

Section 1. Product and Company Identification

Product Name Calcium Peroxide
CAS Number Mixture

Parchem - fine & specialty chemicals
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EMERGENCY RESPONSE NUMBER
CHEMTEL
Toll Free US & Canada: 1 (800) 255-3924
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Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

HCS 2012 (29 CFR 1910.1200)

Oxidizing solids, Category 1 H271: May cause fire or explosion; strong oxidizer.

Serious eye damage, Category 1 H318: Causes serious eye damage.

Specific target organ systemic toxicity - single exposure Category 3 H335: May cause respiratory irritation. (Respiratory system)

GHS Label Elements

Pictograms:



Signal word: DANGER

Hazard and precautionary statements

Hazard Statements

H271: May cause fire or explosion; strong oxidizer.

H318: Causes serious eye damage.

H335: May cause respiratory irritation.

Precautionary Statements

Prevention

P210: Keep away from heat.

P220: Keep/Store away from clothing/combustible materials.

P221: Take any precaution to avoid mixing with combustibles.

P261: Avoid breathing dust/fume/gas/mist/vapors/spray.

P271: Use only outdoors or in a well-ventilated area.



P280: Wear protective gloves/eye protection/face protection.

P283: Wear fire/flame resistant/retardant clothing.

Response

P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

P305 + P351 + P338 + P310 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.

P306 + P360 IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Storage

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

Disposal

P501: Dispose of contents/container to an approved waste disposal plant.

Other hazards which do not result in classification

H401: Toxic to aquatic life.

Oxidizing

Contact with combustible material may cause fire.

Irritating to respiratory system and skin.

Risk of serious damage to eyes.

Section 3. Composition / Information on Ingredients

Common Name Calcium Peroxide

Formula CaO₂

CAS Number Mixture

COMPONENT	CAS NUMBER	CONCENTRATION
Calcium Peroxide	1305-79-9	70 – 80%
Calcium hydroxide (Ca(OH) ₂)	1305-62-0	15 – 20%
Sodium silicate SiO ₂ /Na ₂ O	1344-09-8	1 – 5%



Section 4. First Aid Measures

In case of inhalation: Move to fresh air. If symptoms persist, call a physician.

In case of skin contact: Remove and wash contaminated clothing before re-use. Wash off with soap and water. If symptoms persist, call a physician.

In case of eye contact: Call a physician or poison control center immediately.

In case of eye contact: remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of difficulty of opening the lids, administer an analgesic eye wash (oxybuprocaine).

In case of ingestion: Rinse mouth with water. Do NOT induce vomiting. If accidentally swallowed obtain immediate medical attention. Oxygen or artificial respiration if needed.

Most important symptoms and effects, both acute and delayed: no data available

Indication of any immediate medical attention and special treatment needed

Notes to physician: Immediate medical attention is required.

Section 5. Firefighting Measures

Flash point: Not applicable

Autoignition temperature: The substance or mixture is not classified as self-heating.

Flammability/Explosive limit: no data available

Extinguishing media

Suitable extinguishing media: Water. Water spray

Unsuitable extinguishing media: None.

Special hazards arising from the substance or mixture

Specific hazards during firefighting: Oxidizing. Oxygen released in thermal decomposition may support combustion. Contact with combustible material may cause fire. Contact with flammables may cause fire or explosions. Risk of explosion if heated under confinement.

Hazardous combustion products: Oxygen

Advice for firefighters

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. Cool containers/tanks with water spray.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Keep away from incompatible products

Advice for emergency responders: Sweep up to prevent slipping hazard.

Environmental precautions: Should not be released into the environment.



Limited quantity: Flush into sewer with plenty of water.

Large quantities: If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up: Sweep up and shovel into suitable containers for disposal. Do not mix waste streams during collection. Avoid dust formation. Treat recovered material as described in the section "Disposal considerations". All receiving equipment should be clean, vented, dry, labeled and made of material that is compatible with the product. Never return spills in original containers for re-use.

Section 7. Handling and Storage

Precautions for safe handling: Avoid dust formation. Ensure adequate ventilation. Keep away from heat and sources of ignition. Use only clean and dry utensils. Never return unused material to storage receptacle.

Hygiene measures: When using do not eat, drink or smoke. Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice. Do not ingest. Eye wash bottles or eye wash stations in compliance with applicable standards.

Conditions for safe storage, including any incompatibilities

Packaging material

Suitable material: Stainless steel. Plastic materials. Carton + Polyethylene.

