

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

Printing date 14.11.2023

Version number 7 (replaces version 6)

Revision: 14.11.2023

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

· **1.1 Product identifier**

· **Product name:** KS809 - Dissolved Oxygen Reagent 1

· **Catalog number:** 56Z080998, 461150, 427705, 56L080930

· **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 2      H373 May cause damage to organs through prolonged or repeated exposure.

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.

· **Hazard pictograms**



GHS08

· **Signal word** Warning

· **Hazard-determining components of labelling:**

manganese sulphate

· **Hazard statements**

H373 May cause damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

(Contd. on page 2)

GB

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 7 (replaces version 6)

Revision: 14.11.2023

**Product name: KS809 - Dissolved Oxygen Reagent 1**

(Contd. of page 1)

**Precautionary statements**

- P260 Do not breathe mist/vapours/spray.
- P273 Avoid release to the environment.
- P314 Get medical advice/attention if you feel unwell.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3 Other hazards** No further relevant information available.

**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: 10034-96-5 EINECS: 232-089-9 Index No: 025-003-00-4	manganese sulphate	☠ STOT RE 2, H373; ☠ Aquatic Chronic 2, H411	10–20%
--	--------------------	--	--------

**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** Instantly remove any clothing soiled by the product.
- After inhalation** Supply fresh air; consult doctor in case of symptoms.
- After skin contact** Instantly wash with water and soap and rinse thoroughly.
- After eye contact**  
Rinse opened eye for several minutes under running water (at least 15 min). If symptoms persist, consult doctor.
- After swallowing**  
Rinse out mouth and then drink 1-2 glasses of water.  
In case of persistent symptoms consult doctor.

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

- sickness
- vomiting
- gastric pain

**4.3 Indication of any immediate medical attention and special treatment needed:** Monitor circulation

### 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:  
Sulphur oxides (SO<sub>x</sub>)

**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.

GB  
(Contd. on page 3)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 7 (replaces version 6)

Revision: 14.11.2023

**Product name: KS809 - Dissolved Oxygen Reagent 1**

(Contd. of page 2)

### 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.  
Ensure adequate ventilation
- **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.  
Dilute with much water.
- **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** Prevent formation of aerosols.
- **Advice on safe handling:** Work only in fume cupboard.
- **Hygiene measures:**  
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.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
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: 10034-96-5 manganese sulphate**

WEL (Great Britain)	Long-term value: 0.2* 0.05** mg/m <sup>3</sup> as Mn *inhalable fraction **respirable fraction
IOELV (European Union)	Long-term value: 0.2* 0.05** mg/m <sup>3</sup> as Mn; *inhalable, **respirable fraction

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

(Contd. on page 4)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 7 (replaces version 6)

Revision: 14.11.2023

**Product name: KS809 - Dissolved Oxygen Reagent 1**

(Contd. of page 3)

- **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**  
Safety glasses  
use against the effects of fumes / dust
- **Hand protection**  
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:  $\geq 0.11$  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):** Protective work clothing.
- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
- **Recommended filter device for short term use:** Filter B
- **Environmental exposure controls** Avoid release to the environment.

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **Physical state** Fluid
- **Form:** Solution
- **Colour:** Pink
- **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.
- **Upper:** Not applicable.
- **Flash point:** Not applicable.
- **Auto-ignition temperature:** Not applicable.
- **Decomposition temperature:** Not determined.
- **pH at 20°C** 5
- **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:** 1.01 g/cm<sup>3</sup>
- **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** Void
- **Other safety characteristics**
- **Oxidising properties:** none
- **Additional information**
- **Solids content:** < 20 %
- **Solvent content:**
- **Water:** > 80 %

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 7 (replaces version 6)

Revision: 14.11.2023

**Product name: KS809 - Dissolved Oxygen Reagent 1**

(Contd. of page 4)

### 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** No further relevant information available.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **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: 10034-96-5 manganese sulphate**

Oral	LD50	2150 mg/kg (rat) (anhydrous substance, IUCLID)
------	------	---

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** 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.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
- **STOT (specific target organ toxicity) -repeated exposure**  
May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**  
CAS 10034-96-5: chronic: central nervous system effects

