

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 15.10.2022

Revision: 15.10.2022

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

· 1.1 Product identifier

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

· **Article number:** 40-5013

· **CAS Number:**

1310-58-3

· **EC number:**

215-181-3

· **Index number:**

019-002-00-8

· **Registration number** 01-2119487136-33

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

· **Product category**

PC1 Adhesives, sealants

PC2 Adsorbents

PC3 Air care products

PC4 Anti-Freeze and de-icing products

PC7 Base metals and alloys

PC8 Biocidal products

PC9a Coatings and paints, thinners, paint removers

PC9b Fillers, putties, plasters, modelling clay

PC9c Finger paints

PC11 Explosives

PC12 Fertilisers

PC13 Fuels

PC14 Metal surface treatment products

PC15 Non-metal-surface treatment products

PC16 Heat transfer fluids

PC17 Hydraulic fluids

PC18 Ink and toners

PC19 Intermediate

PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents

PC21 Laboratory chemicals

PC24 Lubricants, greases, release products

PC25 Metal working fluids

PC26 Paper and board treatment products

PC27 Plant protection products

PC28 Perfumes, fragrances

PC29 Pharmaceuticals

PC30 Photo-chemicals

PC31 Polishes and wax blends

PC32 Polymer preparations and compounds

PC33 Semiconductors

PC34 Textile dyes, and impregnating products

PC35 Washing and cleaning products (including solvent based products)

PC36 Water softeners

PC37 Water treatment chemicals

PC38 Welding and soldering products, flux products

PC39 Cosmetics, personal care products

PC40 Extraction agents

PC 0: Other: building and construction preparations

PC 0: Other: Catalysts

· **Article category**

AC2 Machinery, mechanical appliances, electrical/electronic articles

AC3 Electrical batteries and accumulators

AC4 Stone, plaster, cement, glass and ceramic articles

AC7 Metal articles

AC10 Rubber articles

AC11 Wood articles

AC13 Plastic articles

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- **Application of the substance / the mixture**

The substance is a major industrial chemical because it is used as a base in a wide variety of chemical processes.

Potassium hydroxide is a food additive, listed as E525 in Annex 1 of Directive 95/2/EU. This means that KOH is a general food additive to be used following the "quantum satis" principle: as much as necessary according to GMP (European Union, 1995).

- **Uses advised against**

Any use involving aerosol formation or vapour or dust release in excess of the assigned workplace exposure limits where workers are exposed without suitable respiratory protective equipment (RPE).

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.

The product is intended exclusively for industrial and professional use.

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

- **Manufacturer/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:**

UK National Poisons Information Service. E-mail: npis.birmingham@nhs.net; Tel: +44 (0)344 892 0111

SECTION 2: Hazards identification

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

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



corrosion

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



Acute Tox. 4 H302 Harmful if swallowed.

- **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, GHS07

- **Signal word** Danger

- **Hazard statements**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

- **Precautionary statements**

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.

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- P310 Immediately call a POISON CENTER/doctor.
 P321 Specific treatment (see on this label).
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international 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 Chemical characterisation: Substances**
- **CAS No. Description**
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:**
DON'T DELAY!
Supply fresh air; consult doctor in case of complaints.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
DO NOT DELAY!
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
DO NOT DELAY!
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
DON'T DELAY!
Wash mouth out with water
Do not induce vomiting; call for medical help immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.
If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
- **Information for doctor:**
Corrosive. The substance is very corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion. Inhalation of an aerosol of a solution of this substance may cause lung oedema.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **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.

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- **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.

SPECIFIC HAZARDS

- Corrosive in solution.
- Not combustible.
- Reacts violently with water.
- Gives off hydrogen by reaction with metals.
- **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.

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.
- **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Pick up mechanically.
Send for recovery or disposal in suitable receptacles.
 1. Personal protection / precautions
 - Isolate the area.
 - Evacuate personnel to safe areas
 - Approach from upwind.
 - Ventilate the area.
 - Keep away from incompatible products
 - Wear chemical resistant personal protective equipment
 - Prevent further leakage or spillage if safe to do so.
 - Abundant running water should be available for emergency use.
 - Refer to protective measures listed in sections handling and storage and exposure controls/personal protection.
 2. Environmental precautions
 - Should not be released into the environment.
 - Do not flush into surface water or sanitary sewer system.
 - Notify environmental personnel
 3. Methods for cleaning up
 - Scoop substance into closing containers.
 - Carefully collect spill / leftovers.
 - Equipment must be corrosion resistant.
 - Flush contaminated areas with large amounts of water and direct rinsings to chemical sewer or collect for treatment.
- **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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Store in cool, dry place in tightly closed receptacles.

