

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier:

Product name: OXONE
Synonyms; trade names: OXONE PS 16 MONOPERSULFATE COMPOUND

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

Identified uses: Cleaning agent. Oxidising Agent Biocide for industrial use.

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Classification (EC 1272/2008):

Physical hazards: Not Classified
Health hazards: Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318
Environmental hazards: Aquatic Chronic 3 - H412

Label elements:

Hazard pictograms:



Signal word: Danger.

Hazard statements: EUH208 Contains DIPOTASSIUM PEROXODISULPHATE. May produce an allergic reaction.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H412 Harmful to aquatic life with long lasting effects.

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Precautionary statements: P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.
Rinse skin with water or 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.
P310 Immediately call a POISON CENTER/ doctor.

Contains: PENTAPOTASSIUM BIS(PEROXIMONOSULPHATE) BIS(SULPHATE), POTASSIUM HYDROGENSULPHATE, DIPOTASSIUM DISULPHATE

Other hazards: This product does not contain any substances classified as PBT or vPvB. (@ >= 0.1%)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures: PENTAPOTASSIUM BIS(PEROXIMONOSULPHATE) BIS(SULPHATE) 60-100%
CAS number: 70693-62-8
EC number: 274-778-7
REACH registration number: 01-2119485567-22-XXXX
Classification: Acute Tox. 4 - H302
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Aquatic Chronic 3 - H412

Mixtures: POTASSIUM HYDROGENSULPHATE 1-5%
CAS number: 7646-93-7
EC number: 231-594-1
Classification: Skin Corr. 1B - H314
Eye Dam. 1 - H318
STOT SE 3 - H335

Mixtures: DIPOTASSIUM DISULPHATE 1-5%
CAS number: 7790-62-7
EC number: 232-216-8
Classification: Acute Tox. 3 - H331
Skin Corr. 1A - H314
Eye Dam. 1 - H318

[cont...]

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Mixtures: DIPOTASSIUM PEROXODISULPHATE $\geq 1 - < 3\%$
CAS number: 7727-21-1
EC number: 231-781-8
REACH registration number: 01-2119495676-19-XXXX
Classification: Ox. Sol. 3 - H272
Acute Tox. 4 - H302
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
Resp. Sens. 1 - H334
Skin Sens. 1 - H317
STOT SE 3 - H335

The full text for all hazard statements is displayed in Section 16.

Composition comments: The data shown are in accordance with the latest EC Directives.

4. FIRST AID MEASURES

Description of first aid measures:

General information: Show this Safety Data Sheet to the medical personnel.

Inhalation: Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention.

Ingestion: Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Get medical attention.

Skin contact: Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention immediately.

Eye contact: Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

Most important symptoms and effects, both acute and delayed:

Ingestion: Harmful if swallowed. May cause chemical burns in mouth, oesophagus and stomach.

Skin contact: Chemical burns.

Eye contact: Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated.

Indication of any immediate medical attention and special treatment needed:

Notes for the doctor: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Extinguish with the following media: Water spray, fog or mist. Foam. Dry chemicals.

Unsuitable extinguishing media: Carbon dioxide (CO₂). Do not use water jet as an extinguisher, as this will spread the fire.

[cont...]

Special hazards arising from the substance or mixture:

Specific hazards: Harmful to aquatic life with long lasting effects.

Hazardous combustion products: Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Sulphurous gases (SO_x). Metal oxide(s).

Advice for firefighters:

Protective actions during firefighting: Avoid the spillage or runoff entering drains, sewers or watercourses. Contain and collect extinguishing water.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures:**

Personal precautions: Follow precautions for safe handling described in this safety data sheet. Avoid generation and spreading of dust. Avoid inhalation of dust and contact with skin and eyes. Provide adequate ventilation.

Environmental precautions:

Environmental precautions: Harmful to aquatic life with long lasting effects. Avoid the spillage or runoff entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

Methods and material for containment and cleaning up:

Methods for cleaning up: Neutralise with alkali. Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into suitable waste disposal containers and seal securely. The contaminated absorbent may pose the same hazard as the spilled material.

Reference to other sections:

Reference to other sections: For personal protection, see Section 8. For waste disposal, see Section 13.

