

FLINN SCIENTIFIC, INC.

Material Safety Data Sheet (MSDS)

MSDS #: 194.00

Revision Date: April 28, 2011

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Calcium Carbide

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Calcium carbide

Synonym: calcium acetylide

CAS#: 75-20-7

SECTION 3 — HAZARDS IDENTIFICATION

Rocklike, grayish-black solid. Odor of acetylene always present. Garlic like odor.

Corrosive. Avoid all body tissue contact.

Exposure to water or moisture evolves flammable acetylene.

FLINN AT-A-GLANCE

Health-1

Flammability-3

Reactivity-3

Exposure-1

Storage-2

0 is low hazard, 3 is high hazard

SECTION 4 — FIRST AID MEASURES

Call a physician and seek medical attention for further treatment, observation, and support after first aid.

Inhalation: Remove to fresh air at once. If breathing has stopped, give artificial respiration immediately.

Eye or External: Immediately flush with fresh water for at least 15 minutes.

Internal: Do NOT induce vomiting. Rinse mouth. Call a physician or poison control at once.

SECTION 5 — FIRE FIGHTING MEASURES

Flammable solid. Exposure to water or moisture evolves flammable acetylene. 500 g of calcium carbide will yield approximately 150L of flammable acetylene.

Fire Fighting Instructions: Use Class D, Met-L-X, or dry sand as a fire extinguisher. Do NOT use CO₂, halogenated extinguishing agent, or water: violent reaction with water. Firefighters should wear PPE and SCBA with full facepiece operating in positive mode.

NFPA CODE

H-3

F-3

R-2

No Water

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from the area. Remove all ignition sources and water. Do NOT use water, sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #5. Store with sulfides, phosphides, carbides, and nitrides.

Store in a cool, dry place. Store in a Flinn Chem-Saf bag and then inside a Flinn Saf-Stor can. Use and dispense in a hood.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use exhaust ventilation to keep airborne concentrations low.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Rocklike, grayish-black; odor of acetylene always present.
Garlic like odor.
Solubility: Reacts with water. Decomposes in water.
Forms calcium hydroxide and acetylene with much heat.
Formula: CaC₂

Formula weight: 64.10
Specific gravity: 2.22

SECTION 10 — STABILITY AND REACTIVITY

Decomposes in water to form acetylene and calcium hydroxide. Store in a metal can or a flammables cabinet. Avoid contact with water, acids, halogens, silver nitrate, copper compounds, and heavy metals.
Shelf life: Good, if stored under dry conditions.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Corrosive.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD₅₀: N.A.
IHL-RAT LC₅₀: N.A.
SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply, before proceeding.
Flinn Suggested Disposal Method #25 is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Calcium Carbide
Hazard class: 4.3, Dangerous when wet
UN number: UN1402
N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-848-3), RCRA code D001, D003.

SECTION 16 — OTHER INFORMATION

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**Consult your copy of the *Flinn Science Catalog/Reference Manual*
for additional information about laboratory chemicals.**