Unsuitable material: no data available

Section 8. Exposure Controls / Personal Protection

Components with workplace occupational exposure limits

Ingredients	Value type	Value	Basis
Calcium peroxide	TWA	3 mg/m ³	Acceptable Exposure Limit
Calcium hydroxide (Ca(OH) ₂)	TWA	5 mg/m ³	American Conference of Governmental Industrial Hygienists
Calcium hydroxide (Ca(OH) ₂)	TWA	5 mg/m ³	National Institute for Occupational Safety and Health
Calcium hydroxide (Ca(OH) ₂)	TWA	15 mg/m ³	Occupational Safety and Health Administration - Table Z-1 Limits for Air Contaminants
Calcium hydroxide (Ca(OH) ₂)	TWA	5 mg/m ³	Occupational Safety and Health Administration - Table Z-1 Limits for Air Contaminants

Control measures

Engineering measures: Provide appropriate exhaust ventilation at places where dust is formed. Apply technical measures to comply with the occupational exposure limits.

Individual protection measures

Respiratory protection: Use only respiratory protection that conforms to international/ national standards. Use NIOSH approved respiratory protection. Effective dust mask

Hand protection: Wear suitable gloves.

Suitable material: PVC. Neoprene. Natural Rubber.

Eye protection: Goggles

Skin and body protection: Dust impervious protective suit

Hygiene measures: When using do not eat, drink or smoke. Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice. Do not ingest. Eye wash bottles or eye wash stations in compliance with applicable standards.

Section 9. Physical and Chemical Properties

Form: powder

Physical state: solid

Color: light yellow

Particle size

2.125 µm: d 10

11.346 µm: d 50

31.939 µm: d 90

Odor Threshold: no data available

pH: 11.7 (10 g/l) (68 °F (20 °C)) saturated aqueous solution

pKa: 11.6

Hydrogen peroxide

< 0.0 (77 °F (25 °C))

Calcium hydroxide

Melting point/range: 527 °F (275 °C)

Decomposition: yes

Boiling point/boiling range

Thermal decomposition: yes

Flash point: Not applicable

Evaporation rate (Butylacetate =1): no data available

Flammability (solid, gas): The product is not flammable.

Flammability/Explosive limit Explosiveness: Not explosive



Autoignition temperature: The substance or mixture is not classified as self-heating.

Vapor pressure: Not applicable

Vapor density: Not applicable

Density

Bulk density: 450 - 550 kg/m³

Relative density: 2.81 (68 °F (20 °C))

Solubility

Water solubility: 1.65 g/l (68 °F (20 °C))

Calcium hydroxide

Decomposes in contact with water.

Partition coefficient n-octanol/water: Not applicable

Thermal decomposition: > 527 °F (> 275 °C)

Viscosity

Viscosity, dynamic: Not applicable

Explosive properties: no data available

Oxidizing properties: The substance or mixture is classified as oxidizing with the category 1.

Oxidizing

Molecular weight: 72.1 g/mol

Section 10. Stability and Reactivity

Reactivity: Decomposes when moist. Decomposes on heating.

Chemical stability: Stable under recommended storage conditions. Potential for exothermic hazard

Possibility of hazardous reactions: Contact with combustible material may cause fire. Contact with flammables may cause fire or explosions. Risk of explosion if heated under confinement. Fire or intense heat may cause violent rupture of packages.

Conditions to avoid: Exposure to moisture. To avoid thermal decomposition, do not overheat.

Incompatible materials: Water. Acids. Bases. Heavy metal salts. Reducing agents. Organic materials. Flammable materials. Combustible material.

Hazardous decomposition products: Oxygen

Section 11. Toxicological Information

Acute toxicity

Acute oral toxicity

LD50: > 5,000 mg/kg - Rat

Acute inhalation: toxicity no data available

Acute dermal toxicity

LD50: > 2,000 mg/kg - Rat

Acute toxicity (other routes of administration): no data available

Skin corrosion/irritation

Rabbit: No skin irritation

Serious eye damage/eye irritation

Rabbit: Risk of serious damage to eyes.

Respiratory or skin sensitization: Does not cause skin sensitization. Guinea pig. Did not cause sensitization on laboratory animals.

Mutagenicity

Genotoxicity in vitro: In vitro tests showed mutagenic effects

Genotoxicity in vivo: Animal testing did not show any mutagenic effects. In vivo tests did not show mutagenic effects

Carcinogenicity

Mouse

Oral

Exposure time: Prolonged exposure

Target Organs: duodenum

carcinogenic effects

Mouse

Dermal

Exposure time: Prolonged exposure. Animal testing did not show any carcinogenic effects.