7. HANDLING AND STORAGE**Precautions for safe handling:**

Usage precautions: Provide adequate ventilation. Avoid generation and spreading of dust. Avoid inhalation of dust and contact with skin and eyes. Use suitable respiratory protection if ventilation is inadequate. Protect from moisture.

Advice on general occupational hygiene: Eye wash facilities and emergency shower must be available when handling this product. Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product. Remove contaminated clothing and protective equipment before entering eating areas. Take off immediately all contaminated clothing and wash it before reuse.

Conditions for safe storage, including any incompatibilities:

Storage precautions: Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store at temperatures not exceeding 50°C. Keep container dry. Protect from moisture. Store away from the following materials: Cyanides. Halogenated hydrocarbons. Metal Salts

Specific end use(s): The identified uses for this product are detailed in Section 1.2.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Control parameters:****Occupational exposure limits:**

PENTAPOTASSIUM BIS(PEROXIMONOSULPHATE) BIS(SULPHATE)

Short-term exposure limit (15-minute): WEL 4 mg/m³ resp. dust.

WEL = Workplace Exposure Limit

PENTAPOTASSIUM BIS(PEROXIMONOSULPHATE) BIS(SULPHATE) (CAS: 70693-62-8)

DNEL:

- Workers - Dermal; Short term systemic effects: 80 mg/kg/day
- Workers - Inhalation; Short term systemic effects: 50 mg/m³
- Workers - Dermal; Short term local effects: 0.449 mg/cm²
- Workers - Inhalation; Short term local effects: 50 mg/m³
- Workers - Inhalation; Long term systemic effects: 0.28 mg/m³
- Workers - Inhalation; Long term local effects: 0.28 mg/m³
- Consumer - Dermal; Short term systemic effects: 40 mg/kg/day
- Consumer - Inhalation; Short term systemic effects: 25 mg/m³
- Consumer - Oral; Short term systemic effects: 10 mg/kg/day
- Consumer - Dermal; Short term local effects: 0.224 mg/cm²
- Consumer - Inhalation; Short term local effects: 25 mg/m³
- Consumer - Dermal; Short term local effects: 10 mg/kg/day
- Consumer - Inhalation; Long term systemic effects: 0.14 mg/m³
- Consumer - Oral; Long term systemic effects: 10 mg/kg/day
- Consumer - Inhalation; Long term local effects: 0.14 mg/m³

PNEC:

- Fresh water; 0.022 mg/l
- Marine water; 0.002 mg/l
- Intermittent release, Water; 0.0109 mg/l
- Sediment (Freshwater); 0.017 mg/kg
- Sediment (Marine water); 0.00174 mg/kg
- Soil; 0.885 mg/kg
- STP; 108 mg/l

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DIPOTASSIUM PEROXODISULPHATE (CAS: 7727-21-1)

Ingredient comments:

No exposure limits known for ingredient(s).

DNEL:

Workers - Inhalation; Long term systemic effects: 2.06 mg/m³
Workers - Inhalation; Short term systemic effects: 590 mg/m³
Workers - Inhalation; Long term local effects: 2.06 mg/m³
Workers - Dermal; Long term systemic effects: 18,2 mg/m³
Workers - Dermal; Short term systemic effects: 400 mg/kg/day
Workers - Dermal; Long term local effects: 0.102 mg/cm²
Workers - Dermal; Short term local effects: 2.248 mg/cm²
Consumer - Inhalation; Long term systemic effects: 1.03 mg/m³
Consumer - Inhalation; Short term systemic effects: 295 mg/m³
Consumer - Inhalation; Long term local effects: 1.03 mg/m³
Consumer - Inhalation; Short term local effects: 295 mg/m³
Consumer - Dermal; Long term systemic effects: 9.1 mg/kg/day
Consumer - Dermal; Short term systemic effects: 200 mg/kg/day
Consumer - Dermal; Long term local effects: 0.051 mg/cm²
Consumer - Dermal; Short term local effects: 1.124 mg/cm²
Consumer - Oral; Long term systemic effects: 9.1 mg/kg/day
Consumer - Oral; Short term systemic effects: 30 mg/kg/day

PNEC:

Fresh water; 0.0763 mg/l
Marine water; 0.011 mg/l
Intermittent release; 0.763 mg/l
STP; 3.6 mg/l
Sediment (Freshwater); 0.275 mg/kg
Sediment (Marine water); 0.0396 mg/kg
Soil; 0.015 mg/kg

Exposure controls:

Protective equipment:



Appropriate engineering controls: Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients. This product is not to be used under conditions of poor ventilation. Eye wash facilities and emergency shower must be available when handling this product.

