

## Safety Data Sheet

according to UK REACH (SI 2020/1577) as amended

Printing date 21.07.2025

Version number 2 (replaces version 1)

Revision: 21.07.2025

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

· **1.1 Product identifier**

· **Trade name:** Potassium Hydroxide Crystal >99%

· **Product Code:** 40-5013

· **CAS Number:**  
1310-58-3

· **EC number:**  
215-181-3

· **Index number:**  
019-002-00-8

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

· **Product category** PC21 Laboratory chemicals

· **Application of the substance / the mixture** Laboratory chemicals

· **Uses advised against**

Any use involving aerosol formation or vapour release in excess of the assigned Workplace Exposure Limit where workers are exposed without suitable Respiratory Protective Equipment.

Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).

Processes involving the use of incompatible substances - refer to section 10.

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

· **Supplier:**

Severn Biotech Ltd.

Unit 2,

Park Lane,

Kidderminster,

Worcestershire.

DY11 6TJ

UK

Tel: 0044 1562 825286

Fax: 0044 1562 825284

email: info@severnbiotech.com

· **Further information obtainable from:** Product safety department.

· **1.4 Emergency telephone number:**

Members of the public seeking specific information on poisons should contact:

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

### SECTION 2: Hazards identification

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

· **Classification according to GB-CLP**

Acute Tox. 4 H302 Harmful if swallowed.

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

· **2.2 Label elements**

· **Labelling according to GB-CLP** The substance is classified and labelled according to the GB CLP regulation.

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### · Hazard pictograms



GHS05 GHS07

### · Signal word Danger

### · Hazard statements

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

### · Precautionary statements

P260 Do not breathe dusts or mists.

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 POISON CENTER/doctor.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local regulations.

### · 2.3 Other hazards

### · Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

### · 3.1 Substances

#### · CAS No. Description

CAS: 1310-58-3 Potassium hydroxide

#### · Identification number(s)

· **EC number:** 215-181-3

· **Index number:** 019-002-00-8

## SECTION 4: First aid measures

### · 4.1 Description of first aid measures

#### · General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

#### · After inhalation:

In case of inhalation:

- Provide fresh air.

- In case of breathing difficulties administer oxygen.

- No mouth-to-mouth or mouth-to-nose resuscitation. Use respiratory bag or oxygen resuscitation apparatus.

- Do not leave patient unattended.

In case of unconsciousness place patient stably in side position for transportation.

#### · After skin contact:

Immediately rinse with water.

If skin irritation continues, consult a doctor.

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Chemical burns must be treated promptly by a physician.

- **After eye contact:**

Check for and remove any contact lenses.

Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:**

Wash mouth out with water

Do not induce vomiting; call for medical help immediately.

If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

- **Information for doctor:** Inhalation of an aerosol of this substance may cause lung oedema.

- **4.2 Most important symptoms and effects, both acute and delayed** Corrosive damage to gastro-intestinal tract.

- **Hazards** Danger of gastric perforation.

- **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

- **For safety reasons unsuitable extinguishing agents:** Water

- **5.2 Special hazards arising from the substance or mixture**

Contact with moisture or water may generate sufficient heat to ignite combustible materials.

Reacts with most metals to produce hydrogen gas, which can form explosive mixtures with air.

- **5.3 Advice for firefighters**

- **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

Do not inhale explosion gases or combustion gases.

- **Additional information**

Cool endangered receptacles with water spray.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

### \* SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

- **6.2 Environmental precautions:**

Do not allow to penetrate the ground/soil.

Do not allow product to reach sewage system or any water course in the undiluted form.

Inform respective authorities in case of seepage into water course or sewage system.

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

Pick up mechanically.

Ensure adequate ventilation.

Send for recovery or disposal in suitable receptacles.

Wash the area with plenty of water.

- **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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### SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Store in cool, dry place in tightly closed receptacles.

