

<a href="#">Calcium Hypochlorite</a>		<a href="#">Pricing &gt;</a>
Linear Formula	Ca(OCl) <sub>2</sub>	
Pubchem CID	24504	
MDL Number	MFCD00010900	
EC No.	231-908-7	
IUPAC Name	calcium; dihypochlorite	
Beilstein/Reaxys No.	N/A	
SMILES	[O-]Cl.[O-]Cl.[Ca+2]	
Inchl Identifier	InChI=1S/Ca.2ClO/c;2*1-2/q+2;2*-1	
Inchl Key	ZKQDCIXGCQPQNV-UHFFFAOYSA-N	
Signal Word	Danger	
Hazard Statements	H272-H302-H314-H400	
Hazard Codes	O,C,N	
Risk Codes	26-36/37/39-45-61	
Safety Statements	N/A	
RTECS Number	NH3485000	
Transport Information	UN 1748 5.1/PG 2	
WGK Germany	3	

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## SAFETY DATA SHEET

Date Accessed: 04/20/2024

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### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #7778-54-3

**Relevant identified uses of the substance:**  
Scientific research and development

Supplier details:  
American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024

Tel: +1 310-208-0551  
Fax: +1 310-208-0351

Emergency telephone number:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

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## **SECTION 2. HAZARDS IDENTIFICATION**

Classification of the substance or mixture in  
accordance with 29 CFR 1910 (OSHA HCS)

GHS03 Flame over circle

Ox. Sol. 2

H272 May intensify fire; oxidizer.

GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and  
eye damage.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Hazards not otherwise classified

No data available

GHS label elements

GHS label elements, including precautionary  
statements

Hazard pictograms

GHS03

GHS05

GHS07

Signal word

Danger

Hazard statements

H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P221

Take any precaution to avoid mixing with  
combustibles.

P210

Keep away from heat/sparks/open flames/hot  
surfaces. No smoking.

P303+P361+P353 If on skin (or hair): Take off  
immediately all contaminated clothing. Rinse skin with  
water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with  
water for several minutes. Remove contact lenses, if  
present and easy to do. Continue rinsing.

P405

Store locked up.

P501

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

WHMIS classification

C - Oxidizing materials  
D2B - Toxic material causing other toxic effects  
E - Corrosive material  
Classification system  
HMIS ratings (scale 0-4)  
(Hazardous Materials Identification System)  
Health (acute effects) = 3  
Flammability = 0  
Physical Hazard = 3  
Other hazards  
Results of PBT and vPvB assessment  
PBT:  
N/A  
vPvB:  
N/A



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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances  
CAS No. / Substance Name:  
7778-54-3 Calcium hypochlorite  
Identification number(s):  
EC number:  
231-908-7  
Index number:  
017-012-00-7

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### SECTION 4. FIRST AID MEASURES

Description of first aid measures  
General information  
Immediately remove any clothing soiled by the product.  
If inhaled:  
Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.  
Seek immediate medical advice.  
In case of skin contact:  
Immediately wash with soap and water; rinse thoroughly.  
Seek immediate medical advice.  
In case of eye contact:  
Rinse opened eye for several minutes under running water. Consult a physician.  
If swallowed:  
Seek medical treatment.  
Information for doctor  
Most important symptoms and effects, both acute and

delayed  
Causes severe skin burns.  
Causes serious eye damage.  
Indication of any immediate medical attention and  
special treatment needed  
No data available

