

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Revision date 08-Apr-2025

Revision Number 1

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

1.1. Product identifier

Product Code(s)	124740
Safety data sheet number	124740
Product Name	POTASSIUM HYDROXIDE SOLUTION 35 – 40%
Index No	019-002-00-8
EC Number	215-181-3
CAS No	1310-58-3
Synonyms	CAUSTIC POTASH 40% ZW, CAUSTIC POTASH 40% SOL, CAUSTIC POTASH 35% SOL
Pure substance/mixture	Mixture

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

Recommended use	Industrial application Chemical intermediate Cleaning agent Colouring agent Cosmetics Fertiliser Laboratory chemicals Metallurgical Industry Pharmaceuticals Process Additive Water treatment chemical For further information, see attached Exposure Scenario
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1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address	SDS.EMEA@univarsolutions.com
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone	SGS - +32 (0)3 575 55 55 (24h)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Corrosive to metals	Category 1 - (H290)
Acute toxicity - Oral	Category 4 - (H302)
Skin corrosion/irritation	Category 1 Sub-category A - (H314)
Serious eye damage/eye irritation	Category 1 - (H318)

2.2. Label elements



Signal word
Danger

Hazard statements

H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H290 - May be corrosive to metals

Precautionary statements

P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P280 - Wear protective gloves/protective clothing and eye/face protection
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 or doctor

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
POTASSIUM HYDROXIDE 1310-58-3	35 - 40%	215-181-3	-	Skin Corr. 1A (H314) Met. Corr. 1 (H290) Acute Tox. 4 (H302) Eye Dam. 1 (H318)	Eye Irrit. 2 :: 0.5%≤C<2% Skin Corr. 1A :: C≥5%	-	-

					Skin Corr. 1B :: 2%≤C<5% Skin Irrit. 2 :: 0.5%≤C<2%		
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Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration ≥ 0.1% (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.
Skin contact	Wash off immediately with plenty of water. Take off contaminated clothing and shoes immediately. Get immediate medical attention. Chemical burns must be treated promptly by a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Wear personal protective clothing (see section 8).

4.2. Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation.
Eyes	Burning sensation. Redness. Pain. Causes serious eye damage.
Dermal	Burning sensation. Redness. Causes severe burns.
Ingestion	Causes severe burns and corrosion of mouth, throat and oesophagus, with immediate pain and difficulty in swallowing

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically. Product is a corrosive material. Use of gastric lavage or emesis is contra-indicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical The product is not flammable. Reacts with some metals releasing flammable hydrogen.

Hazardous combustion products Thermal decomposition can lead to release of toxic/corrosive gases and vapours.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Move containers from fire area if you can do it without risk. Cool containers with flooding quantities of water until well after fire is out. Collect contaminated fire extinguishing water separately. Do not allow it to enter drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes, skin and clothing. Avoid breathing vapours or mists. Do not touch or walk through spilled material. Use personal protection recommended in Section 8. Evacuate personnel to safe areas.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not allow to enter into soil/subsoil. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Methods for containment Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up Flush area with flooding quantities of water. Retain contaminated washing water and dispose of it.

Prevention of secondary hazards Observe good chemical hygiene practices.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Avoid contact with eyes, skin and clothing. Avoid breathing vapours or mists. Use personal

protection recommended in Section 8. Before making transfer operations, ensure that the receiving containers are free from incompatible material residues.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using the product. Wash hands and face before breaks and immediately after handling the product. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep away from food, drink and animal feedingstuffs. Store away from incompatible materials. Acids. Oxidising agents. Keep away from heat, sparks and open flame. Protect from direct sunlight. Keep/store only in original container. Keep in properly labelled containers.

Packaging materials Unsuitable container/equipment material. Metal.

7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	United Kingdom
POTASSIUM HYDROXIDE 1310-58-3	STEL: 2 mg/m ³

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
POTASSIUM HYDROXIDE 1310-58-3			1 mg/m ³ [5] [6]

[5] Local health effects.
[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
POTASSIUM HYDROXIDE 1310-58-3			1 mg/m ³ [5] [6]

