

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 02.11.2015

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## Calcium Carbide

### SECTION 1 : Identification of the substance/mixture and of the supplier

**Product name :** Calcium Carbide

**Manufacturer/Supplier Trade name:**

**Manufacturer/Supplier Article number:** S25219

**Recommended uses of the product and uses restrictions on use:**

**Manufacturer Details:**

AquaPhoenix Scientific  
9 Barnhart Drive, Hanover, PA 17331

**Supplier Details:**

Fisher Science Education  
15 Jet View Drive, Rochester, NY 14624

**Emergency telephone number:**

Fisher Science Education Emergency Telephone No.: 800-535-5053

### SECTION 2 : Hazards identification

**Classification of the substance or mixture:**



**Flammable**

Flammable gases, category 1



**Irritant**

Skin irritation, category 2

Specific target organ toxicity following single exposure, category 3



**Corrosive**

Serious eye damage, category 1

Skin. Irrit 2

Eye. Damage 1

STOT SE. 3

Aq. AcTox 2

Flamm. Solid 1 (emits Flamm. Gas)

**Signal word :**Danger

**Hazard statements:**

In contact with water releases flammable gases which may ignite spontaneously

Causes skin irritation

Causes serious eye damage

May cause respiratory irritation

Toxic to aquatic life

**Precautionary statements:**

If medical advice is needed, have product container or label at hand

Keep out of reach of children

Read label before use

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Keep away from any possible contact with water, because of violent reaction and possible flash fire  
Handle under inert gas. Protect from moisture  
Avoid breathing dust/fume/gas/mist/vapours/spray  
Wash skin thoroughly after handling  
Use only outdoors or in a well-ventilated area  
Avoid release to the environment  
Wear protective gloves/protective clothing/eye protection/face protection  
IF ON SKIN: Wash with soap and water  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.  
Continue rinsing  
Immediately call a POISON CENTER or doctor/physician  
Specific treatment (see supplemental first aid instructions on this label)  
If skin irritation occurs: Get medical advice/attention  
Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages  
Take off contaminated clothing and wash before reuse  
In case of fire: Use agents recommended in section 5 for extinction  
Store in a dry place. Store in a closed container  
Store in a well ventilated place. Keep container tightly closed  
Store locked up  
Dispose of contents and container as instructed in Section 13

### Other Non-GHS Classification:

WHMIS



NFPA/HMIS



NFPA SCALE (0-4)

Health	2
Flammability	3
Physical Hazard	1
Personal Protection	X

HMIS RATINGS (0-4)

### SECTION 3 : Composition/information on ingredients

#### Ingredients:

CAS 75-20-7	Calcium carbide	>90 %
Percentages are by weight		

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#### SECTION 4 : First aid measures

##### Description of first aid measures

**After inhalation:** Seek medical attention. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Loosen clothing and place exposed in a comfortable position.

**After skin contact:** Wash hands and exposed skin with soap and plenty of water. Seek medical attention if irritation persists or if concerned.

**After eye contact:** Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing. Seek medical attention if irritation persists or concerned.

**After swallowing:** Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Dilute with water or milk. Seek medical attention.

##### Most important symptoms and effects, both acute and delayed:

Irritation. Shortness of breath. Headache. Nausea. Dizziness.; Inhalation - May cause respiratory irritation.

##### Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

#### SECTION 5 : Firefighting measures

##### Extinguishing media

**Suitable extinguishing agents:** Dry powder

**For safety reasons unsuitable extinguishing agents:**

##### Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors. Reacts violently with water. Contact with moisture to form flammable acetylene gas,. Contact with acid or acid fumes evolves heat and flammable vapors.

##### Advice for firefighters:

**Protective equipment:** Wear protective eyewear, gloves, and clothing. Refer to Section 8.

**Additional information (precautions):** Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

#### SECTION 6 : Accidental release measures

##### Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

##### Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

##### Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Refer to Section 8. Always obey local regulations. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable closed containers for disposal.

##### Reference to other sections:

#### SECTION 7 : Handling and storage

##### Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances.

##### Conditions for safe storage, including any incompatibilities:

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Store in a cool location.Keep away from food and beverages.Protect from freezing and physical damage.Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials.

#### SECTION 8 : Exposure controls/personal protection



**Control Parameters:**

No applicable occupational exposure limits

**Appropriate Engineering controls:**

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

**Respiratory protection:**

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.When necessary use NIOSH approved breathing equipment.

