Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 15.11.2023 Version number 7 (replaces version 6) Revision: 08.08.2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Product name: KS810 - Dissolved Oxygen Reagent 2**

· **Catalog number:** 56Z081098, 56L0810, 56L081030, 461160, 427706

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

· **Application of the substance / the preparation:** Reagent for water analysis

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**
Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com
phone: +49 (0)231 94510-0
e-mail: sales@lovibond.com

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom
phone : +44 1980 664800
e-mail: SDS@lovibond.uk

· **Informing department:**
e-mail: sds@lovibond.com
Product Safety Department

· **1.4 Emergency telephone number:**
+44 1235 239670
Languages: English

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

GHS08 health hazard

STOT RE 1	H372 Causes damage to the thyroid through prolonged or repeated exposure. Route of exposure: Oral.

GHS05 corrosion

Met. Corr.1	H290 May be corrosive to metals.
Skin Corr. 1A	H314 Causes severe skin burns and eye damage.
Eye Dam. 1	H318 Causes serious eye damage.
Aquatic Chronic 3	H412 Harmful to aquatic life with long lasting effects.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.

(Contd. on page 2)

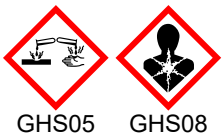
Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 15.11.2023 Version number 7 (replaces version 6) Revision: 08.08.2022

Product name: KS810 - Dissolved Oxygen Reagent 2

(Contd. of page 1)

· **Hazard pictograms**



GHS05 GHS08

· **Signal word** Danger
· **Hazard-determining components of labelling:**
sodium hydroxide
potassium iodide
· **Hazard statements**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H372 Causes damage to the thyroid through prolonged or repeated exposure. Route of exposure: Oral.
H412 Harmful to aquatic life with long lasting effects.
· **Precautionary statements**
P280 Wear protective gloves/protective clothing/eye 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 doctor.

· **2.3 Other hazards**
Acid burns have to treated immediately, as it may otherwise cause badly curing wounds.
The main intake pathways of potassium iodide are: inhalation of dust and solution aerosols, as well as oral ingestion.

· **Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **Determination of endocrine-disrupting properties**
The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** aqueous solution

· **Dangerous components:**

CAS: 1310-73-2 EINECS: 215-185-5 Index No: 011-002-00-6 Reg.nr.: 01-2119457892-27-XXXX	sodium hydroxide Met. Corr.1, H290; Skin Corr. 1A, H314 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 5 % Skin Corr. 1B; H314: 2 % ≤ C < 5 % Skin Irrit. 2; H315: 0.5 % ≤ C < 2 % Eye Irrit. 2; H319: 0.5 % ≤ C < 2 %	25–35%
CAS: 7681-11-0 EINECS: 231-659-4 Reg.nr.: 01-2119966161-40-XXXX	potassium iodide STOT RE 1, H372	10–20%
CAS: 26628-22-8 EINECS: 247-852-1 Index No: 011-004-00-7	sodium azide Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; STOT RE 2, H373; Aquatic Acute 1, H400 (M=1); Aquatic Chronic 1, H410 (M=1), EUH032	0.25–<1%

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information**
Personal protection for the First Aider!
Instantly remove any clothing soiled by the product.
· **After inhalation** Supply fresh air. Call a doctor.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 2)

· **After skin contact**
Instantly rinse with water.
Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
· **After eye contact**
Rinse opened eye for several minutes (at least 15 min) under running water.
Call a doctor immediately.
· **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
Do not induce vomiting; instantly call for medical help.
· **4.2 Most important symptoms and effects, both acute and delayed:**
Irritation and corrosion
after inhalation:
coughing
breathing difficulty
Possible damages: damage of respiratory tract
after swallowing:
strong caustic effect.
sickness
vomiting
pain
cramps
after absorption:
drop in blood pressure
weakness
headache
· **Danger**
Risk of blindness!
Danger of gastric perforation.
Danger of pulmonary oedema.
· **4.3 Indication of any immediate medical attention and special treatment needed:**
If swallowed or in case of vomiting, danger of entering the lungs
Subsequent observation for pneumonia and pulmonary oedema
Absorption: in case of iodine hypersensitivity, even after relatively low doses, acute respiratory and cardiovascular disorders (possibly shock), skin and mucous membrane reactions possible. (GESTIS)
Symptoms of poisoning may even occur after several hours.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
· **5.2 Special hazards arising from the substance or mixture**
The product is not combustible.
Formation of toxic gases is possible during heating or in case of fire.
Can be released in case of fire:
Nitrogen oxides (NOx)
Hydrogen iodide (HI)
Sodium oxide
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
· **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
· **Advice for non-emergency personnel:**
Wear protective equipment. Keep unprotected persons away.
Avoid substance contact.
Ensure adequate ventilation