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media  
Suitable extinguishing agents  
In case of fire, use sand, carbon dioxide  
or powdered extinguishing agent. Never use water.  
For safety reasons unsuitable extinguishing agents  
Water  
Halocarbon extinguisher  
Special hazards arising from the substance or mixture  
This substance is an oxidizer and its heat of reaction  
with reducing agents  
or combustibles may cause ignition.  
If this product is involved in a fire, the following can be  
released:  
Calcium oxide  
Hydrogen chloride (HCl)  
Advice for firefighters  
Protective equipment:  
Wear self-contained respirator.  
Wear fully protective impervious suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and  
emergency procedures  
Mount respiratory protective device.  
Use personal protective equipment. Keep unprotected  
persons away.  
Ensure adequate ventilation  
Environmental precautions:  
Do not allow product to enter drains, sewage systems,  
or other water courses.  
Methods and materials for containment and cleanup:  
Use neutralizing agent.  
Dispose of contaminated material as waste according  
to section 13.  
Ensure adequate ventilation.  
Prevention of secondary hazards:  
Acts as an oxidizing agent on organic materials such  
as wood, paper and fats  
Keep away from combustible material.  
Reference to other sections

See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information

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## **SECTION 7. HANDLING AND STORAGE**

### Handling

Precautions for safe handling

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires:

Substance/product can reduce the ignition temperature of flammable substances.

This substance is an oxidizer and it s heat of reaction with reducing agents or combustibles may cause ignition.

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Store away from flammable substances.

Store away from reducing agents.

Do not store with organic materials.

Store away from metal powders.

Do not store together with acids.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

Specific end use(s)

No data available

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that should be monitored at the workplace.

Additional information:

No data

Exposure controls

Personal protective equipment

Follow typical protective and hygienic practices for handling chemicals.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Recommended filter device for short term use:

Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands:

Impervious gloves

Inspect gloves prior to use.

Suitability of gloves should be determined both by material and quality, the latter of which may vary by manufacturer.

Material of gloves

Nitrile rubber, NBR

Penetration time of glove material (in minutes)

480

Glove thickness

0.11 mm

Eye protection:

Tightly sealed goggles

Full face protection

Body protection:

Protective work clothing.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

Appearance:

Form:

Powder or granules

Color:

White to pale brown

Odor:  
Like chlorine  
Odor threshold:  
No data available.  
pH (10 g/l) at 25 °C (77 °F):  
11.5  
Melting point/Melting range:  
100 °C (212 °F)  
Boiling point/Boiling range:  
No data available  
Sublimation temperature / start:  
No data available  
Flammability (solid, gas)  
Contact with combustible material may cause fire.  
Ignition temperature:  
No data available  
Decomposition temperature:  
No data available  
Autoignition:  
No data available.  
Danger of explosion:  
No data available.  
Explosion limits:  
Lower:  
No data available  
Upper:  
No data available  
Vapor pressure:  
N/A  
Density at 20 °C (68 °F):  
2.35 g/cm<sup>3</sup> (19.611 lbs/gal)  
Relative density  
No data available.  
Vapor density  
N/A  
Evaporation rate  
N/A  
Solubility in / Miscibility with  
Water at 20 °C (68 °F):  
217 g/l  
Partition coefficient (n-octanol/water):  
No data available.  
Viscosity:  
Dynamic:  
N/A  
Kinematic:  
N/A  
Other information  
No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity

May intensify fire; oxidizer.  
Contact with acids liberates toxic gas.  
Chemical stability  
Stable under recommended storage conditions.  
Thermal decomposition / conditions to be avoided:  
Decomposition will not occur if used and stored according to specifications.  
Possibility of hazardous reactions  
Reacts with reducing agents  
Reacts with flammable substances  
Contact with acids liberates toxic gas.  
Conditions to avoid  
No data available  
Incompatible materials:  
Flammable substances  
Reducing agents  
Acids  
Organic materials  
Metal powders  
Hazardous decomposition products:  
Calcium oxide  
Hydrogen chloride (HCl)

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects  
Acute toxicity:  
Harmful if swallowed.  
Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.  
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.  
LD/LC50 values that are relevant for classification:  
Oral LD50 850 mg/kg (rat)  
Skin irritation or corrosion:  
Causes severe skin burns.  
Eye irritation or corrosion:  
Causes serious eye damage.  
Sensitization:  
No sensitizing effects known.  
Germ cell mutagenicity:  
The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.  
Carcinogenicity:  
IARC-3: Not classifiable as to carcinogenicity to humans.  
Reproductive toxicity:  
No effects known.  
Specific target organ system toxicity - repeated exposure:



