

**SAFETY DATA SHEET
KLOZUR® ONE**

**SDS # : 7775-27-1-3
Revision date: 2021-02-17
Format: NA
Version 1.01**



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name KLOZUR® ONE

UN/ID no UN 1505

Recommended use of the chemical and restrictions on use

Recommended Use: In situ and ex situ chemical oxidation of contaminants and compounds of concern for environmental remediation applications.

Restrictions on Use No uses to be advised against were identified.

Manufacturer/Supplier

PeroxyChem LLC
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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)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

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

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2B
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Oxidizing Solids	Category 3

GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Danger

Hazard Statements

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
 H335 - May cause respiratory irritation
 H319 - Causes serious eye irritation
 H315 - Causes skin irritation
 H317 - May cause an allergic skin reaction
 H302 - Harmful if swallowed
 H272 - May intensify fire; oxidizer



Precautionary Statements - Prevention

P261 - Avoid breathing dust.
 P285 - In case of inadequate ventilation wear respiratory protection
 P271 - Use only outdoors or in a well-ventilated area
 P280 - Wear protective gloves/ protective clothing
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 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
 P337 + P313 - If eye irritation persists: Get medical advice/ attention
 P302 + P352 - IF ON SKIN: Wash with plenty of water.
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention
 P304 + P341 - IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing
 P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor
 P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
 P330 - Rinse mouth
 P370 + P378 - In case of fire: Use water spray for extinction

Precautionary Statements - Storage

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

Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

Other Information

Risk of decomposition by heat or by contact with incompatible materials

Unknown acute toxicity

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No	Weight %
Sodium Persulfate	7775-27-1	95
inorganic salt	Proprietary	< 1
organic salt	Proprietary	< 5

PeroxyChem is withholding the identity of specific chemicals in this product as confidential business information.

4. FIRST AID MEASURES

General Advice	Remove from exposure, lie down. Show this material safety data sheet to the doctor in attendance.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids intermittently. Consult a physician.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.
Inhalation	Remove from exposure, lie down. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth. Drink 1 or 2 glasses of water.
Most important symptoms and effects, both acute and delayed	Itching; Redness; Coughing and/ or wheezing.
Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Water. Cool containers with flooding quantities of water until well after fire is out.
Unsuitable extinguishing media	Do not use carbon dioxide or other gas filled fire extinguishers; they will have little effect on decomposing persulfate.
Specific Hazards Arising from the Chemical	Decomposes under fire conditions to release oxygen that intensifies the fire.

Explosion data

Sensitivity to Mechanical Impact Not sensitive.
Sensitivity to Static Discharge Not sensitive.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Keep off any unprotected persons. Avoid contact with the skin and the eyes. Avoid breathing dust. Wear personal protective equipment.

Other Never add other substances or combustible waste to product residues.

Environmental Precautions Prevent material from entering into soil, ditches, sewers, waterways, and/or groundwater. See Section 12, Ecological Information for more detailed information.

Methods for Containment Vacuum, shovel or pump waste into a drum and label contents for disposal. Avoid dust formation. Store in closed container.

Methods for cleaning up Clean up spill area and treat as special waste. Dispose of waste as indicated in Section 13.

7. HANDLING AND STORAGE

Handling Wear personal protective equipment. Use only in area provided with appropriate exhaust ventilation. Avoid dust formation. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Avoid contact with skin and eyes. Avoid breathing dust. Remove and wash contaminated clothing before re-use. Reference to other sections.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Do not store near combustible materials. Avoid contamination of opened product. Keep away from food, drink and animal feedings. Avoid formation and deposition of dust.