**CAS: 10034-96-5 manganese sulphate**

(source: GESTIS) Acute: strong eye irritant with risk of permanent damage. chronic: systemic effects of manganese ions: Damage to the central nervous system, local: irritation and inflammation in the respiratory tract [GESTIS].
---

- **11.2 Information on other hazards**
- **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **Other information**  
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: 10034-96-5 manganese sulphate**

EC50	8.3 mg/l/48h (Daphnia magna) (anhydrous substance, ECOTOX)
LC50	30.6 mg/l/96h (fathhead minnow) (anhydrous substance, ECOTOX)

- **Other information:**  
The following applies to manganese ions: toxic to water organisms.  
In flowing waters, depending on the mixture, moderate to high toxic effect.
- **12.2 Persistence and degradability .**
- **Other information:**  
Mixture of inorganic compounds.

(Contd. on page 6)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 7 (replaces version 6)

Revision: 14.11.2023

**Product name: KS809 - Dissolved Oxygen Reagent 1**

(Contd. of page 5)

The following statements refer to the individual components.

Quantitative data on the ecological effect of this product are not available.

Methods for the determination of biodegradability are not applicable to inorganic substances.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **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** Avoid transfer into the environment.

· **Water hazard:**

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

### 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 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals
-----------	--

· **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** Void

· **14.2 UN proper shipping name**

· **ADR, IMDG, IATA** Void

· **14.3 Transport hazard class(es)**

· **ADR, IMDG, IATA**

· **Class** Void

· **14.4 Packing group**

· **ADR, IMDG, IATA** Void

· **14.5 Environmental hazards:**

· **Marine pollutant:** No

· **14.6 Special precautions for user**

Not applicable.

· **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

· **Transport/Additional information:**

Not dangerous according to the above specifications.

### 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.

(Contd. on page 7)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 7 (replaces version 6)

Revision: 14.11.2023

**Product name: KS809 - Dissolved Oxygen Reagent 1**

(Contd. of page 6)

<ul style="list-style-type: none"> <li>· <b>Reportable explosives precursors</b></li> </ul>
None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>Reportable poisons</b></li> </ul>
Products containing less than 1% of any of the reportable substances are in general of no concern.
<ul style="list-style-type: none"> <li>· <b>Regulation (EU) 2019/1148 on the marketing and use of explosives precursors</b> not regulated</li> </ul>
<ul style="list-style-type: none"> <li>· <b>Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)</b></li> </ul>
None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:</b></li> </ul>
None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>Regulation (EC) No 273/2004 on drug precursors</b></li> </ul>
None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors</b></li> </ul>
None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:</b></li> </ul>
None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)</b></li> </ul>
None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)</b></li> </ul>
None of the ingredients is listed.
<ul style="list-style-type: none"> <li>· <b>Substances of very high concern (SVHC) according to REACH, Article 57</b></li> </ul>
This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).
<ul style="list-style-type: none"> <li>· <b>Substances of very high concern (SVHC) according to UK REACH</b></li> </ul>
This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).
<ul style="list-style-type: none"> <li>· <b>Directive 2012/18/EU (SEVESO III):</b></li> </ul>
<ul style="list-style-type: none"> <li>· <b>Named dangerous substances - ANNEX I</b> None of the ingredients is listed.</li> </ul>
<ul style="list-style-type: none"> <li>· <b>REGULATION (EC) No 1907/2006 ANNEX XVII</b> Conditions of restriction: 3</li> </ul>
<ul style="list-style-type: none"> <li>· <b>Information about limitation of use:</b> Employment restrictions concerning young persons must be observed (94/33/EC).</li> </ul>
<ul style="list-style-type: none"> <li>· <b>15.2 Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.</li> </ul>

### 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**

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

- **Abbreviations and acronyms:**

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)

LC50: Lethal concentration, 50 percent

(Contd. on page 8)

— GB —

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 14.11.2023

Version number 7 (replaces version 6)

Revision: 14.11.2023

---

**Product name: KS809 - Dissolved Oxygen Reagent 1**

---

(Contd. of page 7)

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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.

ECOTOX Database

IUCLID (International Uniform Chemical Information Database)

GESTIS- Stoffdatenbank (Substance Database, Germany)

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

---

GB