

SAFETY DATA SHEET

Creation Date 11-Jul-2014

Revision Date 19-Dec-2025

Revision Number 7

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

1. Identification

Product Name Calcium oxide

Cat No. : AC196910000; AC196910010; AC196910025

CAS No 1305-78-8
Synonyms Lime

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

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

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number

For information **US** call: 001-800-227-6701 / **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

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

| | |
|--|------------|
| 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

Causes skin irritation

Causes serious eye damage
May cause respiratory irritation



Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell

Skin

IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing

Eyes

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

Storage

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

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

Hazards classified under paragraph (d)(1)(ii) of 1910.1200

No information available

3. Composition/information on Ingredients

| Component | CAS No | Weight % |
|---------------|-----------|----------|
| Calcium oxide | 1305-78-8 | >95 |

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. Immediate medical attention is required.

Inhalation

Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

Ingestion

Do NOT induce vomiting. Call a physician or poison control center immediately.

Most important symptoms and effects

Causes severe eye damage. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
Treat symptomatically

Notes to Physician

5. Fire-fighting measures

Suitable Extinguishing Media

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Unsuitable Extinguishing Media

DO NOT USE WATER, Carbon dioxide (CO₂)

Flash Point
Method -

No information available
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

Non-combustible. Water reactive.

Hazardous Combustion Products

None known.

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
0

Instability
1

Physical hazards
-

6. Accidental release measures

Personal Precautions

Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing.

Environmental Precautions

Avoid release to the environment. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up

Do not expose spill to water. Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

7. Handling and Storage

Handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Handle under inert gas, protect from moisture.

Storage.

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Air sensitive. Store under an inert atmosphere. Incompatible Materials. Acids. Strong oxidizing agents. Halogens. Fluorine. Hydrogen fluoride. Carbon dioxide (CO₂). Alcohols. Water.

8. Exposure controls / personal protection

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH | Mexico OEL (TWA) |
|---------------|--------------------------|--|---|--------------------------|
| Calcium oxide | TWA: 2 mg/m ³ | (Vacated) TWA: 5 mg/m ³ TWA: 5 mg/m ³ | IDLH: 25 mg/m ³ REL = 2 mg/m ³ (TWA) | TWA: 2 mg/m ³ |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment**Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

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.

Recommended Filter type:

Particulates filter conforming to EN 143.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties**Appearance****Physical State**

Powder Solid

Color

Beige

Odor

Odorless

Odor Threshold

No information available

Property**Values****Remarks****• Method****Melting Point/Range**

2570 °C / 4658 °F

Softening Point

No data available

Boiling Point/Range

2850 °C / 5162 °F

Flash Point

No information available

Flammability (liquid)

Not applicable

Flammability (solid,gas)

No information available

Explosion Limits

No data available

Autoignition Temperature

No data available

Decomposition Temperature

No data available

pH

12.5

Viscosity

Not applicable

Solid

Water Solubility

Reacts with water

Solubility in other solvents

No information available

Partition Coefficient (n-octanol/water)**Vapor Pressure**

No data available

Density / Specific Gravity

No data available

Bulk Density

No data available

Vapor Density

Not applicable

Solid

Particle characteristics

No data available

Other Information

| | |
|--------------------------|------------------------|
| Molecular Formula | Ca O |
| Molecular Weight | 56.08 |
| Evaporation Rate | Not applicable - Solid |

10. Stability and reactivity

| | |
|---|---|
| Reactive Hazard | Yes |
| Stability | Moisture sensitive. Air sensitive. |
| Conditions to Avoid | Avoid dust formation. Exposure to air. Incompatible products. Exposure to moist air or water. |
| Incompatible Materials | Acids, Strong oxidizing agents, Halogens, Fluorine, Hydrogen fluoride, Carbon dioxide (CO ₂), Alcohols, Water |
| Hazardous Decomposition Products | None known |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information**Information on expected route of exposure**

| | |
|-------------------|---|
| Inhalation | Avoid breathing dust or spray mist. May be harmful if inhaled. |
| Ingestion | May be harmful if swallowed. |
| Eyes | Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness. May cause irritation. |
| Skin | Avoid contact with skin. Skin Corrosion/Irritation. May cause irritation. |