This product does not contain any ingredient designated as probable or suspected human carcinogens by: NTP, IARC, OSHA, ACGIH

Toxicity for reproduction and development

Toxicity to reproduction/fertility: No toxicity to reproduction

Developmental Toxicity/Teratogenicity: no data available

STOT

STOT-single exposure

Routes of exposure: Inhalation. May cause respiratory irritation. H₂O₂ 50 %

STOT-repeated exposure

Oral 90-day: Mouse

LOAEL: 300 ppm

Target Organs: Gastrointestinal tract

Oral 90-day: Mouse
NOAEL: 100 ppm
Inhalation: 28-day - Rat
LOAEL: 10 ppm
Target Organs: Respiratory system
Inhalation: 28-day - Rat
NOAEL: 2 ppm

Aspiration toxicity: no data available

Section 12. Ecological Information

Toxicity

Aquatic Compartment

Acute toxicity to fish

LC50 - 96 h: 16.4 mg/l - Pimephales promelas (fathead minnow)

NOEC - 96 h: 4.3 mg/l - Pimephales promelas (fathead minnow)

Acute toxicity to daphnia and other aquatic invertebrates

EC50 - 48 h: 6.8 mg/l - Daphnia magna (Water flea) semi-static test. Fresh water

Toxicity to aquatic plants

EC50 - 72 h: 2.6 mg/l - Skeletonema costatum (marine diatom)

Growth rate

NOEC - 72 h: 0.63 mg/l - Skeletonema costatum (marine diatom)

Chronic toxicity to daphnia and other aquatic invertebrates

NOEC: 0.63 mg/l - 21 Days - Daphnia magna (Water flea) Reproduction Test

Persistence and degradability

Abiotic degradation

Photodegradation: Not applicable. Medium. Air complexation/precipitation of inorganic materials. Medium. Water. Soil hydrolyzes. Medium. Water

Biodegradation

Biodegradability: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential

Bioconcentration factor (BCF): Not applicable

Mobility in soil

Adsorption potential (Koc): Air. Not applicable. Water. Low solubility and mobility.



Soil/sediments

Results of PBT and vPvB assessment no data available: Other adverse effects no data available

Other adverse effects: no data available

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

DOT

UN number: UN1457

Proper shipping name: CALCIUM PEROXIDE

Transport hazard class: 5.1

Label(s): 5.1

Packing group: II

ERG No: 140

Environmental hazards

Marine pollutant: NO

TDG

UN number: UN1457

Proper shipping name: CALCIUM PEROXIDE

Transport hazard class: 5.1

Label(s): 5.1

Packing group: II

ERG No: 140

Environmental hazards

Marine pollutant: NO

NOM: no data available

IMDG

UN number: UN1457

Transport hazard class: 5.1

Label(s): 5.1

Packing group: II

Environmental hazards

Marine pollutant: NO



Special precautions for user: EmS F-G, S-Q

IATA

UN number: UN1457

Proper shipping name: CALCIUM PEROXIDE

Transport hazard class: 5.1

Label(s): 5.1

Packing group: II

Packing instruction (cargo aircraft): 562

Max net qty/pkg: 25.00 kg

Packing instruction (passenger aircraft): 558

Max net qty/pkg: 5.00 kg

Environmental hazards: NO

Section 15. Regulatory Information

Inventory Information	Status
United States TSCA Inventory	In compliance with the inventory
Mexico INSQ (INSQ)	In compliance with the inventory
Canadian Domestic Substances List (DSL)	In compliance with the inventory
New Zealand. Inventory of Chemical Substances	In compliance with the inventory
Australia Inventory of Chemical Substances (AICS)	In compliance with the inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	In compliance with the inventory
Korea. Korean Existing Chemicals Inventory (KECI)	In compliance with the inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	In compliance with the inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	In compliance with the inventory

Federal Regulations

US. EPA EPCRA SARA Title III

SARA HAZARD DESIGNATION SECTIONS 311/312 (40 CFR 370)

Fire Hazard: yes

Reactivity Hazard: no

Sudden Release of Pressure Hazard: no

Acute Health Hazard: yes

Chronic Health Hazard: no



Section 313 Toxic Chemicals (40 CFR 372.65): This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Section 302 Emergency Planning Extremely Hazardous Substance Threshold Planning Quantity (40 CFR 355): No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355): This material does not contain any components with a SARA 302 RQ.

Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355): This material does not contain any components with a section 304 EHS RQ.

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4): This material does not contain any components with a CERCLA RQ.

State Regulations

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65): This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

NFPA (National Fire Protection Association) - Classification

Health: 2 moderate

Flammability: 0 minimal

Instability or Reactivity: 0 minimal

Special Notices: OX Oxidizer

HMIS (Hazardous Materials Identification System (Paint & Coating)) - Classification

Health: 2 moderate

Flammability: 0 minimal

Reactivity: 1 slight

PPE: Determined by User; dependent on local conditions

Section 16. Other Information

Disclaimer: 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.

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