

SAFETY DATA SHEET

Creation Date 05-September-2006

Revision Date 25-December-2021

Revision Number 5

1. Identification

Product Name Calcium carbide

Cat No. : AC389790000; AC389790010; AC389790025; AC389792500

CAS-No 75-20-7

Synonyms No information available

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Importer/Distributor

Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Manufacturer

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

WHMIS 2015 Classification Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

Substances/mixtures which, in contact with water, emit flammable gases	Category 1	Gas(es) = Hydrogen
Skin Corrosion/Irritation	Category 2	
Serious Eye Damage/Eye Irritation	Category 1	
Specific target organ toxicity (single exposure)	Category 3	
Target Organs - Respiratory system.		

Label Elements

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

**Precautionary Statements****Prevention**

Do not allow contact with water
Handle under inert gas. Protect from moisture
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection

Response

IF ON SKIN: Wash with plenty of soap and water
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
Immediately call a POISON CENTER/doctor
Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages
Take off contaminated clothing

Storage

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

Disposal

Dispose of contents/container to an approved waste disposal plant

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Calcium carbide	75-20-7	72-82
Calcium oxide	1305-78-8	12-18

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Ingestion	Do NOT induce vomiting. Get medical attention.
Most important symptoms/effects	Causes eye burns.
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Dry chemical. Dry sand.

Unsuitable Extinguishing Media Water, Foam

Flash Point No information available
Method - No information available

Autoignition Temperature No information available

Explosion Limits

Upper No data available

Lower No data available

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Contact with water liberates toxic gas. Water reactive. Produce flammable gases on contact with water.

Hazardous Combustion Products

Acetylene. Hydrogen.

Protective Equipment and Precautions for Firefighters

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

NFPA

Health
3

Flammability
3

Instability
2

Physical hazards
W

6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Remove all sources of ignition. Avoid dust formation.

Environmental Precautions Should not be released into the environment.

Methods for Containment and Clean Up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Do not let this chemical enter the environment. Do not expose spill to water. Avoid dust formation.

7. Handling and storage

Handling Ensure adequate ventilation. Avoid contact with skin and eyes. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance. Keep under nitrogen. Remove all sources of ignition. Do not allow contact with water. Minimize dust generation and accumulation. Wash hands before breaks and immediately after handling the product.

Storage. Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep from any possible contact with water. Keep under nitrogen. Incompatible Materials. Acids. Bases. Strong oxidizing agents. copper.

8. Exposure controls / personal protection

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Component	Alberta	British Columbia	Ontario TWA/ELV	Quebec	ACGIH TLV	OSHA PEL	NIOSH IDLH
Calcium oxide	TWA: 2 mg/m ³	TWA: 2 mg/m ³	TWA: 2 mg/m ³	TWA: 2 mg/m ³	TWA: 2 mg/m ³	(Vacated) TWA: 5 mg/m ³ TWA: 5 mg/m ³	IDLH: 25 mg/m ³ TWA: 2 mg/m ³

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection **Hand Protection**

Goggles
Protective gloves

Glove material	Breakthrough time	Glove thickness	Glove comments
Natural rubber	See manufacturers	-	Splash protection only
Nitrile rubber	recommendations		
Neoprene			
PVC			

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified 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.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Recommended Filter type: Particulates filter conforming to EN 143

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls

No information available.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

9. Physical and chemical properties

Physical State	Solid
Appearance	Dark grey
Odor	Garlic-like
Odor Threshold	No information available
pH	No information available
Melting Point/Range	2160 °C / 3920 °F
Boiling Point/Range	2300 °C / 4172 °F @ 760 mmHg
Flash Point	No information available
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Specific Gravity	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available

Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	C ₂ Ca
Molecular Weight	64.1

10. Stability and reactivity

Reactive Hazard	Yes
Stability	Reacts violently with water, liberating extremely flammable gases.
Conditions to Avoid	Incompatible products. Exposure to moist air or water. Avoid dust formation.
Incompatible Materials	Acids, Bases, Strong oxidizing agents, copper
Hazardous Decomposition Products	Acetylene, Hydrogen
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Calcium oxide	>2000 mg/kg (female Rat)	Not listed	LC50 > 6.04 mg/L (Rat) 4 h

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	Irritating to respiratory system and skin. Risk of serious damage to eyes
Sensitization	No information available
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Calcium carbide	75-20-7	Not listed	Not listed	Not listed	Not listed	Not listed
Calcium oxide	1305-78-8	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system
STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects

The toxicological properties have not been fully investigated.

12. Ecological information**Ecotoxicity**

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Calcium carbide	Not listed	LC50: > 50 mg/L, 96h static (Oncorhynchus mykiss)	Not listed	Not listed
Calcium oxide	Not listed	LC50: = 1070 mg/L, 96h static (Cyprinus carpio)	Not listed	Not listed

Persistence and Degradability No information available**Bioaccumulation/ Accumulation** No information available.**Mobility** No information available.**13. Disposal considerations**

Waste Disposal Methods 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 to ensure complete and accurate classification.

14. Transport information**DOT**

UN-No UN1402
 Proper Shipping Name CALCIUM CARBIDE
 Hazard Class 4.3
 Packing Group I

TDG

UN-No UN1402
 Proper Shipping Name CALCIUM CARBIDE
 Hazard Class 4.3
 Packing Group I

IATA

UN-No UN1402
 Proper Shipping Name CALCIUM CARBIDE
 Hazard Class 4.3
 Packing Group I

IMDG/IMO

UN-No UN1402
 Proper Shipping Name CALCIUM CARBIDE
 Hazard Class 4.3
 Packing Group I

15. Regulatory information**International Inventories**

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
Calcium carbide	75-20-7	X	-	X	ACTIVE	200-848-3	-	-
Calcium oxide	1305-78-8	X	-	X	ACTIVE	215-138-9	-	-

Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Calcium carbide	75-20-7	X	X	X	X	X	X	X	X
Calcium oxide	1305-78-8	X	KE-04588	X	X	X	X	X	X

Legend:

X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances**IECSC** - Chinese Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**ENCS** - Japanese Existing and New Chemical Substances**AICS** - Australian Inventory of Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**Canada**

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

Other International Regulations**Authorisation/Restrictions according to EU REACH****Safety, health and environmental regulations/legislation specific for the substance or mixture**

Component	CAS-No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Calcium carbide	75-20-7	Listed	Not applicable	Not applicable	Not applicable
Calcium oxide	1305-78-8	Listed	Not applicable	Not applicable	Not applicable

Component	CAS-No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Calcium carbide	75-20-7	Not applicable	Not applicable	Not applicable	Not applicable
Calcium oxide	1305-78-8	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

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Revision Summary This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS