



PRODUCT SAFETY INFORMATION

Oxy-Clean Advanced™ 18SR

1. Chemical Product and Supplier Identification

Product Name:	Oxy-Clean Advanced™ 18SR
Chemical Name:	Calcium Peroxide
Synonyms:	Calcium dioxide, Calcium superoxide
Chemical Formula:	CaO ₂
Molecular Weight:	72.08
CAS Number:	1305-79-9
EINECS Number:	2154-139-4
Grades/Trade Names:	Oxy-Clean Advanced™ 18SR Calcium Peroxide (60% Calcium Peroxide)
Distributed by:	ERE 8605 Champ-d'Eau St. Leonard, Quebec, H1P 3B8 Canada

2. Composition/Information on Ingredients

Components	Formula	CAS No.	Percent
Calcium peroxide	CaO ₂	1305-79-9	>70
Other inorganic compounds			<30

3. Hazards Identification

Emergency Overview:° Oxidizer - Contact with combustibles may cause fire. In a fire, this material decomposes, releasing oxygen which may intensify the fire.

Potential health effects:

- ° Irritating to mucous membrane, eyes and skin.
- ° In case of product splashing into the eyes and face, treat eyes first.
- ° Do not dry soiled clothing near an open flame or heat source.
- ° Submerge contaminated clothing in water prior to drying.

Inhalation:

- ° At high concentrations, slight nose and throat irritation with a cough.
- ° In case of repeated or prolonged exposure: risk of sore throat, nosebleeds.

- Eye contact:**
- Severe eye irritation, watering and redness.
 - Risk of serious or permanent eye lesions.
- Skin contact:**
- Slight irritation.
 - In case of repeated contact: risk of dermatitis.
- Ingestion:**
- Severe irritation of the mouth, throat, esophagus and stomach.
 - Bloating of stomach, belching.
 - Nausea, vomiting and diarrhea

4. First-Aid Measures

- General recommendations:**
- Do not dry soiled clothing near an open flame or incandescent heat source.
- Inhalation:**
- Remove the subject from dusty environment and let him blow his nose.
 - Consult with a physician in case of respiratory symptoms.
- Eye contact:**
- Flush eyes with running water for 15 minutes while keeping the eyelids wide open.
 - Consult with an ophthalmologist in all cases.
- Skin contact:**
- Remove contaminated shoes, socks and clothing; wash the affected skin with running water.
 - Clean clothing
 - Consult a physician in case of persistent pain and redness.
- Ingestion:**
- Consult with a physician in all cases.
 - If the subject is completely conscious, rinse mouth and administer fresh water. Do not induce vomiting.
 - If the subject is unconscious, loosen collar and tight clothing, lay the victim on his/her left side, give nothing by mouth. Keep warm with blanket. Do not induce vomiting.

5. Fire Fighting Measures

- Flash Point:** Not applicable
- Flammability:** Not applicable
- Auto-ignition temperature:** Not applicable
- Danger of explosion:** Non-explosive

Common extinguishing methods: Large quantities of water, water spray.
In case of fire in close proximity, all means of extinguishing are acceptable

Specific hazards: ◦ Oxidizing substance

- Oxygen released on exothermic decomposition may support combustion.
- Pressure burst may occur due to decomposition in confined spaces or containers.
- Wet product decomposes exothermically and may cause combustion of organic materials.

Fire fighting instructions:

- Evacuate all non-essential personnel.
- Personnel should wear normal protective equipment (full bunker gear) and positive pressure self-contained breathing apparatus.
- Intervention only by capable personnel who are trained and aware of the hazards of the product.
- If safe to do so, remove unaffected product to a safe area.

6. Accidental Release Measures

Precautions:

- Observe the protection measures given in sections 5 and 8.
- Avoid materials and products which are incompatible with the product (see Section 10).
- Avoid direct contact of the product with water.

Cleanup:

- Collect the product with suitable means, shovel or sweep, avoiding dust formation.
- All receiving equipment should be clean, dry, vented, labeled and made of material that is compatible with the product.
- Do not return spilled or contaminated material to inventory.
- Clean the area with large quantities of water.
- For disposal methods, refer to Section 13.

