

SAFETY DATA SHEET

Safety data sheet according to (EF) no. 1907/2006.

POINT 1: Identification of material/compounds and of the company/factory

1.1. Product identifier:

Oxi-Liq

UFI: DH20-308N-J00T-11UR

1.2. Relevant identifying use of the material or compound and the usage that is contraindicated:

Disinfectant. Only for commercial use.

1.3. Detailed information about the supplier for the safety data sheet:

Jorenku A/S

Teglvaerksvej 11

4733 Tappernoeye

Denmark

Tel.: +45 56214070

Responsible for safety data sheet (e-mail): jorenku@jorenku.dk

1.4. Emergency phone:

Contact the poison centre in your own country.

POINT 2: Identification of danger

2.1. Classification of the material or compound:

Eye-damaging liquid with long-term effects

CLP (1272/2008): Eye Dam. 1;H318

2.2. Label elements:



Contains:

Hydrogen peroxide.

H318:

Causes serious eye damage.

P280:

Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338+P310:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

EUH 071:

Corrosive to the respiratory tract.

2.3. Other dangers:

PBT/vPvB: The ingredients are not PBT/vPvB according to the criteria in REACH annex XIII.

Endocrine disrupting properties: The ingredients are not considered endocrine disruptors according to the criteria of Regulation 2017/2100 or Regulation 2018/605.

POINT 3: Compensation of/information about contents

3.1. Compensation of/information about contents

3.2. Compounds:

Substance name	CAS	EF-No.	Index-no.	REACH reg.no.	Substance Classification	Note
Acetic acid	64-19-7	200-580-7	607-002-00-6	-	Flam. Liq. 3;H226 Skin Corr. 1A;H314	1,2
Hydrogen peroxide	7722-84-1	231-765-0	008-003-00-9	01-2119485845-22	Ox. Liq. 1;H271 Acute Tox. 4;H302+H332 Skin Corr. 1A;H314 Eye Dam. 1;H318 STOT SE 3;H335	3,4

- 1) Stoffet er et organisk opløsningsmiddel.
- 2) SCL (Specific Concentration limits) for classification (harmonised): Eye Irrit. 2;H319: $10\% \leq C < 25\%$; Skin Corr. 1A;H314: $C \geq 90\%$; Skin Corr. 1B;H314: $25\% \leq C < 90\%$; Skin Irrit. 2;H315: $10\% \leq C < 25\%$
- 3) ATE (inhalation, vapour) = 11 mg/l; ATE (ingestion) = 1026 mg/kg
- 4) SCL (Specific Concentration limits) for classification (harmonised classification): Ox. Liq. 1;H271: $C > 70\%$; Skin Corr. 1A;H314: $C > 70\%$; Ox. Liq. 2;H272: $50\% < C < 70\%$; Skin Corr. 1B;H314: $50\% < C < 70\%$; STOT SE 3;H335: $C > 35\%$; Skin Irrit. 2;H315: $35\% < C < 50\%$; Eye Dam. 1;H318: $8\% < C < 50\%$; Eye Irrit. 2;H319: $5\% < C < 8\%$

The wording of the hazard statements - see paragraph 16.

POINT 4: First aid measures

4.1. Description of first aid measures:

- Inhalation: Bring the person to fresh air. Keep calm under supervision. In case of discomfort: Seek medical attention.
- Skin: Rinse skin and wash thoroughly with soap and water. In case of skin rashes, wounds or other skin problems: Seek medical attention.
- Eyes: Immediately rinse with water or physiological saline for at least 15 min. If possibly remove contact lenses and open the eye wide. By continued irritation: Seek medical attention. Continue rinsing during transport to the doctor/hospital.
- Ingestion: Immediately rinse mouth thoroughly and drink water in copious amounts. **Do not induce vomiting.** If vomiting occurs, keep the head low to avoid stomach contents in the lungs. Immediately call an ambulance.

4.2. Most important symptoms and effects, both acute and delayed:

Causes severe eye damage with redness and pain. May have an irritating and bleaching effect on the skin. Inhalation of high concentrations or frequent inhalation of even small amounts of organic solvent can cause damage to e.g. liver, kidneys, and the central nervous system (including brain damage).

4.3. Indication of whether emergency medical attention and special treatment are needed:

Show this safety data sheet to doctors or casualty ward.

POINT 5: Fire suppression

5.1. Suppression methods:

Water fogging (never water jet - spreads the fire), foam, powder or carbon dioxide.

5.2. Special dangers in connection with the material or compound:

Avoid inhalation of flue gases. In case of fire, very toxic gases are formed: Primarily carbon oxides. Can also increase the fire hazard of other materials, as hydrogen peroxide is a strong oxidant. If possible, remove containers or cool with water.