Eye/face protection:

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Wear tight-fitting, dust-resistant, chemical splash goggles if airborne dust is generated. Personal protective equipment for eye and face protection should comply with European Standard EN166.

[cont...]

- Hand protection:** Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Butyl rubber. The selected gloves should have a breakthrough time of at least 1 hours. To protect hands from chemicals, gloves should comply with European Standard EN374.
- Other skin and body protection:** Wear appropriate clothing to prevent any possibility of skin contact.
- Hygiene measures:** Wash after use and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Remove contaminated clothing and protective equipment before entering eating areas. Take off immediately all contaminated clothing and wash it before reuse.
- Respiratory protection:** If ventilation is inadequate, suitable respiratory protection must be worn. Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m³. Wear a respirator fitted with the following cartridge: Particulate filter, type P3. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

- Appearance:** Granules.
- Colour:** White.
- Odour:** Odourless.
- Odour threshold:** No information available.
- pH:** pH (diluted solution): 2.1 @ 3 %
- Melting point:** No information available.
- Initial boiling point and range:** No information available.
- Flash point:** No information available.
- Evaporation rate:** No information available.
- Evaporation factor:** No information available.
- Flammability (solid, gas):** No information available.
- Upper/lower flammability or explosive limits:** No information available.
- Other flammability:** No information available.
- Vapour pressure:** 0.0000013 mm Hg @ 25°C
- Vapour density:** No information available.
- Relative density:** 2.35 @ @ 20°C
- Bulk density:** 1100 - 1400 kg/m³
- Solubility(ies):** Soluble in water.
- Partition coefficient:** No information available.
- Auto-ignition temperature:** No information available.
- Decomposition Temperature:** > 50°C
- Viscosity:** No information available.
- Explosive properties:** No information available.
- Explosive under the influence of a flame:** No information available.
- Oxidising properties:** No information available.
- Other information:** No information available.

[cont...]

10. STABILITY AND REACTIVITY

Reactivity: The following materials may react with the product: Cyanides. Metal Salts Halogenated hydrocarbons.

Chemical stability:

Stability: Stable under the prescribed storage conditions.

Possibility of hazardous reactions: None known.

Conditions to avoid: Avoid handling which leads to dust formation. Keep at temperature not exceeding 50°C. Protect from moisture.

Incompatible materials:

Materials to avoid: Cyanides. Halogenated hydrocarbons. Metal Salts

Hazardous decomposition products: Sulphurous gases (SO_x). Oxygen.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity – oral:

ATE oral (mg/kg): 555.56

Acute toxicity – dermal:

Notes (dermal LD₅₀): LD₅₀ > 5000 mg/kg, Dermal, Rat

Acute toxicity – inhalation:

ATE inhalation (dusts/mists mg/l): 60.0

Skin corrosion/irritation:

Skin corrosion/irritation: Causes burns.

Serious eye damage/irritation:

Serious eye damage/irritation: Causes serious eye damage.

Respiratory sensitisation:

Respiratory sensitisation: Not sensitising. Guinea pig OECD 406

Skin sensitisation:

Skin sensitisation: Not sensitising. Guinea pig OECD 406

Germ cell mutagenicity:

Genotoxicity - in vitro: No information available.

Carcinogenicity:**Carcinogenicity:** No information available.**Reproductive toxicity:****Reproductive toxicity – fertility:** Based on available data the classification criteria are not met.**Specific target organ toxicity - single exposure:****STOT - single exposure:** No information available.**Specific target organ toxicity - repeated exposure:****STOT - repeated exposure:** No information available.**Aspiration hazard:****Aspiration hazard:** Not anticipated to present an aspiration hazard, based on chemical structure.**Inhalation:**

Dust in high concentrations may irritate the respiratory system.

Ingestion:

Harmful if swallowed. May cause chemical burns in mouth, oesophagus and stomach.

Skin contact:

Causes burns.

Eye contact:

Causes serious eye damage.

12. ECOLOGICAL INFORMATION**Ecotoxicity:**

Harmful to aquatic life with long lasting effects.

Toxicity:

Harmful to aquatic life with long lasting effects.