[5] Local health effects.
[6] Long term.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls	Ensure adequate ventilation. Ensure that eyewash stations and safety showers are close to the workstation location.
<u>Personal protective equipment</u>	
Eye/face protection	Tight sealing safety goggles. Use eye protection according to EN 166.
Hand protection	Chemical resistant gloves required for prolonged or repeated contact. Gloves must conform to standard EN 374. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Examples of preferred glove barrier materials include:. Butyl rubber. Polyvinyl chloride (PVC).
Skin and body protection	Wear appropriate clothing to prevent reasonably probable skin contact. Chemical-resistant protective suit. EN13034.
Respiratory protection Recommended filter type:	In case of inadequate ventilation wear respiratory protection. Type P.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using the product. Wash hands and face before breaks and immediately after handling the product. Remove and wash contaminated clothing and gloves, including the inside, before re-use.
Environmental exposure controls	Avoid release to the environment. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Colour	Colourless
Odour	Odourless.
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	< 0 °C	No information available.
Initial boiling point and boiling range	145 °C	No information available.
Flammability		The product is not flammable.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point		Not applicable.
Autoignition temperature		Not applicable.
Decomposition temperature		No information available.
pH	14	No information available.
pH (as aqueous solution)	11.5 - 12.8	solution (1 %).
Kinematic viscosity		No information available.
Dynamic viscosity		No information available.
Water solubility	Soluble in water	No information available.
Solubility(ies)		No information available.
Partition coefficient		Not applicable. Inorganic.

Vapour pressure	3 mmHg	@ 25 °C.
Relative density	1.3 - 1.4	@ 20 °C.
Bulk density		No information available
Liquid Density	.	No information available
Relative vapour density		No information available.
Particle characteristics		Not applicable. liquid.
Particle Size	.	
Particle Size Distribution	.	
Explosive properties	No information available	
Oxidising properties	No information available	

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Stable under normal conditions. May be corrosive to metals. Exothermic reaction with acids. Exothermic reaction with water.
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10.2. Chemical stability

Stability	Stable under normal conditions.
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Explosion data

Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Contact with metals may evolve flammable hydrogen gas. Exothermic reaction with acids. Exothermic reaction with water.
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10.4. Conditions to avoid

Conditions to avoid	Keep from any possible contact with water. Acids. Oxidising agents. Metals.
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10.5. Incompatible materials

Incompatible materials	Acids. Oxidising agents. Highly flammable materials. Halogens. Organic material. Lead. Aluminium. Copper. Bronze. Tin.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Heating can cause water to evaporate with the formation of caustic mist.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation	Not an expected route of exposure.
Eye contact	Causes serious eye damage.
Skin contact	Causes severe burns.
Ingestion	Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Gastrointestinal burns. Redness. Burning. May cause blindness. Coughing and/ or wheezing.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 1,923.10 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
POTASSIUM HYDROXIDE	= 333.0 mg/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Causes serious 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.

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Based on available data, the classification criteria are not met. Possible harmful effect would result from the pH effect of releasing the product into the aquatic environment.

12.2. Persistence and degradability

Persistence and degradability The methods for determining biodegradability are not applicable to inorganic substances.

Will freely dissociate in water to K⁺ and OH⁻ ions.

12.3. Bioaccumulative potential

Bioaccumulation Not likely to bioaccumulate.

Component Information

Chemical name	Partition coefficient
POTASSIUM HYDROXIDE	0.83

12.4. Mobility in soil

Mobility in soil No information available.

Mobility Soluble in water.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
POTASSIUM HYDROXIDE	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

Contaminated packaging Do not reuse empty containers. Empty remaining contents. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	UN1814
14.2 UN proper shipping name	POTASSIUM HYDROXIDE SOLUTION
14.3 Transport hazard class(es)	8
14.4 Packing group	II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	A3, A803
ERG Code	8L

IMDG

14.1 UN number or ID number	UN1814
UN proper shipping name	POTASSIUM HYDROXIDE SOLUTION
14.3 Transport hazard class(es)	8
14.4 Packing group	II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
EmS-No	F-A, S-B
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	UN1814
14.2 UN proper shipping name	POTASSIUM HYDROXIDE SOLUTION
14.3 Transport hazard class(es)	8
14.4 Packing group	II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
Classification code	C5

ADR

14.1 UN number or ID number	UN1814
14.2 UN proper shipping name	POTASSIUM HYDROXIDE SOLUTION
14.3 Transport hazard class(es)	8
14.4 Packing group	II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
Classification code	C5
Tunnel restriction code	(E)

SECTION 15: Regulatory information

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

National regulations

Authorisations and/or restrictions on use:

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

Product restricted per REACH Annex XVII: 3

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
POTASSIUM HYDROXIDE - 1310-58-3	75	-

