

Product
OXIMA

www.watchwater.de

Version: 1.0
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Watch-Water® encourages and expects you to read and understand the entire MSDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Name: OXIMA

Application: Water Treatment

Company Identification/Supplier Watch Water GmbH
Fahrlachstr. 14
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Germany
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2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS-US classification

Acute Tox. 4 (Oral)	H302
Skin Corr. 1A	H314
Eye Dam. 1	H318

Label elements

GHS-US labelling

- **Hazard pictograms (GHS-US):**



GHS05



GHS07

- **Signal word (GHS-US):** Danger
- **Hazard statements (GHS-US):** H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
- **Precautionary statements (GHS-US):** P260 - Do not breathe dust
P264 - Wash exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
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): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
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/...

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P330 - If swallowed, rinse mouth
 P363 - Wash contaminated clothing before reuse
 P405 - Store locked up
 P501 - Dispose of contents/container to comply with local, state and federal regulations

Other hazards**Other hazards not contributing to the classification:**

None under normal conditions.

Unknown acute toxicity (GHS US)

No data available

3	COMPOSITION / INFORMATION ON INGREDIENTS
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Substances

Substance type: Mono-constituent

Component, name	CAS-No.	Chemical Name	%	GHS-US classification
Potassium Hydroxide- Special Food Grade	1310-58-3	KOH (Special Food Grade)	100	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 Eye Dam. 1, H318, H290

Mixture

Not applicable

4	FIRST-AID MEASURES
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Description of first aid measures

- **General Information:** Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
- **Eye contact:** Rinse immediately with plenty of water for 15 minutes. Cover eyes aseptically. Do not apply neutralizing agents. Take victim to an ophthalmologist.
- **Skin contact:** Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.
- **Inhalation:** Remove the victim into fresh air. Doctor: administration of corticoid spray. Respiratory problems: consult a doctor/medical service.
- **Ingestion:** Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Do not give activated charcoal. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.htm). Ingestion of large quantities: immediately to hospital. Take the container/vomit to the doctor/hospital. Do not give chemical antidote.

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Most important symptoms and effects, both acute and delayed

- | | |
|--|---|
| Symptoms/injuries after inhalation: | AFTER INHALATION OF DUST: Dry/sore throat. Corrosion of the upper respiratory tract. Respiratory difficulties. FOLLOWING SYMPTOMS MAY APPEAR LATER: Possible oedema of the upper respiratory tract. Possible inflammation of the respiratory tract. Possible laryngeal spasm/oedema. Risk of pneumonia. |
| Symptoms/injuries after skin contact: | Caustic burns/corrosion of the skin. Slow-healing wounds. |
| Symptoms/injuries after eye contact: | Corrosion of the eye tissue. Permanent eye damage. Blindness. |
| Symptoms/injuries after ingestion: | Abdominal pain. Difficulty in swallowing. Possible esophageal perforation. Irritation of the oral mucous membranes. Burns to the gastric/intestinal mucosa. Blood in vomit. AFTER |
| ABSORPTION OF HIGH QUANTITIES: | Change in the haemogramme/blood composition. Disturbances of heart rate. FOLLOWING SYMPTOMS MAY APPEAR LATER: Bleeding of the gastrointestinal tract. Low arterial pressure. Blood in stool. Shock. |
| Chronic symptoms: | No effects known. |

Indication of any immediate medical attention and special treatment needed

No additional information available

5	FIRE FIGHTING MEASURES
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Extinguishing media

- **Extinguishing media:** EXTINGUISHING MEDIA FOR SURROUNDING FIRES: Adapt extinguishing media to the environment.
- **Unsuitable extinguishing media:** No unsuitable extinguishing media known.

Special hazards arising from the substance or mixture

- **Fire hazard:** DIRECT FIRE HAZARD. Noncombustible. INDIRECT FIRE HAZARD. Reactions involving a fire hazard: see "Reactivity Hazard".
- **Explosion hazards:** INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard".
- **Reactivity:** Violent exothermic reaction with water (moisture). Reacts on exposure to water (moisture) with combustible materials: risk of spontaneous ignition. Reacts on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours (hydrogen). Absorbs the atmospheric CO₂. Violent to explosive reaction with many compounds e.g.: with organic material, with (some) halogens and with (some) acids: heat release resulting in increased fire or explosion risk.

Advice for firefighters

- **Firefighting instructions:** Cool tanks/drums with water spray/remove them into safety. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
- **Protection during firefighting:** Heat/fire exposure: compressed air/oxygen apparatus.

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- **Protective equipment:** Gloves. Face-shield. Corrosion-proof suit. Dust cloud production: compressed air/oxygen apparatus.
- **Emergency procedures:** Mark the danger area. Avoid ingress of water in the containers. Prevent dust cloud formation. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.
- **Measures in case of dust release:** In case of dust production: keep upwind. Dust production: have neighborhood close doors and windows.

For emergency responders

- **Protective equipment:** Equip cleanup crew with proper protection.
- **Emergency procedures:** Ventilate area. Stop release.

Environmental precautions

- Prevent soil and water pollution. Prevent spreading in sewers.