No effects known.  
Specific target organ system toxicity - single exposure:  
No effects known.  
Aspiration hazard:  
No effects known.  
Subacute to chronic toxicity:  
No effects known.  
Additional toxicological information:  
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity  
Aquatic toxicity:  
No data available  
Persistence and degradability  
No data available  
Bioaccumulative potential  
No data available  
Mobility in soil  
No data available  
Ecotoxicological effects:  
Remark:  
Very toxic for aquatic organisms  
Additional ecological information:  
Do not allow product to reach groundwater, water courses, or sewage systems.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Avoid transfer into the environment.  
Very toxic for aquatic organisms  
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pHs. A high pH harms aquatic organisms. In the dilution of the use-level the pH is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.  
Results of PBT and vPvB assessment  
PBT:  
N/A  
vPvB:  
N/A  
Other adverse effects  
No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods  
Recommendation  
Consult official regulations to ensure proper disposal.  
Uncleaned packagings:  
Recommendation:  
Disposal must be made according to official regulations.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number  
DOT  
UN2208  
IMDG, IATA  
UN1748  
UN proper shipping name  
DOT  
RQ Calcium hypochlorite mixtures, dry  
IMDG, IATA  
CALCIUM HYPOCHLORITE, DRY  
Transport hazard class(es)  
DOT  
Class  
5.1 Oxidising substances.  
Label  
5.1  
Class  
5.1 (O2) Oxidizing substances  
Label  
5.1  
IMDG, IATA  
Class  
5.1 Oxidising substances.  
Label  
5.1  
Packing group  
DOT, IMDG, IATA  
II  
Environmental hazards:  
Environmentally hazardous substance, solid  
Special precautions for user  
Warning: Oxidizing substances  
EMS Number:  
F-H,S-Q  
Segregation groups  
Hypochlorites  
Transport in bulk according to Annex II of  
MARPOL73/78 and the IBC Code  
N/A  
Transport/Additional information:  
DOT  
Hazardous substance:  
10 lbs, 4.54 kg

Marine Pollutant (DOT):  
No  
UN "Model Regulation":  
UN1748, Calcium hypochlorite mixtures dry, 5.1, II

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture  
GHS GHS label elements, including precautionary statements  
Hazard pictograms  
GHS03  
GHS05  
GHS07  
Signal word  
Danger  
Hazard statements  
H272 May intensify fire; oxidizer.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
Precautionary statements  
P221  
Take any precaution to avoid mixing with combustibles.  
P210  
Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P405  
Store locked up.  
P501  
Dispose of contents/container in accordance with local/regional/national/international regulations.  
National regulations  
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.  
All components of this product are listed on the Canadian Domestic Substances List (DSL).  
SARA Section 313 (specific toxic chemical listings)  
Substance is not listed.  
California Proposition 65  
Prop 65 - Chemicals known to cause cancer

Substance is not listed.  
Prop 65 - Developmental toxicity  
Substance is not listed.  
Prop 65 - Developmental toxicity, female  
Substance is not listed.  
Prop 65 - Developmental toxicity, male  
Substance is not listed.  
Information about limitation of use:  
For use only by technically qualified individuals.  
Other regulations, limitations and prohibitive  
regulations  
Substance of Very High Concern (SVHC) according to  
the REACH Regulations (EC) No. 1907/2006.  
Substance is not listed.  
The conditions of restrictions according to Article 67  
and Annex XVII of the Regulation (EC) No 1907/2006  
(REACH) for the manufacturing, placing on the market  
and use must be observed.  
Substance is not listed.  
Annex XIV of the REACH Regulations (requiring  
Authorisation for use)  
Substance is not listed.  
Chemical safety assessment:  
A Chemical Safety Assessment has not been carried  
out.

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## **16. OTHER INFORMATION**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

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