

FLINN SCIENTIFIC, INC.

Material Safety Data Sheet (MSDS)

MSDS #: 194.10

Revision Date: October 12, 2011

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Bangsite 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 (75-20-7) 65-85% & Calcium oxide (1305-78-8) 10-30%.

Synonym: Carbide; Acetylenogen; Calcium dicarbide; Foundry carbide; Desulfurization carbide; Gas grade carbide

CAS#: None established

SECTION 3 — HAZARDS IDENTIFICATION

Grayish-black solid powder. Garlic-like odor when exposed to air.

Corrosive solid. Avoid all body tissue contact. Exposure to water or moisture evolves flammable acetylene and heat.

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: Rinse mouth. Give large quantities of water for dilution. Call a physician or poison control at once.

SECTION 5 — FIRE FIGHTING MEASURES

Flammable solid. Exposure to water or moisture evolves flammable acetylene and heat. 500 g of calcium carbide will yield approx. 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-2

F-4

R-3

No Water

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area. Remove all ignition sources and water. Sweep up, place in bag or container but do not seal tightly to prevent pressure buildup. Store under cover away from personnel and buildings until disposed of properly. 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.

Exposure guidelines: PEL 5 mg/m³ (as calcium oxide) (OSHA)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Grayish-black solid; odor of acetylene always present.
Garlic-like odor when exposed to air.
Solubility: Reacts with water to form calcium hydroxide and acetylene with much heat.

Melting point range: 1700-2300 °C
Specific gravity: 2.2

SECTION 10 — STABILITY AND REACTIVITY

Dangerous when wet or upon exposure to moisture. Decomposes in water to form acetylene and calcium hydroxide. 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: Irritating to skin, eyes, and respiratory tract. Acetylene is a simple asphyxiant.
Chronic effects: N.A.
Target organs: Eyes, mucous membranes

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.**