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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.

Warn relevant workers of the dangers of working with this product and provide suitable and sufficient training to ensure safe working.

The product is corrosive. Direct contact (skin, eyes and by inhalation) and ingestion must be prevented. A safe system of work, taking into account the product properties and the operation taking place, must be formulated (by a competent, trained and suitably experienced person) prior to work taking place and the system must be followed to ensure the safety of workers and other who may be affected.

Further precautions for safe handling

- Observe strict hygiene - avoid eye and skin contact.
 - Avoid splashing of material.
 - Safety showers should be readily available in handling and storage areas.
 - Eye wash fountains should be located in the work areas and should be immediately accessible for emergency use.
 - Remove contaminated clothing immediately.
 - When diluting, always add the product to water. Never add water to the product.
 - Keep away from incompatible products. When making an aqueous solution, add the substance to the water gradually with constant stirring and at a rate which will prevent overheating; prevent irritant fume and vapour evolving from the solution from entering the breathing zone of workers.
- **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.

Packaging material

- Suitable: stainless steel, synthetic material / polyethylene, glass
- To avoid: lead, aluminium, copper, tin, zinc, bronze

· **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 banded area.

Store in cool, dry conditions in well sealed receptacles.

This product is hygroscopic.

Protect from humidity and water.

Store in a well-ventilated area.

Store at ambient temperature.

Keep container tightly closed.

KOH in contact with water or moisture may result in enough heat to ignite combustibles.

Keep away from : heat sources, highly flammable materials, incompatible products.

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

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Additional information about design of technical facilities:** No further data; see item 7.

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

1310-58-3 Potassium hydroxide

WEL	Short-term value: 2 mg/m ³
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- **DNELs**

- WORKERS

- Long-term exposure - local effects

- Inhalation DN(M)EL

- DNEL (Derived No Effect Level): 1 mg/m³

- GENERAL POPULATION

- Long-term exposure - local effects

- Inhalation DN(M)EL

- DNEL (Derived No Effect Level): 1 mg/m³

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

- **8.2 Exposure controls**

- **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.

- 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.

- Eye wash bottles or eye wash stations in compliance with applicable standards must be present within easy reach of the work station.

- **Respiratory protection:**

- KOH is a deliquescent solid, the potential for dust formation is low. Nevertheless, direct manipulation of dry KOH should be done with an approved respirator (like European Standard EN-149), when necessary.

- Recommended Filter type: P2

- **Protection of hands:**



Protective gloves

- 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

- Hand protection:

- Impervious gloves

- Suitable material: PVC, Neoprene, Natural rubber, Butyl rubber

- Unsuitable material: Leather

- **Material of gloves**

- 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.

- **Eye protection:**



Tightly sealed goggles

- Face shield if risk on splashes.

- **Body protection:**

- Impervious protective clothing

- Skin and body protection:

- Corrosionproof clothing.

- Suitable material: PVC, Neoprene, Natural rubber, Butyl rubber

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Solid
Pellets or flakes depending on specification.

Colour: White

· **Odour:** Odourless

· **pH-value (5.5 g/l) at 25 °C:** 13.5

· Change in condition

Melting point/freezing point: 406 °C

Initial boiling point and boiling range: 1327 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Product is not flammable.

· **Explosive properties:** Product does not present an explosion hazard.

· **Vapour pressure:** Not applicable.

· **Density at 20 °C:** 2.04 g/cm³

· **Solubility in / Miscibility with water at 20 °C:** >10000 g/l

· **Partition coefficient: n-octanol/water:** Not determined.

· **9.2 Other information** NOTE: The physical data presented above are typical values and should not be construed as a specification.

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

The substance is a strong base, it reacts violently with acid and is corrosive in moist air to metals such as zinc, aluminium, tin and lead forming a combustible/explosive gas (hydrogen).

Reacts with ammonium salts to produce ammonia and causing fire hazard. Attacks some forms of plastics, rubber or coatings.

Rapidly absorbs carbon dioxide and water from air.

Contact with moisture or water will generate heat.

