



SAFETY DATA SHEET

According to 29 CFR 1910.1200

CALCIUM HYPOCHLORITE

Date of issue: September 01, 2023 Revision date: - Version: 1

SECTION 1.- IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier

Product form Solid
Substance name Calcium hypochlorite
CAS No. 7778-54-3
Formula Ca(ClO)₂
Synonyms Chloride of lime, bleaching powder, hypochlorous acid calcium salt

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture Fertilizers

1.3 Details of the supplier of the safety data sheet

Química Pima, S.A. de C.V.
Del Cobre 20, Parque Industrial Hermosillo
Hermosillo, Sonora, México. C.P. 83297 Tel. 011 (662) 251-0010 / (662) 251-0316
ventas@qpima.com
www.qpima.com

1.4 Emergency telephone number

Emergency number CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

SECTION 2.- HAZARD IDENTIFICATION

2.1 GHS-US classification

Flammable Solids	2	H272
Acute Oral Toxicity	4	H302
Skin Corrosion/Irritation	1B	H314
Serious Eye Damage/Eye Irritation	1	H318
Hazardous to Aquatic Environment - Acute	1	H400

2.2 Label elements

GHS-US labelling

Hazard pictograms (GHS-US)



Signal Word (GHS-US):

Danger

Hazard statement (GHS-US):

H272 May intensify fire; oxidizer
H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life

Precautionary statements (GHS-US):

P210 Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking.
P220 Keep away from clothing and other combustible materials.
P221 Take any precaution to avoid mixing with combustibles materials



SAFETY DATA SHEET

According to 29 CFR 1910.1200

CALCIUM HYPOCHLORITE

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash your hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water.
P304+P310+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
P305+P310+P351+P338 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.
P370+P378 In case of fire: Use water spray, foam, dry chemical powder, or CO₂ to extinguish.
P391 Collect spillage.
P405 Store locked up.
P501 Dispose of contents/container in accordance with federal, state, and local regulations.
No data available
Not applicable

2.3 Other hazards

2.4 Unknown acute toxicity (GHS-US)

SECCIÓN 3.- COMPOSITION / INFORMATION OF INGREDIENTS

3.1 Substance

Name	Product identifier	%
Calcium hypochlorite	(CAS No.) 7778-54-3	> 65

3.2 Mixture

Not applicable

SECCIÓN 4.- FIRST AID MEASURE

4.1 Description of first aid measure

First-aid measures general

Check vital signs. Unconscious: keep airways clear and provide breathing assistance. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform CPR. Conscious victim with breathing difficulty: semi-upright position. Victim in shock: lying on back with legs slightly elevated. Vomiting: prevent choking or aspiration. Avoid cooling by covering the victim (without heating). Continue monitoring the victim. Provide psychological support. Keep the victim calm, and avoid physical strain. Depending on the victim's condition: seek medical attention/hospital. Never give anything by mouth to an unconscious person. If feeling unwell, seek medical attention (if possible, show the label).

First-aid measures after eye contact

In case of contact with eyes, immediately flush open eyes under running water for 10 to 15 minutes and consult an ophthalmologist. Protect the unaffected eye.



SAFETY DATA SHEET

According to 29 CFR 1910.1200

CALCIUM HYPOCHLORITE

First-aid measures after skin contact

Immediately remove contaminated clothing and shoes. Wash the affected area immediately with plenty of water for at least 15 minutes, repeating the washing process if irritation persists. Seek medical attention immediately, as untreated cauterizations can become difficult-to-heal wounds. If the patient needs to be transported to a hospital, continue washing during the journey. Never apply creams or ointments.

First-aid measures after inhalation

Provide fresh air. If discomfort occurs or if in doubt, consult a doctor.