5.3. Indication for a fire department:

Use compressed air mask by heavy smoke.

POINT 6: Accidental release measures

6.1. Personal precautions, personal protective equipment, and emergency procedures:

Use personal protective equipment - see point 8. Limit spread. Ensure good ventilation. Keep unauthorized persons at a distance.

6.2. Environmental protection indications:

Avoid discharge to drains - see point 12. Inform local environmental authorities in case of spillage to the environment.

6.3. Methods and equipment for containment and cleaning:

Soaked up with none flammable granulate or similar. Rinse thoroughly with water. Collect in suitable containers with well-closed lids. Further waste handling - see point 13.

6.4. References to other points:

See above.

POINT 7: Handling and storage

7.1. Measures for safe handling:

Provide effective ventilation. Avoid inhalation of vapours and contact with skin, eyes and clothing. If skin becomes contaminated, wash immediately. Immediately change contaminated clothing. There must be access to emergency shower, plenty of water and eyewash bottles. When diluted with water, the acid is poured into the water - never the other way around. Contaminated clothing may not dry, but immediately be rinsed with plenty of water to avoid spontaneous combustion.

7.2. Conditions for safe storage, including any incompatibility:

Secure, inaccessible to unauthorized persons, separated from foodstuffs, medicines etc. In a well-closed container, protected from direct sunlight. Use a container made of aluminium, glass or polyethylene, possibly equipped with spill valve. Dry and cool. Solutions to which no stabilizer has been added must not be stored above 15°C. Should not be stored for a long time. Separated from flammable materials, reductant, certain metals, acids, bases and organic solvents, cf. incomparable materials - see point 10.

7.3. Special usage:

See use - point 1.

PUNKT 8: Exposure control/personal protective equipment

8.1. Control parameter:

AT-limit value (reg. 1054 of 28.06.2022):

	8-hours limit value	Short-term limit value	Anm.
Hydrogen peroxide	1 ppm = 1.4 mg/m ³	2 ppm = 2.8 mg/m ³	-
Acetic acid	10 ppm = 25 mg/m ³	20 ppm = 50 mg/m ³	E

E = The substance has an EF-limit value

DNEL:	Exposure	Value	Population	Effects
Hydrogen peroxide	Long-term - inhalation	1.4 mg/m ³	Worker	Local
	Acute - inhalation	3 mg/m ³	Worker	Local
	Long-term - inhalation	0.21 mg/m ³	Consumer	Local
	Acute - inhalation	1.93 mg/m ³	Consumer	Local
Acetic acid	Long-term, inhalation	25 mg/m ³	Worker	Local
	Short-term, inhalation	25 mg/m ³	Worker	Local
PNEC:	Medium	Value		
Hydrogen peroxide	Fresh water	0.013 mg/l		
	Sea water	0.013 mg/l		
	Sewage works (STP)	4.66 mg/l		
	Fresh water sediment	0.047 mg/kg		
	Sea water sediment	0.047 mg/kg		
	Sporadic discharge	0.014 mg/l		
	Soil	0.003 mg/kg		
Acetic acid	Fresh water	3.058 mg/l		
	Sea water	0.306 mg/l		
	Fresh water sediment	11.36 mg/kg		
	Sea water sediment	1.136 mg/kg		
	Sewage works (STP)	85 mg/l		
	Soil	0.47 mg/kg		

8.2. Exposure control:

Appropriate measures for exposure control: Provide effective ventilation.

Personal protective equipment:

Inhalation: In case of insufficient ventilation: use approved mask with gas filter type B2 grey - against inorganic gases). The filters have a limited service life (must be replaced). Read the manufacturer's instructions.

Skin: Wear protective gloves made of polyethylene (PE), nitrile or butyl rubber. Breakthrough time approx. 3 hours.

Eyes: Tightly fitted safety goggles (EN 166) by risk of spatter.

Environmental exposure controls: None.

POINT 9: Physical and chemical characteristics

9.1. Information about basic physical and chemical characteristics:

Appearance:	Liquid
Colour:	Uncoloured
Odor:	Pungent odor
Melting point/freezing point (°C):	Not decided

Boiling point or bubble-point and boiling point interval (°C):	> 100
Ignitability (solid, gaseous):	Not decided
Upper/lower explosion limits (vol-%):	Not decided
Flash point (°C):	> 60
Auto-ignition temperature (°C):	Not decided
Self-accelerating decomposition temperature (°C):	Not decided
pH:	Not decided
Kinematic viscosity (mm ² /s at 40°C):	Not decided
Solubility (mg/l):	Soluble in water
Partition coefficient n-octanol/water Log K _{ow} :	Not relevant for solutions
Vapor pressure (hPa, 20°C):	Not decided
Density and/or relative density (g/cm ³):	Approx. 1.1
Relative vapor density (air=1):	Not decided
Particulate properties:	Not decided for liquids
9.2. Other information:	Not relevant.