Risk of explosion in contact with: fluorine; aluminium hexachloroplatinate-(2)/heat; bromoform + crown ether; but-2-ene-1,4-diol (heat); calcium powder; calcium carbide/chlorine; chlorine dioxide; cyanogen azide (rarely); 1,2-dichloroethene; magnesium; sodium azide + benzoyl chloride; nitrobenzene; nitroethane; nitromethane; nitroparaffines; N-nitrosomethylurea; phosphorus (rarely); nitrogen trichloride; tetrachloroethane/ potassium hydroxide solid/heat; tetrahydrofurane (peroxide containing,rarely); 2,4,6-trinitrotoluene; zinc ; tin

The substance can react dangerously with:acids; water; hydrogen peroxide; acetonitrile; acrolein; aldehydes; lower alcohols; aluminium -> hydrogen; aluminium carbide (rarely); ammonium salts/ammonia; chloroform/methanol; cyclopentadiene; acetic acid; germanium; halogenated hydrocarbons; iodine pentafluoride; potassium peroxodisulphate; cresols; maleic anhydride; nitrophenol; phosphorus trioxide; hydrogen sulphide; tetrafluoropropanol; trichloroethene; vinyl acetate; sugars (reducing)

· **10.4 Conditions to avoid** No further relevant information available.

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- **10.5 Incompatible materials:**
 - Finely powdered metals.
 - Strong acids.
 - Substances specifically listed in section 10.3 as incompatible.
- **10.6 Hazardous decomposition products:** Potassium oxide

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

- **Acute toxicity**
Harmful if swallowed.

· LD/LC50 values relevant for classification:

Oral	LD50	333 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.
- **Other information (about experimental toxicology):**
ROUTES OF EXPOSURE: The substance can be absorbed into the body by inhalation of its solution aerosol and by ingestion.

INHALATION RISK: Evaporation at 20°C is negligible; Dust formation is unlikely because of the hygroscopic properties. Furthermore KOH has a negligible vapour pressure and is rapidly neutralised in air by carbon dioxide and therefore dust and vapour exposure are not expected.

- **Subacute to chronic toxicity:** Repeated or prolonged contact with skin may cause dermatitis.
- **Additional toxicological information:**
Corrosive. The substance is very corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion.

Inhalation of an aerosol of a solution of this substance may cause lung oedema. 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.

KOH is a corrosive substance at concentrations of about 2% and higher. Between about 0.5% and 2.0%, it is irritating. Case reports on human accidents or intentional exposure confirm that the risk posed by KOH for human health originates from its corrosive properties.

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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.

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- **Ecotoxicological effects:**
- **Other information:**
The hazard of KOH for the environment is caused by the hydroxyl ion (pH effect). For this reason the effect of KOH on the organisms depends on the buffer capacity of the aquatic or terrestrial ecosystem.
- **Additional ecological information:**
- **General notes:**
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.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Emissions will lead to a local increase in pH in the aquatic environment.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

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.
- **Uncleaned packaging:**
- **Recommendation:**
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.

SECTION 14: Transport information

- | | |
|--|---|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA | 1813 |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG, IATA | 1813 POTASSIUM HYDROXIDE, SOLID
POTASSIUM HYDROXIDE, SOLID |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, IMDG, IATA | |
| <div style="text-align: center;">  </div> | |
| <ul style="list-style-type: none"> · Class · Label | 8 Corrosive substances.
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· 14.4 Packing group · ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number:	Warning: Corrosive substances. 80 F-A,S-B
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Transport category · Tunnel restriction code	1kg 2 E
· UN "Model Regulation":	UN1813, POTASSIUM HYDROXIDE, SOLID, 8, II

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has 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.

- **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

Annex: Exposure scenario

- **Sector of Use SU5** Manufacture of textiles, leather, fur
- **Product category**
PC1 Adhesives, sealants
PC2 Adsorbents
PC3 Air care products
PC4 Anti-Freeze and de-icing products
PC7 Base metals and alloys
PC8 Biocidal products
PC9a Coatings and paints, thinners, paint removers
PC9b Fillers, putties, plasters, modelling clay
PC9c Finger paints