Precautions for protection

- Of the environment:**
- Prevent unapproved discharges into the environment (sewers, rivers, soils, etc).
 - Immediately notify the appropriate authorities in case of significant discharge.

7. Handling and Storage

Handling:

- Clean and dry process piping and equipment before using the product.
- Never return unused product to original storage container.
- Keep away from incompatible products.
- Containers and equipment used to handle the product should be used exclusively for that product.
- Avoid any contact with water or humidity
- For more information consult the supplier.

Storage:

- In a dry area.
- Protect from direct sunlight
- Keep away from heat sources
- Keep away from reactive products (See Section 10).
- Store at temperatures less than 40°C (104°F) in vented containers.

Other Precautions:

- Warn personnel about the dangers of the product.
- Follow protective measures in Section 8.

Packaging:

- Stainless Steel.
- Plastic material.
- Glass.

8. Exposure Controls/Personal Protection

Exposure Limit Values:

Authorized limit Values	TLV® ACGIH® USA (2000)	OSHA PEL	NIOSH REL (1994)
Calcium Hydroxide	5 mg/m ³ TWA	Total dust - 15 mg/m ³ TWA Resp. fraction - 5 mg/m ³ TWA	5 mg/m ³ TWA
Calcium Carbonate	10 mg/m ³ TWA	Total dust - 15 mg/m ³ TWA Resp. fraction - 5 mg/m ³ TWA	Total dust - 10 mg/m ³ TWA Resp. fraction - 5 mg/m ³ TWA

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- Exposure Control:**
- Premises ventilation
 - Maintain employee exposures to levels below the applicable exposure limits.
 - Follow the protective measures given in section 7.
- Ventilation:**
- Provide ventilation in work areas to keep dust below the following applicable limits:
- Respiratory Protection:**
- For most conditions no respiratory protection should be needed; however, in dusty atmospheres use a NIOSH-approved dust respirator.
- Hand protection:**
- Impervious protective gloves made of nitrile or natural rubber, neoprene.
- Eye protection:**
- Dust proof chemical goggles.
- Skin protection:**
- For brief contact, no precautions other than clean body-covering clothing should be needed.
 - When prolonged or frequently repeated contact could occur, use protective clothing such as PVC or rubber impervious to this material.
- Other Precautions:**
- Safety shower and eyewash stations.
 - Consult your industrial hygienist or safety manager for the selection of personal protective equipment suitable for the working conditions.
- Other Information:**
- Use good hygiene practices when handling this product including changing of work clothes after use.
 - Do not eat, drink or smoke in areas where this material is handled.

9. Physical and Chemical Properties

- Appearance:**
- Granules.
- Color:**
- Pale yellow.
- Odor:**
- Odorless
- pH:**
- 11 – 13 (saturated solution).
- Decomposition temperature:**
- > 698° F (>370° C)
- Flash Point:**
- Not applicable.
- Flammability:**
- Not applicable.(solid, gas)

Explosive Properties: ° Non explosive.

Oxidizing Properties: ° Oxidizer.Vapor Pressure:Not applicable.

Bulk Density: ° Specific gravity (H2O=1): 0.5 ± 0.075 g/mL (loose method).

Solubility: ° Water: 1.65 g/L @ 20°C (68°F) for calcium hydroxide; < 0.01% for calcium peroxide..

Partition coefficient: P (noctanol/water): ° Not applicable.

Viscosity: ° Not applicable.

Vapor Density (air=1): ° Not applicable.

Evaporation Rate: ° Not applicable.

10. Stability and Reactivity

Stability: ° Stable under certain conditions.

Conditions to avoid: ° Heat/Sources of heat
° Moisture

Materials to avoid: ° Water
° Acids
° Bases
° Salts of heavy metals
° Reducing agents
° Organic materials
° Flammable substances

Hazardous decomposition products:
° Oxygen
° Hydrogen peroxide
° Steam
° Heat

Hazardous Polymerization:
° Does not occur

Other information: ° None

11. Toxicological Information

Acute toxicity: ° Inhalation, LC₅₀, rat, > 5000 mg/m³ (Powder 35%)
° Oral route – LD₅₀, rat, >2000 mg/kg (Powder 50%)
° Dermal route – LD₅₀, rat, >2000 mg/kg (Powder 50%)

- Irritation:** ◦ Eyes, severe irritation, rabbit
- Sensitization:** ◦ No data
- Chronic toxicity:** ◦ In vitro, no mutagenic effect (Powder 50%).
 ◦ Target organ effects: eyes and respiratory passages.
- Carcinogenic Designation:** ◦ None.