Ensure good ventilation/exhaustion at the workplace.

Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.

Safety showers and eye wash facilities should be available at the work area.

Do not mix with acids.

When diluting, slowly add the product to water. Never add water to the product.

· **Information about fire - and explosion protection:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Prevent any seepage into the ground.

Store only in the original receptacle.

· **Information about storage in one common storage facility:**

Do not store together with acids.

Store away from foodstuffs.

Store away from metals.

Store away from flammable substances.

Store away from water.

· **Further information about storage conditions:**

Store in a bunded area.

Store in cool, dry conditions in well sealed receptacles.

This product is hygroscopic.

Protect from humidity and water.

· **Storage class:** 8 B

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

### SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

**CAS: 1310-58-3 Potassium hydroxide**

WEL Short-term value: 2 mg/m<sup>3</sup>

· **DNELs**

Inhalative	Long-term local effects	1 mg/m <sup>3</sup> (general population)
		1 mg/m <sup>3</sup> (worker)

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

· **8.2 Exposure controls**

· **Appropriate engineering controls** No further data; see section 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

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Do not eat, drink, smoke or sniff while working.

Storing food in the working area is prohibited.

Do not inhale dust / smoke / mist.

A safe system of work must be formulated and followed to ensure safe working with this product. Relevant workers must receive suitable and sufficient training and supervision.

Take note of assigned Workplace Exposure Limits.

Ensure that eyewash stations and safety showers are close to the workstation location.

· **Respiratory protection:**

The substance is a deliquescent solid - the potential for dust formation is low.

Nevertheless, direct manipulation of the dry substance should be done with an approved respirator when necessary.

Filter P2

· **Hand protection**



Protective gloves.

Use gloves tested and approved under appropriate government standards such as NIOSH (US) or EN374 (EU).

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

PVC gloves

Neoprene gloves

Natural rubber, NR

Butyl rubber, BR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Not suitable are gloves made of the following materials:**

Leather gloves

Textile gloves.

· **Eye/face protection**



Tightly sealed goggles conforming to EN166.



Face shield/visor.

Use equipment tested and approved under appropriate government standards such as EN166 (EU) or NIOSH (US)

· **Body protection:**



Impervious protective clothing

Do not get on skin or clothing. Wear clothing and footwear that cannot be penetrated by the product. Suitable protective equipment may include: Chemical resistant boots, Chemical resistant apron, Full chemical protective suit with a hood, Chemical protective suit consisting of a jacket and trousers. The jacket should be buttoned up to the neck, sleeves sealed at the gloves, and trouser legs worn outside the boots. These precautions are required to prevent the clothing from accidentally trapping product against the skin.

· **Environmental exposure controls** Do not allow to enter drains, sewers or watercourses.

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- **Risk management measures** The operators shall be instructed adequately.

### SECTION 9: Physical and chemical properties

#### · 9.1 Information on basic physical and chemical properties

##### · General Information

· Physical state	Solid
· Colour:	White
· Odour:	Odourless
· Odour threshold:	Not determined.
· Melting point/freezing point:	406 °C
· Boiling point or initial boiling point and boiling range	1,327 °C
· Flammability	Product is not flammable.
· Flash point:	Not applicable.
· pH	Not applicable.
· Solubility	
· water at 20 °C:	1120 g/l
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	0 hPa
· Density and/or relative density	
· Density at 20 °C:	2.04 g/cm <sup>3</sup>
· Particle characteristics	Not applicable.

#### · 9.2 Other information

NOTE: The physical data presented above are typical values and should not be construed as a specification.