POINT 10: Stability and reactivity

10.1. Reactivity:

No available data.

10.2. Chemical stability:

Stable under recommended storage conditions - see point 7. Not flammable in itself, but maintains a fire in the same way as oxygen.

10.3. Risk of dangerous reactions:

None known.

10.4. Conditions that should be avoided:

The liquid can split tremendously during strong heating or upon contact with a contaminated rough surface during the development of oxygen. Avoid exposure to light.

10.5. Materials that should be avoided:

May be corrosive to metals (use acid-resistant, stainless steel). Reacts with alkali metals, reductants and a wide range of other materials. Upon contact with flammable substances, a strong heat generation may occur, which can lead to ignition.

10.6. Dangerous decomposition products:

When heated to more than 100°C (decomposition), oxygen is released, which can increase the fire hazard of other materials.

POINT 11: Toxicological information

11.1. Information about hazard classes as defined in Regulation (EC) No 1272/2008:

Acute toxicity: Based on available data, the classification criteria are not met.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Eye Dam. 1; H318 Causes serious eye damage.

Respiratory or skin sensitization: Based on available data, the classification criteria are not met.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproduction toxicity: Based on available data, the classification criteria are not met.

Single STOT-exposure: Based on available data, the classification criteria are not met.

Repeated STOT-exposures: Based on available data, the classification criteria are not met.

Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

Danger class	Data	Test	Data source
Acute toxicity: Inhalation	LC ₅₀ (rat, vapour) = 2 mg/l/4H (Hydrogen peroxide) LC ₅₀ (rat, fog) > 170 mg/m ³ /4H (Hydrogen peroxide)	Not informed OECD 403	IUCLID ECHA
Dermal	LC ₅₀ (rat) > 40 mg/l/4h (Acetic acid) LD ₅₀ (rabbit) > 2000 mg/kg (Hydrogen peroxide) LD ₅₀ (rabbit) = 1060 mg/kg (Acetic acid)	Not informed Not informed	ECHA ECHA
Oral	LD ₅₀ (rat) = 1026 mg/kg (Hydrogen peroxide) LD ₅₀ (rat) = 3310 mg/kg (Acetic acid)	OECD 401 Not informed	ECHA ECHA
Corrosivity/ irritation:	Severe corrosion hazard skin and eyes, rabbit (Hydrogen peroxide)	OECD 404/405	IUCLID
	Severe irritation to corrosion of skin and eyes, rabbit (Acetic acid)	Not informed	IUCLID
Sensitisation:	No available data.	-	-
CMR:	No available data for carcinogenicity (Hydrogen peroxide)	-	-
	No mutagenicity – negative result (Hydrogen peroxide)	Ames	IUCLID
	TD _{Lo} (rat, oral) = 5760 mg/kg/32W intermittent: "Equivocal tumorigenic agent" (Acetic acid)	Not informed	RTECS
	Genotoxicity by in vivo test, inhalation (Acetic acid)	Drosophila SLRL	IUCLID
	TD _{Lo} (suckling femal rat, oral) = 700 mg/kg 18d after birth: "Effects on newborn" (Acetic acid)	Not informed	RTECS

Usual exposure methods: Lungs, skin, and gastrointestinal tract.

Inhalation: Vapours may be irritating to the mucous membranes in the respiratory tract. Symptoms may be cough, sting in the throat and chest pain.

Skin: Long-term contact with the skin may cause irritation with redness, sting and pain.

Eyes: May be irritating with pain, redness and blurred vision. May cause blindness. Any eye damage will not show until later.

Ingestion: May be irritating to the mucous membranes with sting or pain in the mouth and throat, nausea, vomiting, stomach pain and diarrhoea. In the body, hydrogen peroxide splits to release oxygen, which may cause tissue damage.

Chronic effects:

Long-term repeated exposure to hydrogen peroxide carries a risk of bleaching of hair and skin. In tests with bacteria, hydrogen peroxide has caused changes in the genes. Animal tests show conflicting results regarding carcinogenic effect. It is possible that hydrogen peroxide is not in itself carcinogenic, but that it may enhance the carcinogenic effect of other substances. Inhalation of high concentrations or frequent inhalation of even small amounts of organic solvent can cause damage to e.g., liver, kidneys and central nervous system (including brain damage).

