

**SAFETY DATA SHEET**  
**PermeOx® Ultra Granular**

**SDS # :** 1305-79-9-3  
**Revision date:** 2021-02-09  
**Format:** NA  
**Version** 1.04



**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier**

**Product Name** PermeOx® Ultra Granular  
**CAS-No** 1305-79-9  
**Synonyms** Calcium Peroxide.  
**Alternate Commercial Name** PermeOx® Ultra Pellets, PermeOx® Ultra Granular 2018

**Recommended use of the chemical and restrictions on use**

**Recommended Use:** Environmental applications; For the remediation of contaminated groundwater

**Manufacturer/Supplier**

PeroxyChem LLC  
2005 Market Street  
Suite 3200  
Philadelphia, PA 19103  
Phone: +1 267/ 422-2400 (General Information)  
E-Mail: sdsinfo-pxc@evonik.com

**Emergency telephone numbers**

For leak, fire, spill or accident emergencies, call:  
1 800 / 424 9300 (CHEMTREC - U.S.A.)  
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)  
+1 303/ 389-1409 (Medical - U.S. - Call Collect)

## 2. HAZARDS IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Oxidizing Solids	Category 2

### GHS Label elements, including precautionary statements

#### EMERGENCY OVERVIEW

#### **Danger**

#### **Hazard Statements**

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

H272 - May intensify fire; oxidizer



#### **Precautionary Statements - Prevention**

P280 - Wear eye protection/ face protection

P261 - Avoid breathing dust.

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

P210 - Keep away from heat

P220 - Keep/Store away from clothing/combustible materials

P221 - Take any precaution to avoid mixing with combustibles

#### **Precautionary Statements - Response**

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 or doctor

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P312 - Call a POISON CENTER or doctor if you feel unwell

P370 + P378 - In case of fire: Use water spray for extinction

#### **Precautionary Statements - Storage**

P403 - Store in a well-ventilated place

#### **Precautionary Statements - Disposal**

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

#### **Hazards not otherwise classified (HNOC)**

No hazards not otherwise classified were identified.

#### **Other Information**

Reacts with moisture to liberate oxygen

Reacts with moisture to liberate oxygen

**Unknown acute toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No	Weight %
Calcium Peroxide	1305-79-9	>75
Calcium Hydroxide	1305-62-0	<25

### 4. FIRST AID MEASURES

<b>Eye Contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids intermittently. Consult a physician.
<b>Skin Contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If breathing difficulty or discomfort occurs and persists, obtain medical attention.
<b>Ingestion</b>	Rinse mouth with water and afterwards drink plenty of water or milk. Do not induce vomiting or give anything by mouth to an unconscious person. Call a poison control center or doctor immediately for treatment advice. Never give anything by mouth to an unconscious person.
<b>Most important symptoms and effects, both acute and delayed</b>	Corneal lesions and irreversible damage if contact with the eyes.
<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	Treat symptomatically

### 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Flood with water.
<b>Unsuitable extinguishing media</b>	Dry chemical. Foam.
<b>Specific Hazards Arising from the Chemical</b>	Not flammable. Decomposes under fire conditions to release oxygen that intensifies the fire.
<b>Explosion data</b>	
<b>Sensitivity to Mechanical Impact</b>	Not sensitive.
<b>Sensitivity to Static Discharge</b>	Not sensitive.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	Avoid contact with the skin and the eyes. Avoid dust formation. Ensure adequate ventilation. For personal protection see Section 8.
<b>Other</b>	For further clean-up instructions, call PeroxyChem Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
<b>Environmental Precautions</b>	Prevent material from entering into soil, ditches, sewers, waterways, and/or groundwater. See Section 12, Ecological Information for more detailed information.
<b>Methods for Containment</b>	Vacuum or shovel waste into a drum and label contents for disposal. Do not return product to the original storage container/tank due to risk of decomposition. Keep combustibles (wood, paper, oil, etc) away from spilled material.
<b>Methods for cleaning up</b>	After cleaning, flush away traces with water. Do not flush powdered material to sewer; Runoff to sewer may create fire or explosion hazard.