Persistence and degradability:

Not applicable. The product contains inorganic substances which are not biodegradable.

Bioaccumulative potential:

No information available.

Partition coefficient:

No information available.

Mobility in soil:**Mobility:**

The product is soluble in water.

Results of PBT and vPvB assessment: This substance is not classified as PBT or vPvB according to current EU criteria.

(@ > 0.1%)

Other adverse effects:

No information available.

13. DISPOSAL CONSIDERATIONS**Waste treatment methods:****General information:**

Waste is classified as hazardous waste. Harmful to aquatic life with long lasting effects. Do not discharge into drains or watercourses or onto the ground. Do not puncture or incinerate, even when empty. Empty containers or liners may retain some product residues and hence be potentially hazardous.

[cont...]

Disposal methods: Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. TRANSPORT INFORMATION

UN number:

UN No. (ADR/RID): 3260

UN No. (IMDG): 3260

UN No. (ICAO): 3260

UN No. (ADN): 3260

UN proper shipping name:

Proper shipping name (ADR/RID): CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (CONTAINS PENTAPOTASSIUM BIS(PEROXIMONOSULPHATE) BIS(SULPHATE), DIPOTASSIUM DISULPHATE)

Proper shipping name (IMDG): CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (CONTAINS PENTAPOTASSIUM BIS(PEROXIMONOSULPHATE) BIS(SULPHATE), DIPOTASSIUM DISULPHATE)

Proper shipping name (ICAO): CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (CONTAINS PENTAPOTASSIUM BIS(PEROXIMONOSULPHATE) BIS(SULPHATE), DIPOTASSIUM DISULPHATE)

Proper shipping name (ADN): CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (CONTAINS PENTAPOTASSIUM BIS(PEROXIMONOSULPHATE) BIS(SULPHATE), DIPOTASSIUM DISULPHATE)

Transport hazard class(es):

ADR/RID class: 8

ADR/RID classification code: C2

ADR/RID label: 8

IMDG class: 8

ICAO class/division: 8

ADN class: 8

Transport labels:



Packing group:

ADR/RID packing group: II

IMDG packing group: II

ICAO packing group: II

ADN packing group: II

Environmental hazards:

Environmentally hazardous substance/marine pollutant: No.

Special precautions for user:

IMDG Code segregation group: 1. Acids
EmS: F-A, S-B
ADR transport category: 2
Emergency Action Code: 2X
Hazard Identification Number (ADR/RID): 80
Tunnel restriction code: (E)

Transport in bulk according to Annex II of MARPOL and the IBC Code:

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture:**

EU legislation: Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.

Chemical safety assessment: Not applicable.

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION**Abbreviations and acronyms used in the safety data sheet:**

ATE: Acute Toxicity Estimate.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
CAS: Chemical Abstracts Service.
DNEL: Derived No Effect Level.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
Kow: Octanol-water partition coefficient.
LC₅₀: Lethal Concentration to 50 % of a test population.
LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
PBT: Persistent, Bioaccumulative and Toxic substance.
PNEC: Predicted No Effect Concentration.

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.

RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.

vPvB: Very Persistent and Very Bioaccumulative.

IARC: International Agency for Research on Cancer.

MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.

cATpE: Converted Acute Toxicity Point Estimate.

BCF: Bioconcentration Factor.

BOD: Biochemical Oxygen Demand.

EC₅₀: 50% of maximal Effective Concentration.

LOAEC: Lowest Observed Adverse Effect Concentration.

LOAEL: Lowest Observed Adverse Effect Level.

NOAEC: No Observed Adverse Effect Concentration.

NOAEL: No Observed Adverse Effect Level.

NOEC: No Observed Effect Concentration.

LOEC: Lowest Observed Effect Concentration.

DMEL: Derived Minimal Effect Level.

EL50: Exposure Limit 50

hPa: Hectopascal

LL50: Lethal Loading fifty

OECD: Organisation for Economic Co-operation and Development

POW: Octanol-water partition coefficient

SCBA: self-contained breathing apparatus

STP: Sewage Treatment Plant

VOC: Volatile Organic Compounds

Classification abbreviations and acronyms:

Acute Tox. = Acute toxicity

Aquatic Acute = Hazardous to the aquatic environment (acute)

Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Legal disclaimer:

The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation.

This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.