

Calcium Carbide

SECTION 1. IDENTIFICATION

Product Identifier	Calcium Carbide
Other Means of Identification	Calcium acetylide, Calcium dicarbide
Product Code(s)	CA1910
Product Family	Inorganic Solid
Recommended Use	Laboratory and industrial use.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	CANUTEC CANADA, 613-996-6666, 24 Hours
SDS No.	1443

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

In contact with water, emits flammable gases - Category 1; Skin irritation - Category 2; Serious eye damage - Category 1; Specific target organ toxicity (single exposure) - Category 3

Label Elements



Signal Word:

Danger

In contact with water releases flammable gases which may ignite spontaneously.

Causes skin irritation.

Causes serious eye damage.

May cause respiratory irritation.

Precautionary Statement(s):

Prevention:

Do not allow contact with water.

Handle and store contents under inert gas. Protect from moisture.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

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Call a POISON CENTRE or doctor if you feel unwell.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Calcium carbide	75-20-7	> 90	Calcium acetylide, Calcium dicarbide	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor.

Skin Contact

Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. Immediately call a Poison Centre or doctor.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Contact physician immediately.

Ingestion

Do not induce vomiting. Immediately call a Poison Centre or doctor.

First-aid Comments

Do not leave the victim unattended. Provide general supportive measures (comfort, warmth, rest).

Most Important Symptoms and Effects, Acute and Delayed

None known.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice, consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire. Class D fire-extinguishing material only. Do not use water. Smother with dry sand, dry clay, or dry ground limestone. Do not use carbon dioxide or halogenated extinguishing agents.

Unsuitable Extinguishing Media

Water.

Specific Hazards Arising from the Product

Does not burn. Releases a flammable gas on contact with water or water vapour.

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In a fire, the following hazardous materials may be generated: Acetylene gas.

Special Protective Equipment and Precautions for Fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Remove or isolate incompatible materials as well as other hazardous materials.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Avoid generating dust. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Avoid breathing in this product. Only use where there is adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent accidental contact with incompatible chemicals.

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity). Store in a closed container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Calcium carbide	Not established		Not established			

NOTE: In many jurisdictions, exposure limits are similar to the ACGIH TLVs. Since a TLV has not been established for this substance, appropriate government agencies in each jurisdiction should be consulted to determine which regulations apply

Appropriate Engineering Controls

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored. Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.
Suitable materials are: nitrile rubber.

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or

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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

Basic Physical and Chemical Properties

Appearance	Grey - black lumps.
Odour	Garlic
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	~ 2300 °C (4172 °F) (melting); ~ 2300 °C (4172 °F) (freezing)
Initial Boiling Point/Range	Not applicable
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Will not burn.
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	2.22
Solubility	Not available in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)
Other Information	
Physical State	Solid
Molecular Formula	C ₂ -Ca
Molecular Weight	64.10

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Releases a flammable gas on contact with water or water vapour.

Chemical Stability

Normally stable. Unstable under certain conditions - see Conditions to Avoid.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources. Water, moisture or humidity.

Incompatible Materials

Water, strong oxidizing agents (e.g. perchloric acid), metals (e.g. aluminum).

Hazardous Decomposition Products

Acetylene gas; calcium hydroxide; very toxic carbon monoxide, carbon dioxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Calcium carbide		Not available	Not available

Skin Corrosion/Irritation

Causes skin irritation.

Serious Eye Damage/Irritation

Causes eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May be harmful. Causes nose and throat irritation.

Ingestion

May be harmful based on limited evidence.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Calcium carbide	Not Listed	Not designated	Not Listed	Not Listed

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations.

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SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	UN1402	CALCIUM CARBIDE	4.3	I
Canadian TDG	UN1402	CALCIUM CARBIDE	4.3	I

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 3** **Flammability - 3** **Instability - 2**

SDS Prepared By Alphachem Limited

Phone No. (905)-821-2995

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References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

Disclaimer This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.

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