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

Chemical name	Poisons and Explosive Precursors
POTASSIUM HYDROXIDE	Poison, Reportable 17 % of total caustic alkalinity

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA	- United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL	- Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS	- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS	- Japan Existing and New Chemical Substances
IECSC	- China Inventory of Existing Chemical Substances
KECL	- Korean Existing and Evaluated Chemical Substances
PICCS	- Philippines Inventory of Chemicals and Chemical Substances
AIIC	- Australian Inventory of Industrial Chemicals
NZIoC	- New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report	A Chemical Safety Assessment has been carried out for one or more substances present in the material
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SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H290 - May be corrosive to metals
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage

Legend

SVHC: Substances of Very High Concern for Authorisation:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		
Revision Note Not applicable			

Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method

Reproductive toxicity
STOT - single exposure
STOT - repeated exposure
Acute aquatic toxicity
Chronic aquatic toxicity
Aspiration hazard
Ozone

Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared By J Forth

Revision date 08-Apr-2025

**This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical
agents at work**

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	POTASSIUM HYDROXIDE
Pure substance/mixture	Substance
REACH registration number	01-2119487136-33-XXXX
CAS No	1310-58-3
EC No (EU Index No)	215-181-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Industrial use Professional use
Environmental release category(ies)	ERC1 - Manufacture of substances ERC2 - Formulation of preparations (mixtures) ERC3 - Formulation in materials ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles ERC5 - Industrial use resulting in inclusion into or onto a matrix ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) ERC6b - Industrial use of reactive processing aids ERC6c - Industrial use of monomers for manufacture of thermoplastics ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers ERC7 - Industrial use of substances in closed systems ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8b - Wide dispersive indoor use of reactive substances in open systems ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix ERC8d - Wide dispersive outdoor use of processing aids in open systems ERC8e - Wide dispersive outdoor use of reactive substances in open systems ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix ERC9a - Wide dispersive indoor use of substances in closed systems ERC9b - Wide dispersive outdoor use of substances in closed systems ERC10a - Wide dispersive outdoor use of long-life articles and materials with low release ERC10b - Wide dispersive outdoor use of long-life articles and materials with high or intended release ERC11a - Wide dispersive indoor use of long-life articles and materials with low release ERC11b - Wide dispersive indoor use of long-life articles and materials with high or intended release
Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC6 - Calendaring operations PROC7 - Industrial spraying PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10 - Roller application or brushing PROC11 - Non industrial spraying PROC12 - Use of blow agents in manufacture of foam PROC13 - Treatment of articles by dipping and pouring PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising PROC15 - Use as laboratory reagent PROC16 - Using material as fuel sources, limited exposure to unburned product to be expected

Product Name
Sector(s) of use

PROC17 - Lubrication at high energy conditions and in partly open process
 PROC18 - Greasing at high energy conditions
 PROC19 - Hand-mixing with intimate contact and only PPE available
 PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems
 POTASSIUM HYDROXIDE
 SU1 - Agriculture, forestry, fishery SU2a - Mining (without offshore industries) SU2b - Offshore industries SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU4 - Manufacture of food products SU5 - Manufacture of textiles, leather, fur SU6a - Manufacture of wood and wood products SU6b - Manufacture of pulp, paper and paper products SU7 - Printing and reproduction of recorded media SU8 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 - Manufacture of fine chemicals SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU11 - Manufacture of rubber products SU12 - Manufacture of plastics products, including compounding and conversion SU13 - Manufacture of other non-metallic mineral products SU14 - Manufacture of basic metals, including alloys SU15 - Manufacture of fabricated metal products, except machinery and equipment SU16 - Manufacture of computer, electronic and optical products, electrical equipment SU17 - General manufacturing SU18 - Manufacture of furniture SU19 - Building and construction work SU20 - Health services SU21 - Consumer uses SU22 - Professional uses SU23 - Recycling

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC1 - Manufacture of substances

- ERC2 - Formulation of preparations (mixtures)
- ERC3 - Formulation in materials
- ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
- ERC5 - Industrial use resulting in inclusion into or onto a matrix
- ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
- ERC6b - Industrial use of reactive processing aids
- ERC6c - Industrial use of monomers for manufacture of thermoplastics
- ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers
- ERC7 - Industrial use of substances in closed systems
- ERC8a - Wide dispersive indoor use of processing aids in open systems
- ERC8b - Wide dispersive indoor use of reactive substances in open systems
- ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix
- ERC8d - Wide dispersive outdoor use of processing aids in open systems
- ERC8e - Wide dispersive outdoor use of reactive substances in open systems
- ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix
- ERC9a - Wide dispersive indoor use of substances in closed systems
- ERC9b - Wide dispersive outdoor use of substances in closed systems
- ERC10a - Wide dispersive outdoor use of long-life articles and materials with low release
- ERC10b - Wide dispersive outdoor use of long-life articles and materials with high or intended release
- ERC11a - Wide dispersive indoor use of long-life articles and materials with low release
- ERC11b - Wide dispersive indoor use of long-life articles and materials with high or intended release

