

Material Safety Data Sheet

Version 3.1

Revision Date 01/17/2012

Print Date 07/15/2012

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Calcium atomic spectroscopy standard concentrate 1.00 g Ca

Product Number : 02672

Brand : Fluka

Supplier : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832

Fax : +1 800-325-5052

Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Toxic by inhalation., Harmful by ingestion., Corrosive

GHS Classification

Acute toxicity, Inhalation (Category 4)

Skin corrosion (Category 1B)

Serious eye damage (Category 1)

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H314

Causes severe skin burns and eye damage.

H332

Harmful if inhaled.

Precautionary statement(s)

P280

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

P305 + P351 + P338

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

P310

Immediately call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard: 2

Flammability: 0

Physical hazards: 0

NFPA Rating

Health hazard: 2

Fire: 0

Reactivity Hazard: 0

Health hazard: 3
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

Inhalation Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin Harmful if absorbed through skin. Causes skin burns.
Eyes Causes eye burns.
Ingestion Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Calcium chloridesolution

Formula : CaCl_2

Molecular Weight : 110.98 g/mol

Component		Classification	Concentration
Calcium chloride			
CAS-No.	10043-52-4	Eye Irrit. 2; H319	5 - 10 %
EC-No.	233-140-8		
Index-No.	017-013-00-2		
Hydrochloric acid			
CAS-No.	7647-01-0	Skin Corr. 1B; STOT SE 3; H314, H335	5 - 10 %
EC-No.	231-595-7		
Index-No.	017-002-01-X		

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability

Not flammable or combustible.

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Calcium oxide
Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Calcium oxide

Further information

The product itself does not burn.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Basis
Hydrochloric acid	7647-01-0	C	2 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Upper Respiratory Tract irritation Not classifiable as a human carcinogen			
		C	5 ppm 7 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m3 is approximate. Ceiling limit is to be determined from breathing-zone air samples.			
		C	5 ppm 7 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		C	5 ppm 7 mg/m3	USA. NIOSH Recommended Exposure Limits
	Often used in an aqueous solution.			

Personal protective equipment**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form	clear, liquid
Colour	colourless

Safety data

pH	no data available
Melting point/freezing point	no data available
Boiling point	no data available
Flash point	not applicable
Ignition temperature	no data available
Autoignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	no data available
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY**Chemical stability**

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

no data available

Materials to avoid

Bases, Amines, Alkali metals, Metals, hexalithium disilicide, permanganates, e.g. potassium permanganate, Fluorine, Strong acids, Borane/boron oxides, Zinc, Calcium oxide, Methyl vinyl ether, Calcium chloride is attacked by bromine trifluoride

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Calcium oxide

Other decomposition products - no data available

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Calcium oxide

11. TOXICOLOGICAL INFORMATION**Acute toxicity****Oral LD50**

no data available

Inhalation LC50

no data available

Dermal LD50

no data available

Other information on acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

Eyes: no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrochloric acid)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects**Inhalation**

Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion	Harmful if swallowed.
Skin	Harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects

no data available

Additional Information

RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 1789 Class: 8 Packing group: III
 Proper shipping name: Hydrochloric acid
 Marine pollutant: No
 Poison Inhalation Hazard: No

IMDG

UN number: 1789 Class: 8 Packing group: III EMS-No: F-A, S-B
 Proper shipping name: HYDROCHLORIC ACID
 Marine pollutant: No

IATA

UN number: 1789 Class: 8 Packing group: III
 Proper shipping name: Hydrochloric acid

15. REGULATORY INFORMATION

OSHA Hazards

Toxic by inhalation., Harmful by ingestion., Corrosive

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Hydrochloric acid	7647-01-0	1993-04-24

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Hydrochloric acid	7647-01-0	1993-04-24

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Hydrochloric acid	7647-01-0	1993-04-24
Water	7732-18-5	
Calcium chloride	10043-52-4	

New Jersey Right To Know Components

	CAS-No.	Revision Date
Hydrochloric acid	7647-01-0	1993-04-24
Water	7732-18-5	
Calcium chloride	10043-52-4	

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Text of H-code(s) and R-phrases mentioned in Section 3

Eye Irrit.	Eye irritation
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
Skin Corr.	Skin corrosion
STOT SE	Specific target organ toxicity - single exposure

Further information

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