Methods and material for containment and cleaning up

- **For containment:** Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Take account of toxic/corrosive precipitation water. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain.
- **Methods and material for containment and cleaning up:** Collect the spill only if it is in a dry state. Wetted substance: cover with dry sand/earth. Scoop solid spill into closing containers. See "Material-handling" for suitable container materials. Carefully collect the spill/leftovers. Take collected spill to manufacturer/competent authority. Small quantities of liquid spill: neutralize with dilute acid solution. Wash away neutralized product with plentiful water. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

Reference to other sections

- No additional information available.

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

- **Precautions for safe handling:** Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Use corrosion-proof equipment. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Avoid raising dust. Avoid contact of substance with water. Observe very strict hygiene - avoid contact. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.
- **Hygiene measures:** Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

- **Storage temperature:** 20 °C
- **Heat and ignition sources:** KEEP SUBSTANCE AWAY FROM: heat sources.

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- **Prohibitions on mixed storage:** KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. (strong) acids. highly flammable materials. metals. organic materials. water/moisture.
- **Storage area:** Store in a dry area. Keep container in a well-ventilated place. Keep locked up. Provide for a tub to collect spills. Unauthorized persons are not admitted. Meet the legal requirements.
- **Special rules on packaging:** SPECIAL REQUIREMENTS: hermetical. watertight. corrosion-proof. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packaging's in solid containers.
- **Packaging materials:** SUITABLE MATERIAL: steel. stainless steel. carbon steel. iron. nickel. cardboard. synthetic material. glass. stoneware/porcelain. MATERIAL TO AVOID: lead. aluminum. copper. tin. zinc. bronze. polyethylene.

Specific end use(s)

- No additional information available

8 | EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure controls

- **Appropriate engineering controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.
- **Personal protective equipment:** Corrosion-proof clothing. Protective goggles. Dust formation: dust mask. Gloves.
- **Materials for protective clothing:** GIVE EXCELLENT RESISTANCE: butyl rubber. natural rubber. neoprene. nitrile rubber. PVC. Viton. GIVE LESS RESISTANCE: No data available. GIVE POOR RESISTANCE: leather. natural fibers. PVA.
- **Hand protection:** Gloves.
- **Eye protection:** Face shield.
- **Skin and body protection:** Corrosion-proof clothing. In case of dust production: head/neck protection.
- **Respiratory protection:** Dust production: dust mask with filter type P3. Self-contained breathing apparatus if conc. in air > 1 Vol %.

9 | PHYSICAL AND CHEMICAL PROPERTIES

General Information:	
Physical State	solid
Appearance	White to light yellow, solid in various shape
Odor	odorless
pH (100 g/l) at 20 °C	14
pH solution	0.60 %
Melting point	120-190°C
Freezing point	No data available
Boiling point	~1320 °
Flash point	Not applicable
Self-ignition temperature	Not applicable
Decomposition temperature	No data available
Flammability (solid, gas)	No data available

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Vapor pressure	10 hPa
Relative density at 20 °C	2.1 g/cm ³
Solubility	Exothermically soluble in water. Soluble in ethanol. Soluble in glycerol. Water at 20 °C: 1150 g/l
Log Pow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	Not applicable.
Oxidizing properties	None
Explosive limits	No data available

Other information

Minimum ignition energy: Not applicable
 SADT: Not applicable
 VOC content: Not applicable

10 STABILITY AND REACTIVITY

Reactivity

Violent exothermic reaction with water (moisture). Reacts on exposure to water (moisture) with combustible materials: risk of spontaneous ignition. Reacts on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapors (hydrogen). Absorbs the atmospheric CO₂. Violent to explosive reaction with many compounds e.g.: with organic material, with (some) halogens and with (some) acids: heat release resulting in increased fire or explosion risk.

Chemical stability

Hygroscopic. Absorbs the atmospheric CO₂.

Possibility of hazardous reactions

Reacts violently with water. Reacts violently with acids.

Conditions to avoid

Moisture. High temperature. Incompatible materials.

Incompatible materials

metals. Halogens. Acid anhydrides. Nitrates. Organic compounds. Water.

Hazardous decomposition products

Potassium oxide.

Information on toxicological effects

- Acute toxicity: Harmful if swallowed.

11 TOXICOLOGICAL INFORMATION

- Potassium Hydroxide (Food Grade) (f)1310-58-3**
 LD50 oral rat 365 mg/kg
 (Rat; Experimental value, Rat; Experimental value)