11.2. Information about other hazards: None known.

POINT 12: Environmental information

12.1. Toxicity:

Aquatic	Data	Test (Media)	Data source
Fish	LC ₅₀ (Pimephales promelas, 96h) = 16.4 mg/l (Hydrogen peroxide)	Not informed (FW)	ECHA
	LC ₅₀ (Leopomis macrochirus, 96h) = 75 mg/l (Acetic acid)	OECD 203 (FW)	ECHA
Crustacean	LC ₅₀ (Daphnia pulex, 48h) = 2.4 mg/l (Hydrogen peroxide)	Not informed (FW)	ECHA
	EC ₅₀ (Daphnia magna, 48h) > 300 mg/l (Acetic acid)	OECD 202 (FW)	ECHA
Alga	EC ₅₀ (Skeletonema costatum, 72h) = 1,38 mg/l (Hydrogen peroxide)	Not informed (FW)	ECHA
	EC ₅₀ (Skeletonema costatum, 72h) > 300 mg/l (Acetic acid)	Not informed (FW)	ECHA

12.2. Persistence and degradability:

Acetic acid: BOD₁₅ = 85-88% of ThOD & BOD₅ = 66-76% of ThOD (The substance is rapidly degradable).

Methods for determining the biodegradability do not apply to inorganic substances.

Hydrogen peroxide dissociates in water.

12.3. Bioaccumulative potential:

Acetic acid: Log K_{ow} < 0 (no significant bioaccumulation).

Hydrogen peroxide: Log K_{ow} = -1,57 (modeldata). Not expected to bioaccumulate.

12.4. Mobility in soil:

Hydrogen peroxide: Log K_{oc} = 1,58 (very high mobility in land treatment is expected).

12.5. Results of PBT and vPvB assessment:

The ingredients are not PBT/vPvB according to the criteria in REACH annex XIII.

12.6. Endocrine-disrupting capacities:

None known.

12.7. Other adverse effects:

None known.

POINT 13: Removal

13.1. Methods for waste handling:

The chemical must be considered as hazardous waste. Use the local authority's collection scheme.

Chemical waste group: **EAK-code:**

H 02 01 08 (residue)

H/Z 15 02 02 (absorbents polluted with the product)

POINT 14: Transport information

14.1. UN-number or ID-number: 2984

14.2. UN-shipment designation (UN proper shipping name): HYDROGEN PEROXIDE, AQUEOUS SOLUTION

14.3. Transport danger class(es): 5.1

14.4. Packaging group: III

14.5. Environmental dangers: None.

14.6. Special regulations for the user: None.

14.7. Bulk transport by sea according to IMO instruments: Not relevant.

ADR:

Limited quantities (LQ): 5L; Excluded quantities (EQ): Code E1; Transport category: 3;
Tunnel restriction code: E

POINT 15: Information about regulations

15.1. Special determinations/special rules for the material or compound with respect to safety, health and environment:

The product must not be used commercially by young people under 18 years of age. However, young people over the age of 15 are exempt from this rule if the product is included as a necessary part of an education. In a workplace assessment, it must be ensured that employees are not exposed to effects that may involve a risk during pregnancy or breastfeeding (cf. the working environment authority's report on the performance of work).

Covered by Directive 2012/18/EU (Seveso), P8 (Oxidizing liquids and solids): Column 2: 50 t,
Column 3: 200 h.

Covered by REGULATION (EU) 2019/1148 on the marketing and use of starting substances for explosives. This regulation requires traders to report suspicious transactions, regardless of whether the potential customer is an ordinary citizen, professional user or business owner. The obligations concern regulated starting substances for explosives, including the obligation to report suspicious transactions as far as hydrogen peroxide is concerned, are listed in Annex I and regardless of the concentration of the substance.

PR-no.: 4394343

15.2. Chemical safety evaluation:

No CSR.

POINT 16: Other information

Hazard statements given under point 3:

H226: Flammable liquid and vapour.

H271: May cause fire or explosion; strong oxidiser.

H302+H332: Harmful if swallowed or if inhaled.

H314: Causes severe skin burns and eye damage.

H318: Causes serious eye damage.

H335: May cause respiratory irritation.

Abbreviations:

AT = Working environment authority

CMR = carcinogenic, mutagenic, or toxic to reproduction

CSR = Chemical Safety Report

EC₅₀ = Effect Concentration 50 %

DNEL = Derived No-Effect Level

FW = Fresh Water

LC₅₀ = Lethal Concentration 50 %

LD₅₀ = Lethal dosage 50 %

PBT = Persistent, Bioaccumulative, Toxic

PNEC = Predicted No-Effect Concentration

vPvB = very Persistent, very Bioaccumulative

Literature:

ECHA = REACH Registration dossier from ECHA's website

IUCLID = International Uniform Chemical Database Information

RTECS = Register of Toxic Effects of Chemical Substances

Advice on training / instruction:

The product may only be used by persons who are carefully instructed in the execution of the work and who have knowledge of the contents of this safety data sheet.

Changes since previous version:

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