

Safety Data Sheet

CALCIUM OXIDE

SDS no. 9WTJZ4L9 • Version 1.0 • Date of issue: 2024-02-06

- Skin corrosion/irritation, Cat. 2

GHS label elements, including precautionary statements

Pictograms



Signal word

Danger

Hazard statement(s)

H315 Causes skin irritation
H318 Causes serious eye damage
H335 May cause respiratory irritation

Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water/soap
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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/doctor/physician
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 56.08

Components

Component	CAS no.	Concentration
Calcium oxide (EC no.: 215-138-9)	1305-78-8	90 - 100 % (weight)
CLASSIFICATIONS: Serious eye damage/eye irritation, Cat. 1; Skin corrosion/irritation, Cat. 2; Specific target organ toxicity following single exposure, Cat. 3. HAZARDS: H315 - Causes skin irritation; H318 - Causes serious eye damage; H335 - May cause respiratory irritation; H336 - May cause drowsiness or dizziness.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice Consult a physician. Show this safety data sheet to the doctor in attendance.
First Aid Facilities: Maintain eyewash fountain in work area.

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If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear.
In case of skin contact	Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek medical advice /attention depending on the severity.
In case of eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.
If swallowed	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary

For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

When material is not involved in fire. Do NOT use water on material itself.

Small fire: Use CO₂, dry chemical, dry sand or flooding quantities of water. If safe to do so, move undamaged containers from the fire area.

Large fire: Flood fire with large quantities of water while knocking down vapours with water fog. If insufficient water supply, knock down vapours only.

Cool containers with flooding quantities of water until well after the fire is out. Avoid getting water inside the containers.

Specific hazards arising from the chemical

Does not burn but may produce poisonous and/or corrosive fumes upon heating. Heat of reaction may be enough to ignite combustible materials. Will react with water (some violently) releasing flammable, poisonous and/or corrosive gases and runoff. Contact with metals may evolve flammable hydrogen gas. Fire will produce irritating, poisonous and/or corrosive gases. Runoff may pollute waterways. May be transported in a molten form. Containers may explode when heated or contaminated with water.

Special protective actions for fire-fighters

Wear SCBA and acid-resistant chemical splash suit. Structural firefighter's uniform is NOT effective for these materials.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Evacuate the area of all non-essential personnel. Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

Do not touch or walk through this product. Do NOT touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Vapour-suppressing foam may be used to control vapours - Water spray may be used to knock down or divert vapour clouds.

DO NOT GET WATER INSIDE CONTAINERS.

Methods and materials for containment and cleaning up

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Small Spill: Cover with DRY earth, sand or other non-combustible material followed by a plastic sheet to minimize spreading or contact with rain. Use clean non-sparking tools to collect material and place it into loosely-covered plastic containers for later disposal. Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations. Seek expert advice on handling and disposal. Prevent from entering into drains, ditches, rivers or the sea.

SECTION 7: Handling and storage

Precautions for safe handling

Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Aluminium containers should not be used for moist material. Solutions may corrode aluminium.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 1305-78-8

Calcium oxide

AU/SWA (Australia): 2 mg/m³ TWA inhalation; NIOSH: 2 mg/m³ REL inhalation;

Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. RECOMMENDATION: Excellent: Nitrile, Neoprene, PVC. Poor: NR latex.

Body protection

Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Clean clothing or impervious, protective clothing should be worn, preferably with an apron, to prevent skin contact. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection

Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

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Physical state	Solid
Appearance	White or colourless lumps or granular powder. Occasionally has a yellowish or brownish tint, due to the presence of iron.
Color	No data available.
Odor	Odourless.
Odor threshold	No data available.
Melting point/freezing point	2580 °C
Boiling point or initial boiling point and boiling range	2850 °C
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	~ 12.6 (saturated solution, H ₂ O, 20 °C)
Kinematic viscosity	No data available.
Solubility	Solubility in Water: slightly soluble (1.65 g/l @ 20 °C) - rigorous reaction: reacts to form calcium hydroxide with evolution of heat. Solubility in Organic Solvents: Soluble in acids, glycerol and sugar solution. Practically insoluble in alcohol.
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	[14] Specific Gravity: 3.37
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

Other Information: Hygroscopic, readily absorbs carbon dioxide and water from air, becoming air-slaked.

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling.

Chemical stability

Stable under ordinary conditions of use and storage. Hygroscopic

Possibility of hazardous reactions

Calcium oxide combined with water reacts to form calcium hydroxide whilst generating heat. Contact with metals may emit flammable hydrogen gas.

Conditions to avoid

Exposure to moisture.

Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible materials

Air, acids, alcohols, aluminium, ammonium compounds, boric oxide, boron, chlorine, fluorine, halogenated compounds, hydrofluoric acid, hydrogen fluoride, organic materials, metals, moisture, strong bases, phosphorus pentoxide, trifluoride, and water.

Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Ingestion: Corrosive. May attack the esophagus. May result in abdominal pain, and cramps, nausea, vomiting, diarrhoea and collapse. May cause serious alkali burns in mouth, throat, oesophagus and stomach. Swallowing may become painful and difficult. A burning pain extends down the oesophagus to the stomach. May affect respiration. Vomitus is thick and slimy due to mucous. Later it may contain blood shed of mucous membrane due to necrosis.

Inhalation: Inhalation of dust is highly irritating and possibly corrosive to the upper respiratory tract. May cause burning sensation, sore throat, sneezing, coughing, choking, dyspnea, laboured breathing, possibly burns with perforation of the nasal septum and variable symptoms of headache, dizziness and weakness. Intense exposures may result in tightness in the chest, and delayed pulmonary edema. The solubility of the substance allows further penetration that may continue for several days.

Skin corrosion/irritation

Causes skin irritation. Symptoms may include dry skin, redness, burning sensation and pain. During prolonged skin contact the substance can penetrate the unprotected skin slowly, producing soft, necrotic, deeply penetrating areas on contact. The solubility allows further penetration that may continue for several days. The extent of damage depends on duration of contact.

Serious eye damage/irritation

Severe eye irritant. Corrosive. May damage eye tissues. May cause redness, tearing, blurred vision, severe deep burns and pain. Direct contact with the solid or aqueous solutions may cause conjunctival edema and corneal destruction which can lead to and may cause blindness.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

Summary of evaluation of the CMR properties

No data available.

Specific target organ toxicity (STOT) - single exposure

May cause respiratory irritation.

Specific target organ toxicity (STOT) - repeated exposure

No data available.

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Aspiration hazard

No data available.

Additional information

Chronic Effects: Repeated or prolonged skin contact may result in dermatitis. Chronic inhalation of dust may cause inflammation of the respiratory passages, ulcers of the mucous membranes, possible perforation of the nasal septum, bronchial irritation with chronic cough. Symptoms of overexposure include pneumonia and silicosis.

SECTION 12: Ecological information

Toxicity

A harmful effect on aquatic organisms cannot be excluded in the event of improper handling or disposal.
Toxic to aquatic life.

[8X] Acute Toxicity - Fish: LC50 (Cyprinus carpio): 1070 mg/l/96h.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)

Not Classified as Dangerous Good

Hazchem emergency action code (EAC)

2X

IMDG

Not Classified as Dangerous Good

IATA

UN Number: 1910

Class: 8

Packing Group: III

Proper Shipping Name: CALCIUM OXIDE

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP

Poison Schedule: NS

SECTION 16: Other information

Further information/disclaimer

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)