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PC11 Explosives
 PC12 Fertilisers
 PC13 Fuels
 PC14 Metal surface treatment products
 PC15 Non-metal-surface treatment products
 PC16 Heat transfer fluids
 PC17 Hydraulic fluids
 PC18 Ink and toners
 PC19 Intermediate
 PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
 PC21 Laboratory chemicals
 PC24 Lubricants, greases, release products
 PC25 Metal working fluids
 PC26 Paper and board treatment products
 PC27 Plant protection products
 PC28 Perfumes, fragrances
 PC29 Pharmaceuticals
 PC30 Photo-chemicals
 PC31 Polishes and wax blends
 PC32 Polymer preparations and compounds
 PC33 Semiconductors
 PC34 Textile dyes, and impregnating products
 PC35 Washing and cleaning products (including solvent based products)
 PC36 Water softeners
 PC37 Water treatment chemicals
 PC38 Welding and soldering products, flux products
 PC39 Cosmetics, personal care products
 PC40 Extraction agents
 PC 0: Other: building and construction preparations
 PC 0: Other: Catalysts

· **Article category**

AC2 Machinery, mechanical appliances, electrical/electronic articles
 AC3 Electrical batteries and accumulators
 AC4 Stone, plaster, cement, glass and ceramic articles
 AC7 Metal articles
 AC10 Rubber articles
 AC11 Wood articles
 AC13 Plastic articles

· **Description of the activities / processes covered in the Exposure Scenario**

See section 1 of the annex to the Safety Data Sheet.

· **Conditions of use**

· **Duration and frequency** 5 workdays/week.

· **Physical parameters**

· **Physical state** Solid

· **Concentration of the substance in the mixture** Raw material.

· **Used amount per time or activity** <1 tons per day

· **Other operational conditions** Observe the general safety regulations when handling chemicals.

· **Other operational conditions affecting environmental exposure**

Observe section 6 of the Safety Data Sheet (Accidental release measures).
 Store in a bunded area.

· **Other operational conditions affecting worker exposure**

Avoid contact with eyes.

Avoid contact with the skin.

Do not breathe gas/fume/vapour/aerosol.

Do not breathe dust.

Keep away from food, drink and animal feedingstuffs.

Keep container tightly closed and dry.

Keep locked up.

Ensure adequate ventilation, especially in closed rooms.

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Avoid direct contact with the chemical /product / preparation by organisational measures.

Observe first aid measures (for treatment of exposure due to accidents).

- **Other operational conditions affecting consumer exposure** Keep out of the reach of children.
- **Other operational conditions affecting consumer exposure during the use of the product** Not applicable.

- **Risk management measures**

- **Worker protection**

- **Organisational protective measures**

Provide Internal Plant Instruction.

Employment restrictions concerning juveniles must be observed.

Handling procedures must be well documented.

Ensure that activities are executed by specialists or authorised personnel only.

Ensure that the working area is organised, well lit and ventilated, with enough space to handle spilled product.

Consider section 4 of the Safety Data Sheet (First aid measures).

Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device.

Make sure that the workplace is well-lit and organised.

Washing facilities / Water for cleaning eyes and skin should be available.

Provide emergency eye wash station and mark its location clearly.

Deploy only trained chemical workers.

No special measures required.

- **Technical protective measures**

Ensure that suitable extractors are available on processing machines

Store in cool, dry place in tightly closed receptacles.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Any unavoidable deposit of dust must be regularly removed.

Use only in well ventilated areas.

Washing facilities / Water for cleaning eyes and skin should be available.

- **Personal protective measures**

Do not inhale dust / smoke / mist.

Avoid contact with the skin.

Avoid contact with the eyes.

Tightly sealed goggles

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not eat or drink while working.

Ensure that washing facilities are available at the work place.

Storing food in the working area is prohibited.

Use suitable respiratory protective device in case of insufficient ventilation.

Alkaline resistant protective clothing

Protective gloves

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

Hand protection:

- Impervious gloves

- Suitable material: PVC, Neoprene, Natural rubber, Butyl rubber

- Unsuitable material: Leather

- **Measures for consumer protection** Ensure adequate labelling.

- **Environmental protection measures**

Avoid release to the environment. Obtain special instructions / refer to Safety Data Sheet.

- **Water**

Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.

- **Soil** Prevent contamination of soil.

- **Disposal measures**

Ensure that waste is collected and contained.

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.

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

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Trade name: Potassium Hydroxide Crystal >99%

(Contd. of page 12)

Must not be disposed of with household waste. Do not allow to reach sewage system.
Disposal must be made according to official regulations.

· **Disposal procedures**

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

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

· **Waste type** Partially emptied and uncleaned packaging

· **Exposure estimation**

· **Consumer** Not relevant for this Exposure Scenario.

· **Guidance for downstream users** No further relevant information available.

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