**Protection of skin:**

Select glove material impermeable and resistant to the substance.Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves.Wear protective clothing.

**Eye protection:**

Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).Face shield and safety glasses are appropriate eye protection.

**General hygienic measures:**

Perform routine housekeeping.Wash hands before breaks and immediately after handling the product.Avoid contact with skin, eyes, and clothing.Before reworking wash contaminated clothing.

#### SECTION 9 : Physical and chemical properties

<b>Appearance (physical state,color):</b>	Fragments, black-gray solid	<b>Explosion limit lower:</b> <b>Explosion limit upper:</b>	
<b>Odor:</b>	Garlic-like	<b>Vapor pressure:</b>	
<b>Odor threshold:</b>		<b>Vapor density:</b>	
<b>pH-value:</b>	12.48 at 20 g/l	<b>Relative density:</b>	2.22 g/cm <sup>3</sup> at 25 °C
<b>Melting/Freezing point:</b>	2,300 °C	<b>Solubilities:</b>	
<b>Boiling point/Boiling range:</b>		<b>Partition coefficient (n-octanol/water):</b>	
<b>Flash point (closed cup):</b>		<b>Auto/Self-ignition temperature:</b>	390 °C

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Evaporation rate:		Decomposition temperature:	
Flammability (solid,gaseous):	The product is not flammable. - Flammability (solids)	Viscosity:	a. Kinematic: b. Dynamic:
Density:			

#### SECTION 10 : Stability and reactivity

**Reactivity:** Reacts vigorously with water to form highly flammable acetylene gas, which may ignite spontaneously.

**Chemical stability:** Stable under normal temperatures and pressures.

**Possible hazardous reactions:** Lime may also be formed raising the pH of the solution and causing a white precipitate. Reacts violently with water.

**Conditions to avoid:** Exposure to moisture. Incompatible materials.

**Incompatible materials:** Strong oxidizing agents, Reacts violently with water.

**Hazardous decomposition products:** Calcium oxide

#### SECTION 11 : Toxicological information

<b>Acute Toxicity:</b> No additional information.	
<b>Chronic Toxicity:</b> No additional information.	
<b>Corrosion Irritation:</b> No additional information.	
<b>Sensitization:</b>	No additional information.
<b>Single Target Organ (STOT):</b>	Inhalation - May cause respiratory irritation.
<b>Numerical Measures:</b>	No additional information.
<b>Carcinogenicity:</b>	No additional information.
<b>Mutagenicity:</b>	No additional information.
<b>Reproductive Toxicity:</b>	No additional information.

#### SECTION 12 : Ecological information

##### Ecotoxicity

**75-20-7:** static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 50 mg/l - 96 h

**75-20-7:** static test EC50 - Daphnia magna (Water flea) - 4.62 mg/l - 48 h

**75-20-7:** static test EC50 - Desmodesmus subspicatus (Scenedesmus subspicatus) - 46 mg/l - 72 h

**Persistence and degradability:**

**Bioaccumulative potential:**

**Mobility in soil:**

**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

#### SECTION 13 : Disposal considerations

**Waste disposal recommendations:**

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Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed together with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

#### SECTION 14 : Transport information

##### UN-Number

1402

##### UN proper shipping name

Calcium carbide

##### Transport hazard class(es)



##### Class:

4.3 Substances which in contact with water emit flammable gases

##### Packing group:

##### Environmental hazard:

##### Transport in bulk:

##### Special precautions for user:

#### SECTION 15 : Regulatory information

##### United States (USA)

##### SARA Section 311/312 (Specific toxic chemical listings):

Reactive, Acute

##### SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed

##### RCRA (hazardous waste code):

None of the ingredients is listed

##### TSCA (Toxic Substances Control Act):

All ingredients are listed.

##### CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

75-20-7 Calcium carbide 10 lbs

##### Proposition 65 (California):

##### Chemicals known to cause cancer:

None of the ingredients is listed

##### Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

##### Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

##### Chemicals known to cause developmental toxicity:

None of the ingredients is listed

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#### Canada

##### Canadian Domestic Substances List (DSL):

All ingredients are listed.

##### Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

##### Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

#### SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: . The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

##### GHS Full Text Phrases:

##### Abbreviations and acronyms:

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