**7. HANDLING AND STORAGE**

<b>Handling</b>	Avoid contact with skin and eyes. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment if release of airborne dust is expected. If compounded with organics or combustible materials be sure to exclude moisture.
<b>Storage</b>	Keep tightly closed in a dry and cool place. Do not store near combustible materials. Keep away from heat and sources of ignition i.e., steam pipes, radiant heaters, hot air vents or welding sparks. Reacts with moisture. Keep container tightly closed.
<b>Incompatible products</b>	Heavy metals. Combustible materials.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parametersExposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Calcium Hydroxide 1305-62-0	TWA: 5 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	Mexico: TWA 5 mg/m <sup>3</sup>
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Calcium Hydroxide 1305-62-0	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>

Appropriate engineering controls

**Engineering measures** Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

<b>Eye/Face Protection</b>	For dust, splash, mist or spray exposure, wear chemical protective goggles.
<b>Skin and Body Protection</b>	Wear suitable protective clothing. Protective shoes or boots.
<b>Hand Protection</b>	Rubber/latex/neoprene or other suitable chemical resistant gloves. Wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.
<b>Respiratory Protection</b>	For dust, splash, mist or spray exposures wear a filtering mask.
<b>Hygiene measures</b>	Clean water, preferably an eyewash station and a safety shower, should be available for

washing in case of eye or skin contamination. Handle in accordance with good industrial hygiene and safety practice.

**General information**

If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	Powder
<b>Physical State</b>	Solid
<b>Color</b>	White to off white
<b>Odor</b>	odorless
<b>Odor threshold</b>	Not applicable
<b>pH</b>	11.4 - 11.7 (1 % suspension in water) @ 25 °C
<b>Melting point/freezing point</b>	Decomposes on heating @ ~275 °C
<b>Boiling Point/Range</b>	No information available
<b>Flash point</b>	Not applicable No information available
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid, gas)</b>	Substance does not burn but will support combustion
<b>Flammability Limit in Air</b>	Not applicable
<b>Upper flammability limit:</b>	No information available
<b>Lower flammability limit:</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Density</b>	No information available
<b>Specific gravity</b>	2.92
<b>Water solubility</b>	slightly soluble
<b>Solubility in other solvents</b>	Soluble in acids
<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available Product is not self-ignitable.
<b>Decomposition temperature</b>	275 °C
<b>Viscosity, kinematic</b>	No information available (Solid)
<b>Viscosity, dynamic</b>	No information available
<b>Explosive properties</b>	Not explosive
<b>K<sub>st</sub></b>	0
<b>Oxidizing properties</b>	Strong oxidizer
<b>Other Information</b>	
<b>Molecular weight</b>	72.8 (CaO <sub>2</sub> )
<b>Bulk density</b>	45 - 34 lb/cu ft (loose)

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	Oxidizer: Avoid contact with combustible materials.
<b>Chemical Stability</b>	Stable under recommended storage conditions. Decomposition can occur on exposure to heat or moisture.
<b>Possibility of Hazardous Reactions</b>	Contamination, heat, and humid conditions will enhance and accelerate decomposition. However, unlike most oxidizers, decomposition is endothermic.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Heat. (decomposes at 275 °C). Humid air. Contamination. Grinding with organics.
<b>Incompatible materials</b>	Heavy metals. Combustible materials.

**Hazardous Decomposition Products** Oxygen which supports combustion. Calcium oxides.

## 11. TOXICOLOGICAL INFORMATION

### Product Information

<b>Unknown acute toxicity</b>	0% of the mixture consists of ingredient(s) of unknown toxicity
<b>LD50 Oral</b>	> 5 g/kg (rat)
<b>LD50 Dermal</b>	> 10 g/kg (rat)
<b>LC50 Inhalation</b>	> 17 mg/L 1 hr (rat)
<b>Serious eye damage/eye irritation</b>	Corrosive. Risk of serious damage to eyes.
<b>Skin corrosion/irritation</b>	Non-irritating (rabbit). May cause skin irritation in susceptible persons.
<b>Sensitization</b>	No information available.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation	NOAEL Oral Value
Calcium Hydroxide (1305-62-0)	7340 mg/kg ( Rat )			

