SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

- Trade name: Calcium oxide, 98%
- Item number: 93-2031
- CAS Number: 1305-78-8
- EC number: 215-138-9

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

No further relevant information available.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Strem Chemicals, Inc.
7 Mulliken Way
NEWBURYPORT, MA 01950
USA
info@strem.com

Further information obtainable from: Technical Department

1.4 Emergency telephone number:
EMERGENCY: CHEMTREC: + 1 (800) 424-9300
During normal opening times: +1 (978) 499-1600

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

- GHS05 corrosion
  Skin Corr. 1C H314 Causes severe skin burns and eye damage.

- GHS07
  Acute Tox. 4 H302 Harmful if swallowed.
  Acute Tox. 4 H312 Harmful in contact with skin.
  Acute Tox. 4 H332 Harmful if inhaled.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the CLP regulation.

- Hazard pictograms

  GHS05 GHS07

Signal word Danger

Hazard-determining components of labelling:
calcium oxide
Trade name: Calcium oxide, 98%

· Hazard statements
  H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
  H314 Causes severe skin burns and eye damage.

· Precautionary statements
  P101 If medical advice is needed, have product container or label at hand.
  P102 Keep out of reach of children.
  P103 Read label before use.
  P222 Do not allow contact with air.
  P260 Do not breathe dust/fume/gas/mist/vapours/spray.
  P303+P361+P353 IF ON SKIN (or hair): Remove/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.
  P403+P233 Store in a well-ventilated place. Keep container tightly closed.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· 2.3 Other hazards

· Results of PBT and vPvB assessment
  · PBT: Not applicable.
  · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.1 Chemical characterisation: Substances
  · CAS No. Description
    1305-78-8 calcium oxide
  · Identification number(s)
    · EC number: 215-138-9

SECTION 4: First aid measures

· 4.1 Description of first aid measures
  · General information:
    Immediately remove any clothing soiled by the product.
    Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  · After inhalation:
    Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
    In case of unconsciousness place patient stably in side position for transportation.
  · After skin contact: Immediately rinse with water.
  · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
  · After swallowing: Call for a doctor immediately.
  · 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
  · 4.3 Indication of any immediate medical attention and special treatment needed
    No further relevant information available.
SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents:
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture
During heating or in case of fire poisonous gases are produced.

5.3 Advice for firefighters
Protective equipment: Mouth respiratory protective device.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions
No special measures required.

6.3 Methods and material for containment and cleaning up:
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

6.4 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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.

Information about fire - and explosion protection: Keep respiratory protective device available.

7.2 Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace:
1305-78-8 calcium oxide
WEL Long-term value: 2 mg/m³

Additional information: The lists valid during the making were used as basis.
Trade name: Calcium oxide, 98%

8.2 Exposure controls

Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

Respiratory protection:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Tightly sealed goggles

9.1 Information on basic physical and chemical properties

General Information

Appearance:
Form: Powder
Colour: White

Odour:
Odour: Odourless
Odour threshold: Not determined.

pH-value:
Not applicable.

Change in condition
Melting point/Melting range: 2580 °C
Boiling point/Boiling range: 2850 °C

Flash point:
Not applicable.

Flammability (solid, gaseous):
Not determined.

Ignition temperature:
Decomposition temperature:
Not determined.

Self-igniting:
Not determined.

Danger of explosion:
Product does not present an explosion hazard.
Trade name: Calcium oxide, 98%

· Explosion limits:
  Upper: Not determined.
  Lower: Not determined.

· Vapour pressure at 20 °C: no data hPa

· Density at 20 °C: 3.3 g/cm³
  Relative density: Not determined.
  Vapour density: Not applicable.
  Evaporation rate: Not applicable.

· Solubility in / Miscibility with water: Insoluble.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:
  Dynamic: Not applicable.
  Kinematic: Not applicable.

· Solvent content:
  Organic solvents: 0.0 %
  VOC (EC): 0.00 %

· Solids content: 100.0 %

· 9.2 Other information
  No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity
  No further relevant information available.

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· 10.3 Possibility of hazardous reactions
  No dangerous reactions known.

· 10.4 Conditions to avoid
  No further relevant information available.

· 10.5 Incompatible materials:
  No further relevant information available.

· 10.6 Hazardous decomposition products
  No dangerous decomposition products known.

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity
  Harmful if swallowed, in contact with skin or if inhaled.

· Primary irritant effect:
  Skin corrosion/irritation
  Causes severe skin burns and eye damage.

· Serious eye damage/irritation
  Causes severe skin burns and eye damage.

· Respiratory or skin sensitisation
  Based on available data, the classification criteria are not met.

· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
  Germ cell mutagenicity
  Based on available data, the classification criteria are not met.

· Carcinogenicity
  Based on available data, the classification criteria are not met.

· Reproductive toxicity
  Based on available data, the classification criteria are not met.

· STOT-single exposure
  Based on available data, the classification criteria are not met.

· STOT-repeated exposure
  Based on available data, the classification criteria are not met.

(Contd. on page 6)
SECTION 12: Ecological information

- 12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- Additional ecological information:
  - General notes: Must not reach sewage water or drainage ditch undiluted or unneutralised.
- 12.5 Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods
- Recommendation
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

- 14.1 UN-Number
  - ADR, IMDG, IATA UN1910
- 14.2 UN proper shipping name
  - ADR 1910 Calcium oxide
  - IMDG, IATA Calcium oxide
- 14.3 Transport hazard class(es)
  - ADR, IATA
    - Class 8 Corrosive substances.
    - Label 8
- 14.4 Packing group
  - ADR, IMDG, IATA III
- 14.5 Environmental hazards:
  - Marine pollutant: No
### 14.6 Special precautions for user

Warning: Corrosive substances.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

### Transport/Additional information:

- IMDG
- **Limited quantities (LQ)**
- **Excepted quantities (EQ)**
  - Code: -

### UN "Model Regulation":

UN 1910 CALCIUM OXIDE, 8, III

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### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I Substance is not listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing MSDS:** Technical Department.

**Contact:** Technical Director

**Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C