First-aid measures after ingestion

DO NOT INDUCE VOMITING. If the victim is conscious and not convulsing, rinse their mouth and provide as much water as possible to dilute the material. If spontaneous vomiting occurs, have the victim lean forward with the head down to prevent aspiration, rinse their mouth, and give them more water. TRANSPORT THE VICTIM IMMEDIATELY to a medical facility as there is a risk of esophageal and stomach perforation.

4.2 Most important

Symptoms/injuries after inhalation

Exposure to airborne material can cause irritation, redness of the lower airways, coughing, laryngeal spasm and edema, difficulty breathing, bronchoconstriction, and possible pulmonary edema.

Symptoms/injuries after skin contact

Skin corrosion. Skin exposure may cause redness, itching, irritation, swelling, burns (first, second, or third degree), liquefaction of the skin, and damage to underlying tissues (deep and painful wounds).

Symptoms/injuries after eye contact

Serious eye damage. Eye exposures may cause burns to the eyelids, conjunctivitis, corneal edema, corneal burn, corneal perforation, eye contents damage, permanent visual impairment, and blindness and/or eye loss.

Symptoms/injuries after ingestión

Ingestion exposure can cause irritation, inflammation, and perforation of the upper gastrointestinal tissues. Permanent scarring may occur.

Chronic symptoms

No data available.

4.3 Indications of any immediate medical attention and special treatment needed

No Data is available.

SECCIÓN 5.- FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

For large fires, use a medium expansion alcohol-resistant AFFF foam according to techniques recommended by the foam manufacturer. Consult the foam supplier for recommendations regarding foam types and application rates for specific situations. Use carbon dioxide or dry chemical powders for small fires. If only water is available, use it as a fine spray.

Unsuitable extinguishing media

Do not use direct stream water as it may spread the fire due to heat generated by water.

5.2 Special hazard arising from the substance or mixture

Fire hazard

Oxidizing property. Non-combustible.

Explosion hazard

Oxidizing property. Non-combustible.

Reactivity

In case of fire, chlorine gas (HCl) may form, and toxic carbon monoxide fumes may be produced in case of fire.

5.3 Advice for firefighters

Precautionary measures fire

Evacuate personnel to a safe area and prevent unauthorized access to the fire area. Keep personnel away and upwind of gases and fumes.



SAFETY DATA SHEET

According to 29 CFR 1910.1200

CALCIUM HYPOCHLORITE

Protection during firefighting

If the fire involves tank loads or trailers, control the fire from a maximum distance or use automatic hose holders or nozzles with monitors. Do not introduce water into the containers. Cool the containers with flooding amounts of water only after the fire has been extinguished. Immediately withdraw if the sound of safety discharge instruments increases or if the tank starts discoloring. ALWAYS stay away from the ends of the tanks. If a tank truck or trailer is involved in a fire, ISOLATE it and consider evacuation within a radius of 0.8 km.

Use self-contained breathing apparatus. Structural firefighter protective clothing provides limited protection in fire situations ONLY; it may not be effective in spill situations. For major spills, use chemical protective clothing specifically recommended by the manufacturer. This may provide little or no thermal protection.

SECCIÓN 6.- ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

6.1.1 For non-emergency personnel

Protective equipment

Use the recommended protective equipment in section 8.

Emergency procedures

Follow established emergency procedures. Only properly equipped, trained, and functional personnel should attempt to contain a leak. All other personnel should be evacuated from the danger area.

Measures in case of dust release

Avoid the formation of vapors/mist. In case of prolonged exposure and/or high concentrations of vapors in the air, use a half-face respirator, full-face respirator, or SCBA according to applicable regulations.

6.1.2 For emergency responders

Restrict access to the area until cleaning is complete. Ensure that cleaning is carried out by trained personnel. Eliminate all sources of ignition (smoking, burners, sparks, or flames). All equipment should be grounded and non-sparking. Ventilate the area. Use appropriate personal protective equipment. Do not touch the spilled material. If possible, stop the leak without endangering personnel. Ensure that all tools and equipment are properly decontaminated after cleaning. Collect contaminated soil and water, as well as absorbents, for proper disposal. Comply with federal, state or provincial, and local regulations regarding discharge reporting.