Covers concentrations up to 100%
Amounts used

Remarks	Continuous release
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Product characteristics

Physical form of product	Solid or Liquid
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Physical form of product	Solid, low dustiness
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Risk management measures

Technical onsite conditions and measures to reduce or limit discharges, air emissions	Carefully handle the substance to minimise releases Prevent environmental discharge consistent with regulatory requirements
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Conditions and measures related to external treatment of waste for disposal

Disposal	External treatment and disposal of waste should comply with applicable local and/or national regulations Substance will dissociate upon contact with water; the only effect is the pH effect, therefore after passing through the STP exposure is considered negligible and with no risk
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Control of worker exposure

Process category(ies)	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) PROC6 - Calendaring operations PROC7 - Industrial spraying PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10 - Roller application or brushing PROC11 - Non industrial spraying PROC12 - Use of blow agents in manufacture of foam PROC13 - Treatment of articles by dipping and pouring PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising PROC15 - Use as laboratory reagent PROC16 - Using material as fuel sources, limited exposure to unburned product to be expected PROC17 - Lubrication at high energy conditions and in partly open process PROC18 - Greasing at high energy conditions PROC19 - Hand-mixing with intimate contact and only PPE available PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems
Covers concentrations up to	100%
Physical form of product	Solid or Liquid Solid, low dustiness
Use frequency	Covers daily exposures up to 8 hours (unless stated differently). 200 days per year
Technical conditions and measures to control dispersion from source towards the worker	Use in closed process Handle substance within a closed system Clear transfer lines prior to de-coupling Drain down and flush system prior to equipment break-in or maintenance Ensure material transfers are provided with suitable arrangements for vapour capture or venting Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)
Conditions and measures related to personal protection, hygiene and health evaluation	In case of inadequate ventilation wear respiratory protection Wear suitable gloves tested to EN 374 Break through time >480 minutes Use eye protection according to EN 166, designed to protect against liquid splashes Wear suitable coveralls to prevent exposure to the skin
Organisational measures to prevent /limit releases, dispersion and exposure	Assumes a good basic standard of occupational hygiene is implemented Ensure operatives are trained to minimise exposures Ensure control measures are regularly inspected and maintained
Indoor/Outdoor use	Covers indoor and outdoor use
Operational conditions	Assumes use at not more than 20°C above ambient temperature, unless stated differently

Section 3 - Exposure estimation

Environmental release category(ies) - ERC1 - Manufacture of substances
- ERC2 - Formulation of preparations (mixtures)
- ERC3 - Formulation in materials

- ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
- ERC5 - Industrial use resulting in inclusion into or onto a matrix
- ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
- ERC6b - Industrial use of reactive processing aids
- ERC6c - Industrial use of monomers for manufacture of thermoplastics
- ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers
- ERC7 - Industrial use of substances in closed systems
- ERC8a - Wide dispersive indoor use of processing aids in open systems
- ERC8b - Wide dispersive indoor use of reactive substances in open systems
- ERC8c - Wide dispersive indoor use resulting in inclusion into or onto a matrix
- ERC8d - Wide dispersive outdoor use of processing aids in open systems
- ERC8e - Wide dispersive outdoor use of reactive substances in open systems
- ERC8f - Wide dispersive outdoor use resulting in inclusion into or onto a matrix
- ERC9a - Wide dispersive indoor use of substances in closed systems
- ERC9b - Wide dispersive outdoor use of substances in closed systems
- ERC10a - Wide dispersive outdoor use of long-life articles and materials with low release
- ERC10b - Wide dispersive outdoor use of long-life articles and materials with high or intended release
- ERC11a - Wide dispersive indoor use of long-life articles and materials with low release
- ERC11b - Wide dispersive indoor use of long-life articles and materials with high or intended release

Predicted No Effect Concentration
(PNEC)

Remarks Substance will dissociate upon contact with water; the only effect is the pH effect, therefore after passing through the STP exposure is considered negligible and with no risk