12. Ecological Information

- Acute eco toxicity:** ◦ 10 mg Ca(OH)₂/L: pH = 9.0; 100 mg Ca(OH)₂/L: pH = 10.6.
 ◦ Fish, Cyprinus carpio, LC50, 48 hours, 160 mg/L.
 ◦ Crustaceans, Daphnia magna, EC50, 24 hours: 25.6 mg/L (powder 16%).
- Chronic eco toxicity:** ◦ No data
- Mobility:** ◦ Low solubility and mobility.
- Degradation Abiotic:** ◦ Water slow hydrolysis.
 ◦ Degradation products: calcium hydroxide.
 ◦ Water/Soil complexation/precipitation.
 ◦ Carbonates/sulfates present at environmental concentrations.
 ◦ Degradation products: carbonates/sulfates sparingly soluble.
- Biotic:** ◦ Not applicable (inorganic compound).
- Potential for bioaccumulation:**
 ◦ Not applicable (ionizable inorganic compound).
- Other adverse effects / Comments:**
 ◦ Observed effects are related to alkaline properties of the product.
 ◦ Hazard for the environment is limited due to the product properties of: no bioaccumulation; weak solubility and precipitation as carbonate or sulfate in aquatic environment.
 ◦ Diluted product is rapidly neutralized at environmental pH.

13. Disposal Considerations

- Waste treatment:** ◦ Dispose of in an approved waste facility operated by an authorized contractor in compliance with Federal, state and local regulations.
- Packaging treatment:** ◦ The empty and clean containers are to be recycled or disposed of in conformity with local regulations.
- RCRA Hazardous Waste:**
 ◦ Listed as D001 (Ignitability)

14. Transport Information

Mode	DOT	IMDG	IATA
UN Number	1457	1457	1457
Class (Subsidiary)	5.1	5.1	5.1
Proper Shipping Name	Calcium Peroxide	Calcium Peroxide	Calcium Peroxide
Hazard Label (Subsidiary)	Oxidizer 5.1	Oxidizing Agent	Oxidizer
Placard (Subsidiary)	5.1		
Packing Group	II	II	II
Reportable Quantity	100 lbs		
Emergency Info	ERG: 140	EmS: 5.1-04	ERG Code: 5L
STCC #	4918717		

15. Regulatory Information

National Regulations (US)

TSCA Inventory 8(b): Yes

CERCLA Hazardous Substance (40 CFR Part 302)

Listed substance: No

Unlisted substance: Yes

Reportable Quantity

(RQ): 100 pounds

Characteristic(s) Ignitability

RCRA Waste Number: D001

SARA, Title III, Sections 302/303
(40 CFR Part 355 – Emergency Planning and Notification)
Extremely hazardous substance: No

SARA, Title III, Sections 311/312
(40 CFR Part 370 – Hazardous Chemical Reporting: Community Right-to-Know)

Hazard category: Fire hazard
Immediate health hazard

Threshold planning quantity: 10,000 pounds

SARA, Title III, Section 313
(40 CFR Part 372 – Toxic Chemical Release Reporting: Community Right-to-Know)

Extremely hazardous substance: No

WHMIS C Oxidizing material

Classification

D2B Poisonous and Infectious Material
Materials Causing Other Toxic Effects – Eye and skin irritant

Domestic Substances List: Listed, DSL #8694

This product has been classified in accordance with the hazard criteria of the CPR and the product safety information contains all of the information required by the CPR.

16. Other Information

HMIS® Rating:

Health – 2 Flammability – 0 Reactivity – 1 PPE - Required

HMIS® is a registered trademark of the National Paint and Coating Association

NFPA® Rating:

Health – 2 Flammability – 0 Reactivity – 1 Special hazards – OX

NFPA® is a registered trademark of the National Fire Protection Association.

Other Information:

The previous information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations or mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. (Unless noted to the contrary, the technical information applies only to pure product).

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