Toxicology data for the components

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|------------------|--------------------------|--------------------|------------------------------|
| Calcium oxide | >2000 mg/kg (female Rat) | - | LC50 > 6.04 mg/L (Rat) 4 h |

| | |
|---|---|
| Toxicologically Synergistic Products | No information available |
| (b) skin corrosion/irritation; | Category 2 |
| (c) serious eye damage/irritation; | Category 1 |
| (d) respiratory or skin sensitization; | |
| Respiratory | Based on available data, the classification criteria are not met |
| Skin | Based on available data, the classification criteria are not met |
| (e) germ cell mutagenicity; | Based on available data, the classification criteria are not met |
| (f) carcinogenicity; | Based on available data, the classification criteria are not met |
| | The table below indicates whether each agency has listed any ingredient as a carcinogen |

| Component | CAS No | IARC | NTP | ACGIH | OSHA | Mexico |
|---------------|-----------|------------|------------|------------|------------|------------|
| Calcium oxide | 1305-78-8 | Not listed | Not listed | Not listed | Not listed | Not listed |

(g) reproductive toxicity; Based on available data, the classification criteria are not met

(h) STOT-single exposure; Category 3

Results / Target organs Respiratory system.

(i) STOT-repeated exposure; Based on available data, the classification criteria are not met

Target Organs None known.

(j) aspiration hazard; Not applicable
Solid

Symptoms / effects, both acute and delayed Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

Other Adverse Effects The toxicological properties have not been fully investigated.

Endocrine Disrupting Properties This product does not contain any known or suspected endocrine disruptors.

12. Ecological information

Ecotoxicity

Do not empty into drains.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|---------------|------------------|---|------------|------------|
| Calcium oxide | Not listed | LC50: = 1070 mg/L, 96h static (Cyprinus carpio) | Not listed | Not listed |

Persistence and Degradability Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Is not likely mobile in the environment.

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 UN1910
Proper Shipping Name CALCIUM OXIDE
Hazard Class 8
Packing Group III

TDG

UN-No UN1910
Proper Shipping Name CALCIUM OXIDE
Hazard Class 8
Packing Group III

IATA

| | |
|----------------------|---------------|
| UN-No | UN1910 |
| Proper Shipping Name | CALCIUM OXIDE |
| Hazard Class | 8 |
| Packing Group | III |
| IMDG/IMO | Not regulated |

15. Regulatory Information

United States of America Inventory

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|---------------|-----------|------|---|-----------------------------|
| Calcium oxide | 1305-78-8 | X | ACTIVE | - |

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)

Not applicable

TSCA 12(b) - Notices of Export

Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component | CAS No | DSL | NDSL | EINECS | PICCS | ENCS | ISHL | AICS | IECSC | KECL |
|---------------|-----------|-----|------|-----------|-------|------|------|------|-------|----------|
| Calcium oxide | 1305-78-8 | X | - | 215-138-9 | X | X | X | X | X | KE-04588 |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

Not applicable

Clean Air Act

Not applicable

OSHA - Occupational Safety and Health Administration

Not applicable

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|---------------|---------------|------------|--------------|----------|--------------|
| Calcium oxide | X | X | X | - | X |

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Authorisation/Restrictions according to EU REACH Not applicable

| Component | CAS No | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|---------------|-----------|---|---|---|
| Calcium oxide | 1305-78-8 | - | - | - |

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 oxide | 1305-78-8 | Listed | Not applicable | Not applicable | Not applicable |

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Other International Regulations

| 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 oxide | 1305-78-8 | Not applicable | Not applicable | Not applicable | Not applicable |

16. Other Information

Prepared By Product stewardship (Regulatory Affairs)
Thermo Fisher Scientific
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Creation Date 11-Jul-2014
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Revision Summary Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard

Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

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