· Appearance:	
· Form:	Solid
· Important information on protection of health and environment, and on safety.	
· Explosive properties:	Product does not present an explosion hazard.
· Molecular weight	56.1 g/mol

#### · Information with regard to physical hazard classes

· Explosives	Not applicable
· Flammable gases	Not applicable
· Aerosols	Not applicable
· Oxidising gases	Not applicable
· Gases under pressure	Not applicable
· Flammable liquids	Not applicable
· Flammable solids	Not applicable
· Self-reactive substances and mixtures	Not applicable
· Pyrophoric liquids	Not applicable
· Pyrophoric solids	Not applicable
· Self-heating substances and mixtures	Not applicable
· Substances and mixtures, which emit flammable gases in contact with water	Not applicable
· Oxidising liquids	Not applicable
· Oxidising solids	Not applicable
· Organic peroxides	Not applicable
· Corrosive to metals	Not applicable

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· **Desensitised explosives**

Not applicable

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**  
Exothermic reaction with acids.  
Reacts with metals forming hydrogen.  
Heating occurs when water is added.  
Reacts with numerous chemical compounds, especially those with mobile hydrogen atoms.  
Reacts with ammonium salts, releasing ammonia.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**  
Finely powdered metals.  
Strong acids.  
Substances specifically listed in section 10.3 as incompatible.
- **10.6 Hazardous decomposition products:** Metal oxide

### \* SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity**  
Harmful if swallowed.

#### · **LD/LC50 values relevant for classification:**

Oral	LD50	333 – 388 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**  
Causes severe skin burns and eye damage.
- **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-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

#### · **Additional toxicological information:**

Inhalation may cause lung oedema, but only after initial corrosive effects on eyes and/or airways have become manifest. The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential. Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered.

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.

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- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

## SECTION 12: Ecological information

### · 12.1 Toxicity

#### · **Aquatic toxicity:**

EC50 (96 h)	80 mg/l (Fish)
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- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
  - Must not reach sewage water or drainage ditch undiluted or unneutralised.
  - Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
  - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

## \* SECTION 13: Disposal considerations

### · 13.1 Waste treatment methods

#### · **Recommendation**

Recommended Hierarchy of Controls:

- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

Do not mix with other waste streams.

#### · **Uncleaned packaging:**

#### · **Recommendation:**

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Container remains hazardous when empty. Continue to observe all precautions.

Containers, even those that are "empty," may contain residues that can develop hazardous gases and vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

Disposal must be made according to official regulations.

- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

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### SECTION 14: Transport information

· 14.1 UN number or ID number	UN1813
· ADR/RID/ADN, IMDG, IATA	
· 14.2 UN proper shipping name	UN1813 POTASSIUM HYDROXIDE, SOLID
· ADR/RID/ADN	POTASSIUM HYDROXIDE, SOLID
· IMDG, IATA	
· 14.3 Transport hazard class(es)	
· ADR/RID/ADN	
	
· Class	8 (C6) Corrosive substances.
· Label	8
· IMDG, IATA	
	
· Class	8 Corrosive substances.
· Label	8
· 14.4 Packing group	
· ADR/RID/ADN, IMDG, IATA	II
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	80
· Hazchem Code:	2W
· EMS Number:	F-A,S-B
· Segregation groups	(SGG18) Alkalies
· 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/RID/ADN	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 500 g
· Transport category	2
· Tunnel restriction code	E

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· <b>IMDG</b>	1 kg
· <b>Limited quantities (LQ)</b>	Code: E2
· <b>Excepted quantities (EQ)</b>	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 500 g
· <b>UN "Model Regulation":</b>	UN 1813 POTASSIUM HYDROXIDE, SOLID, 8, II

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**
- **Regulated explosives precursors** Substance is not listed.
- **Regulated poisons** Substance is not listed.
- **Reportable explosives precursors** Substance is not listed.
- **Reportable poisons** 17% of total caustic alkalinity
- **Control Of Major Accident Hazards Regulations 2015 (COMAH)**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this 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**

This product should only be handled by workers who have received sufficient training in the safe handling and use of chemical products.

#### · **Department issuing SDS:** Product safety department.

#### · **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

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)

DNEL: Derived No-Effect Level (UK REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

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