6.2 Environmental precautions

Keep away from water supplies and drains. This substance is alkaline and can raise the pH of surface waters with low buffering capacity. If necessary, spills should be reported to the appropriate agencies.

6.3 Methods and material for containment and cleaning up

Method for containment

Hypochlorite can be decomposed by covering it with a reducing agent such as sodium sulfite or sodium thiosulfate. Use sodium sulfite or diluted hydrogen peroxide to reduce the material. Ensure there are no chlorine residues before neutralizing with a weak solution of hydrochloric or sulfuric acid.

Small spills: Use clean tools that do not generate sparks to collect the material and place it in plastic containers with loosely fitting lids for further disposal. Avoid generating dust as much as possible. Wash with water and contain it for further treatment.

Large spills: Avoid entry into drains and confined areas. Make a barrier with inert material (sand, soil, etc.). Contact fire and emergency services and the supplier for advice. Collect the product for recovery or disposal using appropriate tools. Consider neutralization and on-site disposal.



Method for cleaning up

SAFETY DATA SHEET

According to 29 CFR 1910.1200

CALCIUM HYPOCHLORITE

Dispose of the waste material at an approved facility for waste treatment and disposal, following applicable regulations. Do not dispose of the waste in regular garbage or drainage systems.

6.4 Reference to other sections

For further information refer to section 8: Exposure-controls/personal protection

SECTION 7.- HANDLING AND STORAGE

7.1 Precautions for safe handling

Precautions for safe handling

Have emergency equipment available immediately (for fires, spills, leaks, etc.). Ensure all containers are labeled. Use appropriate personal protective equipment. Individuals working with this chemical must be adequately trained regarding its hazards and safe use. Avoid generating mist. Use the smallest quantities possible in designated areas with adequate ventilation. Keep containers closed when not in use. Empty containers may still contain hazardous residues. Use corrosion-resistant transfer equipment when distributing.

Hygiene measures

Do not drink, eat, or smoke in the workplace. Always wash your hands after handling the product. Do not eat, drink, or smoke when using this product. Use local exhaust ventilation to keep airborne dust concentrations below permissible exposure levels. Wash hands before breaks and at the end of the workday. Remove and launder contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store it in a cool, dry, well-ventilated area away from direct sunlight. Store containers at a temperature of 15 to 29°C (59 to 84°F). Do not store above 30°C (86°F) or below the freezing point. Keep containers tightly closed when not in use and when empty.

Incompatible products

Reducing agents, combustibles, and strong acids.

Heat-ignition

Oxidizing property. Non-combustible.

Storage area

Store it in a cool, dry, well-ventilated area away from direct sunlight. Lighting and ventilation systems in the storage area.

Special rules on packaging

Store containers at a temperature of 15 to 29°C (59 to 84°F). Keep containers tightly closed when not in use and when empty. Protect them from damage.

Packaging materials

Use corrosion-resistant structural materials.

7.3 Specific end use(s)

No additional information is available

SECTION 8.- EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Calcium hypochlorite 7778-54-3	No data available	No data available	No data available

8.2 Exposure controls

Appropriate engineering controls

Local exhaust ventilation should be applied where there is incidence of emissions at the point of origin or dispersion of regulated contaminants in the work area. Ventilation control for the contaminant as close as possible to its point of generation is the most economical and safest method to minimize personnel exposure to airborne contaminants. The most effective measures are to place all processes in a total containment enclosure and mechanize handling



SAFETY DATA SHEET

According to 29 CFR 1910.1200

CALCIUM HYPOCHLORITE

Personal protective equipment

procedures to avoid all personal contact. Smoking should be prohibited in areas where calcium hypochlorite solution is stored or handled. Keep eye wash stations and emergency showers in the work area.

Material for protective clothing

Safety goggles, full-face respirator with organic vapor cartridges, protective gloves, appropriate footwear.