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- **Skin corrosion/irritation:** Causes severe skin burns and eye damage. pH: 13.5 (0.60 %)
- **Serious eye damage/irritation:** Causes serious eye damage. pH: 13.5 (0.60 %)
- **Respiratory or skin sensitization:** Not classified
- **Germ cell mutagenicity:** Not classified
- **Carcinogenicity:** Not classified
- **Reproductive toxicity:** Not classified
- **Specific target organ toxicity (single exposure):** Not classified
- **Specific target organ toxicity (repeated exposure):** Not classified
- **Aspiration hazard:** Not classified
- **Symptoms/injuries after inhalation:** AFTER INHALATION OF DUST: Dry/sore throat. Corrosion of the upper respiratory tract. Respiratory difficulties. FOLLOWING SYMPTOMS MAY APPEAR LATER: Possible oedema of the upper respiratory tract. Possible inflammation of the respiratory tract. Possible laryngeal spasm/oedema. Risk of pneumonia.
- **Symptoms/injuries after skin contact:** Caustic burns/corrosion of the skin. Slow healing wounds.
- **Symptoms/injuries after eye contact:** Corrosion of the eye tissue. Permanent eye damage. Blindness.
- **Symptoms/injuries after ingestion:** Abdominal pain. Difficulty in swallowing. Possible esophageal perforation. Irritation of the oral mucous membranes. Burns to the gastric/intestinal mucosa. Blood in vomit. AFTER ABSORPTION OF HIGH QUANTITIES: Change in the haemogramme/blood composition. Disturbances of heart rate. FOLLOWING SYMPTOMS MAY APPEAR LATER: Bleeding of the gastrointestinal tract. Low arterial pressure. Blood in stool. Shock.
- **Chronic symptoms:** No effects known

12	ECOLOGICAL INFORMATION
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Toxicity

- **Ecology – water:** Ground water pollutant. Harmful to fishes. Highly toxic to plankton. pH shift. Insufficient data available on ecotoxicity.

Potassium Hydroxide (1310-58-3) (Food Grade)	
LC50 fishes 1	> 28.6 mg/l (96 h; Pisces; LETHAL)
LC50 fish 2	80 mg/l (Gambusia affinis)

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TLM fish 1	80 ppm (24 h; Gambusia affinis)
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Persistence and degradability

Potassium Hydroxide (1310-58-3) (Food Grade)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
Biochemical oxygen demand (BOD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Bioaccumulative potential

Potassium Hydroxide (1310-58-3) (Food Grade)	
Log Pow	No data available
Bio accumulative potential	Bioaccumulation: not applicable.

Mobility in soil

- No additional information available

Other adverse effects

- No additional information available

Waste treatment methods

- **Waste disposal recommendations:** Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of

13	DISPOSAL CONSIDERATIONS
<p>hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Should not be landfilled with household waste. Recycle/reuse. Immobilize the toxic or harmful components. Precipitate/make insoluble. Remove to an authorized dump (Class I). Treat using the best available techniques before discharge into drains or the aquatic environment.</p> <ul style="list-style-type: none"> • Additional information: LWCA (the Netherlands): KGA category 05. Hazardous waste according to Directive 2008/98/EC. 	

14	TRANSPORT INFORMATION
<ul style="list-style-type: none"> • Land Transport (ADR/RID/ADN): Not classified as dangerous good under transport regulations • Sea Transport (IMDG/IMO): Not classified as dangerous good under transport regulations • Air Transport (IATA/ICAO): Not classified as dangerous good under transport regulations 	

15	REGULATORY INFORMATION
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US Federal regulations

Potassium Hydroxide (1310-58-3) (Food Grade)

- Listed on the United States TSCA (Toxic Substances Control Act) inventory
- RQ (Reportable quantity, section 304 of EPA's List of Lists): 1000 lb.
- SARA Section 311/312 Hazard Classes: Immediate (acute) health hazard

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International regulations

Canada

Potassium Hydroxide (1310-58-3) (Food Grade)

- Listed on the Canadian DSL (Domestic Substances List) inventory.
- WHMIS Classification: Class E - Corrosive Material

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Oral) H302
 Skin Corr. 1A H314
 Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

Xn; R22
 C; R35
 Full text of R-phrases: see section 16

National regulations

Potassium Hydroxide (1310-58-3) (Food Grade)

- Listed on the Canadian Ingredient Disclosure List

US State regulations

Potassium Hydroxide (1310-58-3) (Food Grade)

- State or local regulations
 - U.S. - Massachusetts - Right To Know List
 - U.S. - New Jersey - Right to Know Hazardous Substance List
 - U.S. - Pennsylvania - RTK (Right to Know) List

16	OTHER INFORMATION
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Full text of H-phrases: see section 16:

Acute Tox. 4 (Oral) Eye Dam. 1 Skin Corr. 1A H302 H314 H318	Acute toxicity (oral), Category 4 Serious eye damage/eye irritation, Category 1 Skin corrosion/irritation, Category 1A Harmful if swallowed Causes severe skin burns and eye damage Causes serious eye damage
NFPA health hazard:	3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
NFPA fire hazard:	0 - Materials that will not burn.
NFPA reactivity:	1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.
NFPA specific hazard:	W - Unusual reactivity with water. This indicates a potential hazard using water to fight a fire involving this material. When a compound is both water-reactive and an oxidizer, the W/bar symbol should go in this quadrant and the OX warning is placed immediately below the NFPA diamond.

HMIS III Rating

Health: 3 Serious Hazard - Major injury likely unless prompt action is taken and

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Flammability:	medical treatment is given
Physical:	0 Minimal Hazard
Personal Protection:	1 Slight Hazard
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