

Material Safety Data Sheet

Calcium Carbide

ACC# 03870

Section 1 - Chemical Product and Company Identification

MSDS Name: Calcium Carbide

Catalog Numbers: S75066, S79941, S79941MF, S93159, S93160, C57 500, C57-500, C57500, S79941MF*

Synonyms: Acetylenogen; calcium acetylide; calcium dicarbide

Company Identification:

Fisher Scientific

1 Reagent Lane

Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
75-20-7	Calcium Carbide	>90	200-848-3

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: black-gray solid.

Danger! Corrosive. Causes digestive and respiratory tract burns. Water-reactive. Contact with skin causes irritation and possible burns, especially if the skin is wet or moist. May cause severe eye and skin irritation with possible burns. Eye contact may result in permanent eye damage.

Target Organs: Eyes, skin.

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. When in contact with moist skin, caustic lime is formed, which can lead to ulceration and scarring.

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: Treat symptomatically and supportively.

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.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 3; Instability: 2; 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. 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

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

OSHA Vacated PELs: Calcium Carbide: No OSHA Vacated PELs are listed for this chemical.

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

Appearance: black-gray

Odor: garlic-like odor

pH: Not available.

Vapor Pressure: Not applicable.

Vapor Density: Not applicable.

Evaporation Rate: Not applicable.

Viscosity: Not available.

Boiling Point: Not applicable.

Freezing/Melting Point: 4172 deg F

Decomposition Temperature: Not available.

Solubility: 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: Incompatible materials, contact with water, acids, exposure to moist air or water, oxidizers.

Incompatibilities with Other Materials: Incompatible with water, hydrogen chloride, lead fluoride, magnesium, selenium, silver nitrate, sulfur, silver nitrate, sodium peroxide, stannous chloride, potassium hydroxide and chlorine.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, calcium oxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 75-20-7 unlisted.

LD50/LC50:

Not available.

Carcinogenicity:

CAS# 75-20-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: No information found

Reproductive Effects: No information found

Mutagenicity: No information found

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	CALCIUM CARBIDE	CALCIUM CARBIDE
Hazard Class:	4.3	4.3
UN Number:	UN1402	UN1402
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA

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

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

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

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 75-20-7: immediate, fire, reactive.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

CAS# 75-20-7 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 75-20-7 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

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 - DSL/NDSL

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

Canada - WHMIS

This product has a WHMIS classification of B6, E.

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.

Canadian Ingredient Disclosure List

CAS# 75-20-7 is not listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 12/12/1997

Revision #4 Date: 10/03/2005

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 Fisher 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 Fisher has been advised of the possibility of such damages.