### Information on toxicological effects

**Symptoms** Dust is irritating eyes, nose, throat, and lungs.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Carcinogenicity</b>	There are no known carcinogenic chemicals in this product.
<b>Mutagenicity</b>	This product is not recognized as mutagenic by Research Agencies
<b>Reproductive toxicity</b>	This product is not recognized as reprotox by Research Agencies.
<b>STOT - single exposure</b>	May cause respiratory irritation.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

**Ecotoxicity effects** The environmental impact of this product has not been fully investigated

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to Microorganisms	Toxicity to daphnia and other aquatic invertebrates
Calcium Hydroxide		96 h LC50: = 160 mg/L (Gambusia affinis) static		

**Persistence and degradability** Biodegradability does not pertain to inorganic substances.

**Bioaccumulation** Does not bioaccumulate.

**Mobility** No information available.

**Other Adverse Effects** None known.

**13. DISPOSAL CONSIDERATIONS**

**Waste disposal methods** This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). Dispose of in accordance with local regulations.

**US EPA Waste Number** D001.

**Contaminated Packaging** Empty remaining contents. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. TRANSPORT INFORMATION****DOT**

UN/ID no 1457  
Proper Shipping Name CALCIUM PEROXIDE MIXTURE  
Hazard class 5.1  
Packing Group II

**TDG**

UN/ID no 1457  
Proper Shipping Name CALCIUM PEROXIDE MIXTURE  
Hazard class 5.1  
Packing Group II

**ICAO/IATA**

UN/ID no 1457  
Proper Shipping Name CALCIUM PEROXIDE MIXTURE  
Hazard class 5.1  
Packing Group II

**IMDG/IMO**

UN/ID no 1457  
Proper Shipping Name CALCIUM PEROXIDE MIXTURE  
Hazard class 5.1  
Packing Group II

**ADR/RID**

**UN/ID no** UN 1457  
**Proper Shipping Name** CALCIUM PEROXIDE MIXTURE  
**Hazard class** 5.1  
**Packing Group** II

**OTHER INFORMATION** This material is shipped in 25 lb. plastic pails, and 30 lb. and 100 lb. fiber drums.

**15. REGULATORY INFORMATION**

**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**

This product has the following hazards that are reportable under The Emergency Planning and Community Right-to-Know rule (EPCRA Tier II):

- Oxidizer
- Serious eye damage/eye irritation
- Specific Target Organ Toxicity (STOT) - Single Exposure

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA/EPCRA**

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

**CWC (Chemical Weapons Convention) - Annex on Chemicals** Not applicable

**US State Regulations**

**U.S. State Right-to-Know Regulations**

This product contains the following substances regulated under state Right-to-Know laws:

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Calcium Hydroxide	X	X	X		X
Calcium Peroxide		X			

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**CANADA**

**Environmental Emergencies**

This product contains no substances listed under Canada's Environmental Emergency regulations.

**Canadian National Pollutant Release Inventory**

This product contains no substances reportable under Canada's National Pollutant Release Inventory regulations.



**International Inventories**

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/EL INCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)	NZIoC (New Zealand)
Calcium Peroxide 1305-79-9	X	X	215-139-4	X	X	X	X	X	X
Calcium Hydroxide 1305-62-0	X	X	215-137-3	X	X	X	X	X	X

All ingredients are directly listed on the active TSCA Inventory

**Mexico**

Mexico - Grade

Moderate risk, Grade 2

<b>16. OTHER INFORMATION</b>
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NFPA	Health Hazards 2	Flammability 0	Stability 1	Special Hazards OX
HMIS	Health Hazards 2	Flammability 0	Physical hazard 1	Special precautions J

NFPA/HMIS Ratings Legend

Special Hazards: OX = Oxidizer  
 Protection=J (Safety goggles, gloves, apron, combination dust and vapor respirator)

Revision date:

2021-02-09

Revision note

SDS sections updated: 1.

Issuing Date:

2021-02-08

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Prepared By:

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**End of Safety Data Sheet**