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 3)

Use breathing protection against the effects of fumes/dust/aerosol.
· **Advice for emergency responders:** Protective equipment: see section 8

· **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Inform respective authorities in case product reaches water or sewage system.
· **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Absorb with liquid-binding material (sand, diatomite, universal binders).
Dispose of contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
· **Advice on safe handling:** Prevent formation of aerosols.
· **Hygiene measures:**
Do not inhale gases / fumes / aerosols.
Do not get in eyes, on skin, or on clothing.
Take off immediately all contaminated clothing.
Wash hands during breaks and at the end of the work.
Do not eat, drink or smoke when using this product.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and containers:**
Store in cool location.
Keep only in original packaging.
· **Information about storage in one common storage facility:**
Store away from metals.
Do not store together with acids.
· **Further information about storage conditions:**
Store in a locked cabinet or with access restricted to technical experts or their assistants.
Protect from heat and direct sunlight.
Protect from the effects of light.
Protect from humidity and keep away from water.
· **Recommended storage temperature:** 20°C +/- 5°C

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
CAS: 1310-73-2 sodium hydroxide	
WEL (Great Britain)	Short-term value: 2 mg/m³
CAS: 26628-22-8 sodium azide	
WEL (Great Britain)	Short-term value: 0.3 mg/m³ Long-term value: 0.1 mg/m³ (as NaN_3), Sk
IOELV (European Union)	Short-term value: 0.3 mg/m³ Long-term value: 0.1 mg/m³ Skin

· **Regulatory information**
WEL (Great Britain): EH40/2020
IOELV (European Union): (EU) 2019/1831

· **DNELs**
Derived No Effect Level (DNEL)

CAS: 1310-73-2 sodium hydroxide		
Inhalative	DNEL	1 mg/m³ (Worker / long-term / local effects)

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 4)

		1 mg/m³ (Consumer / long-term / local effects)
CAS: 7681-11-0 potassium iodide		
Oral	DNEL	0.01 mg/kg /bw/d (Consumer / acute / systemic effects)
		0.01 mg/kg /bw/d (Consumer / long-term / systemic effects)
Dermal	DNEL	1 mg/kg /bw/d (Worker / long-term /systemic effects)
		1 mg/kg /bw/d (Consumer / long-term / systemic effects)
Inhalative	DNEL	0.07 mg/m³ (Worker / long-term /systemic effects)
		0.035 mg/m³ (Consumer / long-term / systemic effects)

· **Recommended monitoring procedures:**
Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

· **PNECs**
Predicted No Effect Concentration (PNEC)

CAS: 7681-11-0 potassium iodide	
PNEC	0.007 mg/l (Fresh water)
PNEC	0.075 mg/kg (Aquatic intermittent release)
	0.007 mg/kg /sediment (Fresh water sediment)

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**

· **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.

· **Individual protection measures, such as personal protective equipment**
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
· **Eye/face protection**
Tightly sealed safety glasses.
Use safety glasses that have been tested and approved in accordance with government standards such as EN 166.
· **Hand protection**
Alkaline resistant gloves
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
· **Material of gloves**
nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
· **Penetration time of glove material**
Value for the permeation: Level = 1 (< 10 min)
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Other skin protection (body protection):** Alkaline resistant protective clothing
· **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
· **Recommended filter device for short term use:** Combination filter B-P2

· **Environmental exposure controls** Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **Physical state**	Fluid
· **Form:**	Solution
· **Colour:**	Clear
· **Odour:**	Odourless
· **Odour threshold:**	Not applicable.
· **Melting point/Freezing point:**	Not determined.
· **Boiling point or initial boiling point and boiling range**	Not determined.
· **Flammability**	The product is not combustible.
· **Explosive properties:**	Product is not explosive.
· **Lower and upper explosion limit**	
Lower:	Not applicable.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 5)