Hand protection

Neoprene, butyl rubber, nitrile rubber (NBR) or PVC are recommended.

Eye protection

Use appropriate protective gloves to prevent skin exposure. Neoprene, butyl rubber, or PVC are recommended. Do not use materials made of natural fibers.

Skin and body protection

Use chemical splash-resistant goggles and full-face protection.

The recommendations are valid for permeation rates reaching 0.1 ug/cm²/min or 1 mg/m²/min or more. Resistance to specific materials may vary from one product to another. Penetration times are obtained under continuous contact conditions, usually at room temperature. Evaluate resistance under your conditions of use and carefully maintain the clothing. Use protective clothing to minimize skin contact. When there is a possibility of contact with wet material, use Tychem or a similar chemical protective suit. When there is a possibility of contact with dry material, use disposable coveralls suitable for dust exposure, such as Tyvek. Always tuck pants into boots. Wash and fully dry contaminated garments before reuse. Dispose of contaminated leather materials. Before handling this product, appropriate footwear and any additional skin protection measures based on the task being performed and associated risks should be chosen, with the approval of a specialist. Recommended: NBR (nitrile rubber). Contact your protective equipment supplier to verify equipment compatibility for the intended purpose.

Respiratory protection

Respiratory protection is necessary for: Dust formation. Filtering device (EN 147). Type: BP2 (combined filters for acidic gases and particles, color code: gray/white).

Environmental exposure controls

Avoid release to the environment.

SECTION 9.- PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Solid
Appearance	Granular solid or tablets.
Odor	Similar to chlorine.
Color	White
Molecular mass	142.98 g/mol
Odor threshold	No data available
pH	11
pH solution	No data available
Relative evaporation rate (butyl acetate = 1)	No data available
Melting/Freezing point	100 °C
Boiling point	No data available
Flash point	No data available
Self-ignition temperature	No data available
Decomposition temperature	> 177 °C
Flammability (solid, gas)	Non-flammable



SAFETY DATA SHEET

According to 29 CFR 1910.1200

CALCIUM HYPOCHLORITE

Vapor pressure	No data available
Relative vapor density at 20 °C	No data available
Relative density	2.35 (20 °C)
Bulk density	0.9 kg/cm ³
Solubility	100% in water
Log Pow	No data available
Log Kow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Explosive limits	No data available

9.2 Other information

No additional information is available

SECTION 10.- STABILITY AND REACTIVITY

10.1 Reactivity	Reacts strongly with: ammonium compounds, halogenated hydrocarbons, phenol, reducing agents, nitro derivatives.
10.2 Chemical stability	This material is stable under normal handling and storage conditions.
10.3 Possibility of hazardous reactions	Explosion hazard: alcohols, ethanol, organic substances, methanol.
10.4 Conditions to avoid	Decomposition begins at temperatures above >177 °C
10.5 Incompatible materials	Reducing agents, combustibles, and strong acids.
10.6 Hazardous decomposition products	Release of toxic gases on contact with acids and water.

SECTION 11.- TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Likely routes of exposure	Skin and eyes contact, inhalation, and ingestion.
Acute toxicity	It can cause irritation, pain, and inflammation in the mouth and stomach, vomiting, shock, confusion, delirium, coma, and in severe cases, death. It can cause perforation of the esophagus or stomach.
Skin corrosión/irritation	Calcium hypochlorite powders can cause skin irritation. In severe cases, they can result in chemical burns.
Serious eye damage/irritation	It can cause severe burns and damage to the cornea, which can result in permanent blindness.
Respiratory or skin sensitization	Powders can irritate the nose and throat. If mixed with acids, hypochlorite solutions can release large amounts of toxic gas. This gas can cause severe irritation of the nose and throat. Exposure to high levels of these gases can result in severe lung damage.
Germ cell mutagenicity	It is not classified as mutagenic in germ cells.
Carcinogenicity	It is not classified as carcinogenic.
Reproductive toxicity	No data available
Specific target toxicity (single exposure)	No data available
Specific target toxicity (repeat exposure)	No data available



SAFETY DATA SHEET

According to 29 CFR 1910.1200

CALCIUM HYPOCHLORITE

Aspiration hazard

After inhaling vapors, the respiratory tract may become irritated.