Derived No Effect Level (DNEL):
Worker - inhalative, long-term - local 1 mg/m³

Calculation method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

Process category(ies)	Exposure route	predicted exposure level	Risk characterisation ratio (RCR)
	Worker - inhalative, long-term - local	0.6 mg/m ³	0.6

Section 4 - Guidance to check compliance with the exposure scenario

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	POTASSIUM HYDROXIDE
Pure substance/mixture	Substance
REACH registration number	01-2119487136-33-XXXX
CAS No	1310-58-3
EC No (EU Index No)	215-181-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Consumer use
Environmental release category(ies)	ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8b - Wide dispersive indoor use of reactive substances in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems ERC9a - Wide dispersive indoor use of substances in closed systems
Product category(ies)	PC9a - Coatings and paints, thinners, paint removers PC12 - Fertilisers PC20 - Products such as pH-regulators, flocculants, precipitants, neutralization agents PC35 - Washing and cleaning products (including solvent based products)
Product Name	POTASSIUM HYDROXIDE
Sector(s) of use	SU21 - Consumer uses

Section 2 - Operational conditions and risk management measures

Section 2.1 - Control of environmental exposure

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
 - ERC8b - Wide dispersive indoor use of reactive substances in open systems
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems
 - ERC9a - Wide dispersive indoor use of substances in closed systems

Covers concentrations up to 100%
Amounts used

Remarks	Continuous release
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Product characteristics

Physical form of product	Solid or Liquid
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Physical form of product	Solid, low dustiness
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Conditions and measures related to external treatment of waste for disposal

Disposal	Dispose of waste product or used containers according to local regulations
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Control of consumer exposure

Product categories [PC]	PC9a - Coatings and paints, thinners, paint removers PC12 - Fertilisers PC20 - Products such as pH-regulators, flocculants, precipitants, neutralization agents PC35 - Washing and cleaning products (including solvent based products)
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Covers concentrations up to	100%
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Physical form of product	Solid or Liquid Solid, low dustiness
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Risk management measures	Wear suitable respiratory protection (conforming to EN 140 with Type A filter or better) and gloves (type EN 374) if regular skin contact likely Wear suitable gloves and eye/face protection Keep away from children Delivery in small amounts is recommended Delivery in viscous solutions is recommended
Indoor/Outdoor use	Covers indoor and outdoor use

Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems
- ERC8b - Wide dispersive indoor use of reactive substances in open systems
- ERC8d - Wide dispersive outdoor use of processing aids in open systems
- ERC9a - Wide dispersive indoor use of substances in closed systems

Predicted No Effect Concentration
(PNEC)

Remarks Qualitative approach used to conclude safe use

Derived No Effect Level (DNEL):
Worker - inhalative, long-term - local

1 mg/m³

Remarks Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented

Section 4 - Guidance to check compliance with the exposure scenario

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

Product Name	POTASSIUM HYDROXIDE
Pure substance/mixture	Substance
REACH registration number	01-2119487136-33-XXXX
CAS No	1310-58-3
EC No (EU Index No)	215-181-3
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford GBR
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306
E-mail address	SDS.EMEA@univarsolutions.com

Section 1 - Title

Title	Consumer use
Environmental release category(ies)	ERC9a - Wide dispersive indoor use of substances in closed systems ERC9b - Wide dispersive outdoor use of substances in closed systems
Article categories	AC3b - Electrical batteries and accumulators
Product Name	POTASSIUM HYDROXIDE
Sector(s) of use	SU21 - Consumer uses

Section 2 - Operational conditions and risk management measures**Section 2.1 - Control of environmental exposure**

Environmental release category(ies) - ERC9a - Wide dispersive indoor use of substances in closed systems
- ERC9b - Wide dispersive outdoor use of substances in closed systems

Product characteristics

Physical form of product	Liquid
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Control of consumer exposure

Article categories	AC3b - Electrical batteries and accumulators
Physical form of product	Liquid
Risk management measures	Delivery in small amounts is recommended

Section 3 - Exposure estimation

Environmental release category(ies) - ERC9a - Wide dispersive indoor use of substances in closed systems
- ERC9b - Wide dispersive outdoor use of substances in closed systems

Predicted No Effect Concentration (PNEC)

Derived No Effect Level (DNEL):

Worker - inhalative, long-term - local

1 mg/m³

Section 4 - Guidance to check compliance with the exposure scenario

Qualitative approach used to conclude safe use.

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.