Upper:	Not applicable.
· **Flash point:**	Not applicable.
· **Auto-ignition temperature:**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **pH at 20°C**	> 12
· **Kinematic viscosity**	Not determined.
· **Solubility**	
· **Water:**	Fully miscible
· **Partition coefficient n-octanol/water (log value)**	Not applicable (mixture).
· **Vapour pressure:**	Not determined.
· **Density and/or relative density**	
· **Density at 20°C:**	1.64 g/cm³
· **Relative density:**	Not determined.
· **Relative gas density**	Not determined.
· **Particle characteristics**	Not applicable (liquid).

· **9.2 Other information**

· **Information with regard to physical hazard classes**	.
· **Corrosive to metals**	May be corrosive to metals.
· **Metals that are corroded by the substance or mixture**	Information on incompatible materials can be found in Sections 7 and 10.
· **Other safety characteristics**	
· **Oxidising properties:**	none
· **Additional information**	
· **Solids content:**	40 - 50 %
· **Solvent content:**	
· **Organic solvents:**	0 %
· **Water:**	50 - 60 %

SECTION 10: Stability and reactivity

· **10.1 Reactivity** see section 10.3
· **10.2 Chemical stability** Stable at ambient temperature (room temperature).
· **10.3 Possibility of hazardous reactions**
Reacts with metals forming hydrogen (Danger of explosion in case of large amounts!)
Corrosive action on metals
Contact with acids releases toxic gases
Reacts with alkaline metals
Reacts with peroxides
Reacts with halogenated compounds
Reacts with acids and oxidising agents.
Reacts with reducing agents
Reacts with alcohols
Reacts with ammonia (NH_3).
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:**
metals
light metals
organic substances
· **10.6 Hazardous decomposition products:** see section 5

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

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

· **LD/LC50 values that are relevant for classification:**

CAS: 1310-73-2 sodium hydroxide		
Oral	LDLo	500 mg/kg (rabbit) (IUCLID)

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 6)

CAS: 7681-11-0 potassium iodide		
Oral	LD50	2779 mg/kg (rat)
Dermal	LD50	3160 mg/kg (rabbit)
	NOAEL	0.01 mg/kg /bw/d (human) organ: Thyroid
CAS: 26628-22-8 sodium azide		
Oral	LD50	27 mg/kg (rat) (RTECS)
	LDLo	29 mg/kg (human)
Dermal	LD50	20 mg/kg (rabbit) (ECHA)
Inhalative	LC50/4h	>0.052 mg/l (rat) (dust, aerosol) (ECHA: LC_{50}= 0,052 - 0,52 mg/l)
	LC50	1.853 mg/l/1h (rat) (Registrant, ECHA)

· **Skin corrosion/irritation** Causes severe skin burns and eye damage.
· **Serious eye damage/irritation**
Causes serious eye damage.
Risk of blindness!

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Information on components:**
The following applies to iodides in general: Sensitation possible at predisposed persons.

CAS: 1310-73-2 sodium hydroxide		
Sensitisation	Patch test (human)	(negative)

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **Information on components:**
OECD 414: Teratogenicity testing
OECD 473: Mutagenicity testing
OECD 471, 474, 476, 487: Germ cell mutagenicity testing

CAS: 7681-11-0 potassium iodide	
OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test)
OECD 476	(negative) (In Vitro Mammalian Cell Gene Mutation Test) Mouse (lymhoma L5178Y cells)

· **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
· **STOT (specific target organ toxicity) -repeated exposure**
Causes damage to the thyroid through prolonged or repeated exposure. Route of exposure: Oral.