Name	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀ inhalation
Calcium hypochlorite	850 mg/kg (rat)	> 2000 mg/kg (rabbit)	No data available

SECTION 12.- ECOLOGICAL INFORMATION

12.1 Toxicity

Ecology – General No data available
 Ecology – Air No data available
 Ecology – Water Highly toxic to aquatic organisms.

12.2 Persistence and degradability

The substance is readily biodegradable. Methods for determining disintegration cannot be applied to inorganic materials.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Other adverse effects

Other information

SECCIÓN 13.- INFORMACIÓN RELATIVA A LA ELIMINACIÓN DE LOS PRODUCTOS

13.1 Waste treatment methods

Waste treatment methods Waste generation should be avoided or minimized whenever possible. Waste should not be disposed of untreated down the drain unless compatible with the requirements of all competent authorities. This product may be neutralized with sodium bisulfite, sodium thiosulfate, or sodium sulfite. Exercise caution when handling empty containers that have not been cleaned or rinsed. Empty containers or liners may retain product residues.

Waste disposal recommendations Dispose of waste material following local, regional, national, and international regulations. Dispose of surplus and non-recyclable products via a licensed contractor. Avoid dispersal of spilled material, contact with soil, aquatic environments, drains, and sewers. Dispose of product waste and containers with all possible precautions.

SECTION 14.- TRANSPORT INFORMATION

14.1 UN Number 2880
 14.2 UN proper shipping name CALCIUM HYPOCHLORITE HYDRATED
 14.3 Class of hazards in transportation 5.1
 14.4 Packaging group II
 14.3 Additional information





SAFETY DATA SHEET

According to 29 CFR 1910.1200

CALCIUM HYPOCHLORITE

Other information
Overland transport
Transport by sea
Air transport

No supplementary information is available.
No additional information is available.
No additional information is available.
No additional information is available.

SECTION 15.- REGULATORY INFORMATION

International inventories

TSCA Non-listed

Abbreviations

TSCA – Toxic Substances Control Act Inventory Section 8(b).

DSL/NDSL - Domestic Substance List/Non-Domestic Substance List.

US Federal Regulations: This product does not contain chemicals that are subject to the reporting requirements of the Emergency Planning and Community Right-to-Know Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Categories.

Acute Health Hazard	Yes	Chronic Health Hazard	No	Fire Hazard	No
Sudden Hazardous Pressure Release	No	Reactive Hazard	No		

Clean Water Act. No data available

CERCLA. No data available

Applicable international standards. Regulation ES 1272/2008 [EU-GHS/CLP]

Applicable Mexican standards. No data available

SECTION 16.- OTHER INFORMATION

NFPA	NFPA health Hazard	3	NFPA fire Hazard	0	NFPA instability Hazard	1	NFPA Special hazard	OXI
HMIS III	Health	3	Flammability	0	Physical	1	Personal protection	G

Splash goggles, gloves, and vapor respirator.

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Made for: Química Pima, S.A. de C.V. Del Cobre No. 20 Parque Industrial. Hermosillo, Sonora, México. 83297.

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IMPORTANT NOTE: Information in this SDS is from available published sources and is believed to be accurate, but is not exhaustive and will be used only as a guide, which is based on current knowledge of the chemical substance or mixture and applied to the appropriate product for safety precautions. No warranty, express or implied, is made and Pima Chemicals & Fertilizers, LLC and Quimica Pima, S.A. de C.V. assumes no liability resulting from the use of this SDS. The user must determine the suitability of this information for his application.

End of Safety Data Sheet