

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

Printing date 14.11.2023

Version number 2 (replaces version 1)

Revision: 14.11.2023

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

· **1.1 Product identifier**

· **Product name:** KP641 - Dissolved Oxygen Reagent 3 / Dry Acid Powder

· **Catalog number:** 56Z064198, 461282, 461170, 46128, 461179

· **CAS No.:**  
7681-38-1

· **Registration number** 01-2119552465-36-XXXX

· **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**



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

· **2.2 Label elements**

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

The substance is classified and labelled according to the GB CLP regulation.

· **Hazard pictograms**



GHS05

· **Signal word** Danger

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

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- **Hazard statements**

H318 Causes serious eye damage.

- **Precautionary statements**

P280 Wear eye protection / face protection.

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** No further relevant information available.

- **Results of PBT and vPvB assessment**

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

- **Determination of endocrine-disrupting properties**

The product does not contain substances with endocrine disrupting properties.

### SECTION 3: Composition/information on ingredients

- **3.1 Substances**

- **CAS No. Designation:**

CAS: 7681-38-1 sodium bisulfate

- **Identification number(s):**

- **EC No:** 231-665-7

- **Index No:** 016-046-00-X

### 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.

If skin irritation continues, consult a doctor.

- **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.

In case of persistent symptoms consult doctor.

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

burns

mucous membrane irritation

after swallowing and inhalation:

gastric or intestinal trouble

coughing

sickness

vomiting

diarrhoea

- **Danger** 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

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents**

CO<sub>2</sub>, extinguishing powder or water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

- **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>)

Sodium oxide

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smoke of metal 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.

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### 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.

- **6.3 Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

Collect mechanically.

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.

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### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

- **Advice on safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of dust.

- **Hygiene measures:**

Avoid contact with the eyes.

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:** Store away from oxidising agents.

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed containers.

Protect from heat and direct sunlight.

Protect from the effects of light.

Protect from humidity and keep away from water.

This product is hygroscopic.

- **Recommended storage temperature:** 20°C +/- 5°C

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

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### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Components with limit values that require monitoring at the workplace:** Not required.

- **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.

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- **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.
- **Hand protection**  
Protective 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:  $\geq 0.11$  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 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** Solid.
- **Form:** Powder
- **Colour:** Whitish
- **Odour:** Odourless
- **Odour threshold:** Not applicable.
- **Melting point/Freezing point:** 180°C
- **Boiling point or initial boiling point and boiling range** Decomposition
- **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 (solid).
- **Decomposition temperature:** >315 °C
- **pH (200 g/l) at 25°C** 1.2
- **Kinematic viscosity** Not applicable (solid).
- **Solubility**
- **Water at 20°C:** 285 g/l  
Soluble
- **Partition coefficient n-octanol/water (log value)** Not applicable.
- **Vapour pressure:** Not applicable.
- **Density and/or relative density**
- **Density at 13°C:** 2.4 g/cm<sup>3</sup>
- **Relative density:** Not determined.
- **Relative gas density** Not applicable (solid).
- **Particle characteristics** Not determined.

#### · 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:** 100 %

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### 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**  
Aqueous solution reacts with metals.  
Forms hydrogen in aqueous solution with metals  
Liberates acid in contact with water or alcohol.  
Reacts with strong alkalis and oxidizing agents.
- **10.4 Conditions to avoid** Strong heating (decomposition)
- **10.5 Incompatible materials:** metals
- **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: 7681-38-1 sodium bisulfate**

Oral	LD50	2490 mg/kg (rat) (IUCLID)
Dermal	LD50.	>2000 mg/kg (rabbit)

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**  
Causes serious eye damage.  
Risk of blindness!

**Information on components:**
**CAS: 7681-38-1 sodium bisulfate**

Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: severe irritations)

- **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** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

### SECTION 12: Ecological information

**12.1 Toxicity**
**Aquatic toxicity:**
**CAS: 7681-38-1 sodium bisulfate**

EC50	190 mg/l/48h (Daphnia magna) (IUCLID)
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- **Bacterial toxicity:**  
sulphates toxic > 2.5 g/l

**CAS: 7681-38-1 sodium bisulfate**

EC10	>1000 mg/l (Pseudomonas putida) (16 h)
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**Other information:**

- Toxic for fish:  
Sulphates > 7 g/l
- **12.2 Persistence and degradability** No further relevant information available.

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- **Other information:** 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**  
Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.
- **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**  
Forms corrosive mixtures with water even if diluted.  
Harmful effect due to pH shift.  
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.

<b>European waste catalogue</b>	
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

- |  |  |
|--|--|
| · <b>14.1 UN number or ID number</b><br>· <b>ADR, IMDG, IATA</b>                       | Void   |
| · <b>14.2 UN proper shipping name</b><br>· <b>ADR, IMDG, IATA</b>                      | Void   |
| · <b>14.3 Transport hazard class(es)</b><br>· <b>ADR, IMDG, IATA</b><br>· <b>Class</b> | Void   |
| · <b>14.4 Packing group</b><br>· <b>ADR, IMDG, IATA</b>                                | Void   |
| · <b>14.5 Environmental hazards:</b>   | Not applicable.                                      |
| · <b>14.6 Special precautions for user</b>   | Not applicable.                                      |
| · <b>14.7 Maritime transport in bulk according to IMO instruments</b>                  | Not applicable.                                      |
| · <b>Transport/Additional information:</b>   | 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**

<b>Regulated explosives precursors</b>	
Substance is not listed.	

<b>Regulated poisons</b>	
Substance is not listed.	

<b>Reportable explosives precursors</b>	
Substance is not listed.	

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· <b>Reportable poisons</b>
Substance is not listed.
· <b>Regulation (EU) 2019/1148 on the marketing and use of explosives precursors</b> not regulated
· <b>Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)</b>
Substance is not listed.
· <b>Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:</b>
Substance is not listed.
· <b>Regulation (EC) No 273/2004 on drug precursors</b>
Substance is not listed.
· <b>Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors</b>
Substance is not listed.
· <b>Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:</b>
Substance is not listed.
· <b>REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)</b>
Substance is not listed.
· <b>LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)</b>
Substance is not listed.
· <b>Substances of very high concern (SVHC) according to REACH, Article 57</b> This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).
· <b>Substances of very high concern (SVHC) according to UK REACH</b> This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).
· <b>Directive 2012/18/EU (SEVESO III):</b>
· <b>Named dangerous substances - ANNEX I</b> Substance is not listed.
· <b>Information about limitation of use:</b> Not required.
· <b>15.2 Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out.

### 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 Sheet 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.

· **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

CAS: Chemical Abstracts Service (division of the American Chemical Society)

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

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

· **Sources**

Data arise from safety data sheets, reference works and literature.

IUCLID (International Uniform Chemical Information Database)

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