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

· **Information on likely routes of exposure**

"Main routes of exposure:
At workplaces, intake of potassium iodide (KI) is most likely to occur via the respiratory tract.
Outside the workplace, iodides are ingested with food (essential) and sometimes with medications.
Respiratory tract: KI can be inhaled as dust or aerosol from solutions. Inhalation studies were conducted with particulate aerosols containing sodium iodide using various animal species (monkey, mouse, sheep). Rapid and effective absorption via the respiratory tract was observed. This is also assumed for KI as its solubility is comparable.
Skin: From tests on volunteers who had an aqueous KI solution applied to their forearms (12.5 cm²), the amount of iodine absorbed was estimated at 0.1%. Absorption through the skin is therefore considered to be of little relevance.
Gastrointestinal tract: Soluble iodide is absorbed almost entirely via the gastrointestinal tract. This has been proven by results of studies with KI on adult volunteers." [GESTIS]
In the workplace, sodium hydroxide can be inhaled in the form of dusts or as a liquid aerosol. Due to the pronounced irritant effect (warning effect), prolonged massive exposures are generally avoided. In case of accidental ingestion of dust or swallowing of solution, rapid penetration of the alkali or Na and OH ions into the contacted tissues and partial transfer into the blood is to be expected.
Even if NaOH comes into contact with the skin as a solid, it will act as a concentrated solution due to its hygroscopicity through rapid water absorption.
The most frequent causes of accidents in occupational handling are accidental direct contact with eyes and skin.

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 15.11.2023 Version number 7 (replaces version 6) Revision: 08.08.2022

Product name: KS810 - Dissolved Oxygen Reagent 2

(Contd. of page 7)

· **Additional toxicological information:**
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

CAS: 1310-73-2 sodium hydroxide

. (source: GESTIS)
Main toxic effects:
Acute: strong irritation and caustic effect on all contacted mucous membranes and the skin, risk of irreversible eye damage (risk of blindness)
Chronic: Irritant effect on eyes, respiratory tract and skin

Further information:
Irrespective of the route of exposure, the focus is on the local effect, which is characterized by swelling and dissolution of the contacted tissue (colliquation necrosis) that progresses rapidly in depth.
The extent of the tissue damage essentially depends on the duration of exposure, concentration, pH value, dose and onset of treatment measures.

CAS: 7681-11-0 potassium iodide

. (source: GESTIS)
Main Toxic Effects:
Acute: Irritation to the eyes, skin and airways, disturbance of thyroid function, cardiovascular effects, metabolic disturbances.
Chronic: Disturbance of thyroid function, systemically conditioned skin damage and inflammation of the mucous membranes.

Furter Information (GESTIS, Merck):
Small amounts of iodine are essential for the body. However, long-term overdoses of iodine lead to disturbances in the thyroid function (hypo- and/or hyperthyroidism, possibly accompanied by thyroiditis). The effects are very complex.
Furthermore, symptoms of chronic iodine poisoning (iodine toxicosis, "iodism") can occur following intake of high doses of predisposed persons. They mainly consist of systemically conditioned irritation/inflammatory changes to the mucous membranes and skin.
Iodide crosses the placenta and, when administered (orally) to pregnant women in very high doses, can lead to hypothyroidism and/or goiter in the fetus with deaths from tracheal compression

CAS: 26628-22-8 sodium azide

. (source: GESTIS)
Main toxic effects:
Acute & chronic: disorders in the cardiovascular and nervous systems

Further information:
In the industrial sector, various symptoms have been observed after dermal and/or inhalation exposure to sodium azide, which indicate systemic intoxication: drop in blood pressure, bradycardia, dizziness, headache, palpitations, metabolic acidosis, sometimes also paraesthesia and reduced muscle strength.
A large number of case reports are available on poisoning after ingestion: Rapid onset of dilatation of peripheral vessels and severe drop in blood pressure are characteristic. N. also has a direct (spasmodic) effect on the CNS. Usual symptoms of N. poisoning are tachycardia, headache, weakness, dizziness, nausea, convulsions, collapse. Shortness of breath, vomiting, diarrhea, upper abdominal pain, sweating, restlessness and visual disturbances were also described.

· **11.2 Information on other hazards**
· **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

· **Other information**
Other dangerous properties can not be excluded.
According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

CAS: 1310-73-2 sodium hydroxide

LC50	40.4 mg/l/48h (Ceriodaphnia sp.) (ECHA)

CAS: 7681-11-0 potassium iodide

EC50	7.5 mg/l/48h (Daphnia magna) (OECD 202) Merck
LC50	3780 mg/l/96h (rainbow trout) (OECD 203) Merck

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 8)

CAS: 26628-22-8 sodium azide	
EC50	4.2 mg/l/48h (Daphnia magna) (ECOTEX)

· **Bacterial toxicity:**

CAS: 1310-73-2 sodium hydroxide	
EC50	22 mg/l (Photobacterium phosphoreum) (15 min)

· **12.2 Persistence and degradability** .
· **Other information:**
Mixture of inorganic compounds.
Methods for the determination of biodegradability are not applicable to inorganic substances.
· **12.3 Bioaccumulative potential**
Pow = n-octanol/wasser partition coefficient
log Pow < 1 = Does not accumulate in organisms.