Incompatible products Acids, alkalis, halides (fluorides, chlorides, bromides), combustible materials, reducing agents and organic compounds.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters**Exposure Guidelines**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Sodium Persulfate 7775-27-1	TWA: 0.1 mg/m ³	-	-	-
inorganic salt	TWA: 0.02 mg/m ³ TWA: 0.1 mg/m ³	-	-	-
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Sodium Persulfate 7775-27-1	TWA: 0.1 mg/m ³	-	TWA: 0.1 mg/m ³	TWA: 0.1 mg/m ³
inorganic salt	TWA: 0.2 mg/m ³ TWA: 0.02 mg/m ³	TWA: 0.2 mg/m ³	TWA: 0.02 mg/m ³ respirable TWA: 0.1 mg/m ³ inhalable	TWA: 0.2 mg/m ³

Appropriate engineering controls

Engineering measures Provide local exhaust or general ventilation adequate to maintain exposures below permissible exposure limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Eye protection recommended. Chemical goggles consistent with EN 166 or equivalent.

Skin and Body Protection Wear long-sleeved shirt, long pants, socks, and shoes.

Hand Protection Protective gloves: Neoprene gloves, Polyvinylchloride, Natural Rubber.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn: particulate filtering facepiece respirators.

Hygiene measures Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Wash hands before breaks and after shifts. Keep work clothes separate, remove contaminated clothing - launder after open handling of product.

General information Protective engineering solutions should be implemented and in use before personal protective equipment is considered.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Crystalline solid
Physical State	Solid
Color	Light tan
Odor	odorless
Odor threshold	Not applicable
pH	6.6 (1% solution)
Melting point/freezing point	180 °C (Decomposes)
Boiling Point/Range	Decomposes upon heating
Flash point	Not flammable
Evaporation Rate	No information available
Flammability (solid, gas)	Not flammable
Flammability Limit in Air	Not applicable
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	6.07E-30 mm Hg at 25°C
Vapor density	No information available
Density	2.59 g/cm ³ (crystal density)
Specific gravity	No information available
Water solubility	575 g/l @ 25 °C
Solubility in other solvents	No information available
Partition coefficient	No information available (inorganic)
Autoignition temperature	No evidence of combustion up to 600°C
Decomposition temperature	81 °C (SADT)
Viscosity, kinematic	No information available (Solid)
Viscosity, dynamic	No information available
Explosive properties	Not explosive
Oxidizing properties	oxidizer
Other Information	
Molecular weight	mixture
VOC content (%)	Not applicable
Bulk density	1.12 No information available

10. STABILITY AND REACTIVITY

Reactivity	Oxidizer. Contact with other material may cause fire.
Chemical Stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Heat. Moisture.
Incompatible materials	Acids, alkalis, halides (fluorides, chlorides, bromides), combustible materials, reducing agents and organic compounds. .
Hazardous Decomposition Products	Oxygen which supports combustion.

11. TOXICOLOGICAL INFORMATION

Product Information

Unknown acute toxicity	0% of the mixture consists of ingredient(s) of unknown toxicity
LD50 Oral	Sodium Persulfate: 895 mg/kg (rat)
LD50 Dermal	Sodium Persulfate: > 10 g/kg
LC50 Inhalation	Sodium Persulfate: >5.10 mg/L (4h) (rat)
Serious eye damage/eye irritation	Irritating to eyes.
Skin corrosion/irritation	Minimally irritating.
Sensitization	Sodium Persulfate: May cause sensitization by inhalation and skin contact.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation	NOAEL Oral Value
Sodium Persulfate (7775-27-1)	895 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	> 5.1 mg/L (Rat) 4 h	
inorganic salt ()	= 750 mg/kg (Rat)			

Information on toxicological effects

Symptoms Symptoms of allergic reaction may include rash, itching, swelling and trouble breathing.

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

Irritation corrosivity	Irritating to eyes, respiratory system and skin. None.
Carcinogenicity	Contains no ingredient listed as a carcinogen.
Mutagenicity	Did not show mutagenic effects in animal experiments
Neurological effects	Not neurotoxic
Reproductive toxicity Developmental toxicity	This product is not recognized as reprotox by Research Agencies. None known.

Teratogenicity	Not teratogenic in animal studies.
STOT - single exposure STOT - repeated exposure	May cause respiratory irritation. Not classified.
Target organ effects	Eyes, Lungs.
Aspiration hazard	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects Ecotoxicity effects of component substances

Sodium Persulfate (7775-27-1)				
Active Ingredient(s)	Duration	Species	Value	Units
Sodium Persulfate	96 h LC50	Rainbow trout	163	mg/L
Sodium Persulfate	48 h LC50	Daphnia magna	133	mg/L
Sodium Persulfate	96 h LC50	Grass shrimp	519	mg/L
Sodium Persulfate	72 h EC50	Algae Selenastrum capricornutum	116	mg/L

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to Microorganisms	Toxicity to daphnia and other aquatic invertebrates
Trade secret	72 h EC50: 0.43-0.80 mg/L	96 h LC50: 2.97 - 3.11 mg/L (Cyprinus carpio) 96 h LC50: 3.16 - 3.77 mg/L (Cyprinus carpio) 96 h LC50: = 2.3 mg/L (Lepomis macrochirus) flow-through 96 h LC50: 1.8 - 5.6 mg/L (Lepomis macrochirus) static 96 h LC50: = 2.7 mg/L (Lepomis macrochirus) 96 h LC50: 1.08 - 1.38 mg/L (Oncorhynchus mykiss) 96 h LC50: 0.769 - 1.27 mg/L (Oncorhynchus mykiss) static 96 h LC50: 3.3 - 3.93 mg/L (Carassius auratus) static		48 h EC50: 0.06 mg/L (daphnia magna)

Persistence and degradability	Biodegradability does not pertain to inorganic substances. The organic components are biodegradable and can be expected to contribute to BOD.
Bioaccumulation	Does not bioaccumulate.
Mobility	Dissociates into ions.
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). It must undergo special treatment, e.g. at suitable disposal site, to comply with local regulations.
Contaminated Packaging	Empty remaining contents. Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT

UN/ID no	UN 1505
Proper Shipping Name	Sodium Persulfate Mixture
Hazard class	5.1
Packing Group	III

TDG

UN/ID no	UN 1505
Proper Shipping Name	Sodium Persulfate Mixture
Hazard class	5.1
Packing Group	III

MEX

UN/ID no	UN 1505
Proper Shipping Name	Sodium Persulfate Mixture
Hazard class	5.1
Packing Group	III

ICAO/IATA

UN/ID no	UN 1505
Proper Shipping Name	Sodium Persulfate Mixture
Hazard class	5.1
Packing Group	III

IMDG/IMO

UN/ID no	UN 1505
Proper Shipping Name	Sodium Persulfate Mixture
Hazard class	5.1
Packing Group	III

ADR/RID

UN/ID no	UN 1505
Proper Shipping Name	Sodium Persulfate Mixture
Hazard class	5.1
Packing Group	III

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 is not subject to reporting under the Emergency Planning and Community Right-to-Know rule.

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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
inorganic salt	100 lb			X

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
Sodium Persulfate		X			
inorganic salt	X	X	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.

Chemical name	Canada - 2017 NPRI (National Pollutant Release Inventory)
inorganic salt	Part 1, Group A Substance

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)
inorganic salt	X	X	231-760-3	X	X	X	X	X	X
organic salt		H	H	X	X	H	X	X	X
Sodium Persulfate 7775-27-1	X	X	231-892-1	X	X	X	X	X	X

All ingredients are directly listed on the active TSCA Inventory

Mexico

Mexico - Grade Slight risk, Grade 1

16. OTHER INFORMATION

KLOZUR® ONE

SDS #: 7775-27-1-3
Revision date: 2021-02-17
Version 1.01

NFPA	Health Hazards 1	Flammability 0	Stability 1	Special Hazards OX
HMIS	Health Hazards 1	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: 2021-02-17
Revision note SDS sections updated: 1.

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Prepared By:

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End of Safety Data Sheet