

- Chemical Stability:** Stable under normal temperatures and pressures. Reacts vigorously with water to form highly flammable acetylene gas, which may ignite spontaneously. Lime may also be formed raising the pH of the solution and causing a white precipitate.
- Conditions to Avoid:** Contact with water.
- Incompatibilities with Other Materials** Water, strong oxidizing agents, acids, brass, copper, magnesium, sodium peroxide, sulfur, silver nitrate,



Hazardous

Decomposition

Products

Hazardous

Polymerization

methanol, hydrochloric acid, stannous chloride, tin chloride, selenium, iron chlorides.

Carbon monoxide, carbon dioxide, calcium oxide.

Has not been reported.

Section 11 - Toxicological Information

RTECS#:

LD50/LC50:

Carcinogenicity:

Other:

CAS# 75-20-7: None listed

RTECS: Not available.

Calcium Carbide - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

The toxicological properties have not been fully investigated.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Products considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local authority or advice. Empty containers must be decontaminated before returning for recycling.

Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	CALCIUM CARBIDE	CALCIUM CARBIDE	CALCIUM CARBIDE
Hazard Class:	4.3	4.3	4.3



UN Number:	1402	1402	1402
Packing Group:	II	II	II

USA RQ: CAS# 75-20-7: 10 lb final RQ; 4.54 kg final RQ

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 8 Keep container dry.

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

WGK (Water Danger/Protection)

CAS# 75-20-7: 1

Canada

CAS# 75-20-7 is listed on Canada's DSL List

US Federal

TSCA

CAS# 75-20-7 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 12/12/1997

Revision #7 Date 12/12/2023

Period of validity 12/12/2025