CAS: 26628-22-8 sodium azide	
log Pow	0.3 (.) (OECD 117) (Merck)

· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
Harmful effect due to pH shift.
Forms corrosive mixtures with water even if diluted.
Reacts with water to form toxic decomposition products.
Avoid transfer into the environment.
· **Water hazard:**
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into soil.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to disposers of hazardous waste.

· **European waste catalogue**	
16 05 07*	discarded inorganic chemicals consisting of or containing hazardous substances

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, IMDG, IATA** UN1824

· **14.2 UN proper shipping name**
· **ADR** 1824 SODIUM HYDROXIDE SOLUTION
· **IMDG, IATA** SODIUM HYDROXIDE SOLUTION

· **14.3 Transport hazard class(es)**

· **ADR**

· **Class** 8 (C5) Corrosive substances.

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 15.11.2023 Version number 7 (replaces version 6) Revision: 08.08.2022

Product name: KS810 - Dissolved Oxygen Reagent 2

(Contd. of page 9)

· **Label**	8
· **IMDG, IATA**	
	
· **Class**	8 Corrosive substances.
· **Label**	8
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	II
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	No
· **14.6 Special precautions for user**	Warning: Corrosive substances.
· **Kemler Number:**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	(SGG18) Alkalis
· **Stowage Category**	A
· **Segregation Code**	SG35 Stow "separated from" SGG1-acids
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **Transport category**	2
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

*
SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Poisons Act UK**

· **Regulated explosives precursors**

None of the ingredients is listed.

· **Regulated poisons**

None of the ingredients is listed.

· **Reportable explosives precursors**

None of the ingredients is listed.

· **Reportable poisons**

The substance falls under reportable poisons due to the fact that the concentration is greater than/equal (c≥ x%) the stated mass percentage:

CAS: 1310-73-2	sodium hydroxide	12% of total caustic alkalinity

· **Regulation (EU) 2019/1148 on the marketing and use of explosives precursors** not regulated

· **Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)**

None of the ingredients is listed.

(Contd. on page 11)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 15.11.2023 Version number 7 (replaces version 6) Revision: 08.08.2022

Product name: KS810 - Dissolved Oxygen Reagent 2

(Contd. of page 10)

· **Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:**
None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**
None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
None of the ingredients is listed.

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**
None of the ingredients is listed.

· **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**
None of the ingredients is listed.

· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)**
None of the ingredients is listed.

· **Substances of very high concern (SVHC) according to REACH, Article 57**
This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).
· **Substances of very high concern (SVHC) according to UK REACH**
This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).

· **Directive 2012/18/EU (SEVESO III):**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **Information about limitation of use:** Employment restrictions concerning young persons must be observed (94/33/EC).

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
This Safety Data Sheets is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Relevant phrases**
H290 May be corrosive to metals.
H300 Fatal if swallowed.
H310 Fatal in contact with skin.
H314 Causes severe skin burns and eye damage.
H330 Fatal if inhaled.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
EUH032 Contact with acids liberates very toxic gas.

· **Abbreviations and acronyms:**
OECD: Organisation for Economic Co-operation and Development
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure
EC50: half maximal effective concentration
IC50: half maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (UK REACH)
PNEC: Predicted No-Effect Concentration (UK REACH)

(Contd. on page 12)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 15.11.2023 Version number 7 (replaces version 6) Revision: 08.08.2022

Product name: KS810 - Dissolved Oxygen Reagent 2

(Contd. of page 11)

LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 1: Acute toxicity – Category 1
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· **Sources**
Data arise from safety data sheets, reference works and literature.
ECHA: European CHemicals Agency http://echa.europa.eu
ECOTOX Database
GESTIS- Stoffdatenbank (Substance Database, Germany)

· *** Data compared to the previous version altered.**