

# Safety Data Sheet

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

## SECTION 1: Identification

### Product identifier

Trade name/designation:	Potassium hydroxide
Product No.:	6984
Synonymes:	none

### Relevant identified uses of the substance or mixture and uses advised against

<b>Recommended Use</b>	For Laboratory, Research or Manufacturing Use.
<b>Uses advised against</b>	Not determined.

### Details of the supplier of the safety data sheet

#### Supplier

##### Avantor Performance Materials, LLC.

Street	100 Matsonford Rd, Suite 200
Postal code/City	Radnor, PA 19087, United States
Telephone	+1-855-282-6867
Telefax:	+1-610-573-2610

#### Emergency phone number

Telephone	+1-800-424-9300 (Chemtrec, 24 hrs/day, 7 days/week, USA and Canada)
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#### Preparation Information

Product Information Compliance

E-mail	SDS@avantorsciences.com
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## SECTION 2: Hazard identification

### Classification of the substance or mixture

#### Label elements

##### Physical hazards

Substance or mixture corrosive to metals, category 1

##### Health hazards

Acute toxicity, category 4, oral

Skin corrosion, category 1A

#### Hazard pictograms



#### Signal word: Danger

##### Hazard statements

H290 - May be corrosive to metals.

H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

##### Precautionary statements

###### Prevention:

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P260 - Do not breathe dust/fume/gas/mist/vapours/spray.

P264 - Wash ... thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P234 - Keep only in original container.

###### Response:

P301+P312 - IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell.

P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P363 - Wash contaminated clothing before reuse.

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310 - Immediately call a POISON CENTER/doctor/...

P321 - Specific treatment (see ... on this label).

P390 - Absorb spillage to prevent material damage.

###### Storage:

P405 - Store locked up.

P406 - Store in corrosive resistant container with a resistant inner liner.

###### Disposal:

P501 - Dispose of contents/container to ...

**Hazards not otherwise classified (HNOC)**

none

**SECTION 3: Composition / information on ingredients****Substances**

Substance name	Potassium hydroxide
Molecular formula	KOH
Molecular weight	56.11 g/mol
CAS No.	1310-58-3

**SECTION 4: First aid measures****General information**

IF exposed: Immediately call a POISON CENTER/doctor. If unconscious but breathing normally, place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

**In case of inhalation**

Immediately call a POISON CENTER/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

**In case of skin contact**

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

**After eye contact:**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

**In case of ingestion**

Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Rinse mouth thoroughly with water. Give nothing to eat or drink.

**Most important symptoms/effects, acute and delayed**

no data available

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

no data available

**SECTION 5: Fire fighting measures****Extinguishing media****Suitable extinguishing media**

The product itself does not burn.

Co-ordinate fire-fighting measures to the fire surroundings.

**Extinguishing media which must not be used for safety reasons**

no restriction

**Specific hazards arising from the chemical**

In case of fire may be liberated:

Pyrolysis products, toxic

**Advice for firefighters**

DO NOT fight fire when fire reaches explosives.

Protective equipment and precautions for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

**SECTION 6: Accidental release measures**

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

Avoid dust formation.

**Environmental precautions**

Do not allow to enter into surface water or drains.

**Methods and material for containment and cleaning up**

Spilled product must never be returned to the original container for recycling. Clean contaminated articles and floor according to the environmental legislation. Collect in closed and suitable containers for disposal.

**Additional information**

Clear spills immediately.

**SECTION 7: Handling and storage**

**Precautions for safe handling**

Avoid:

Inhalation

Avoid contact with eyes and skin.

Use extractor hood (laboratory).

If handled uncovered, arrangements with local exhaust ventilation have to be used.

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

Protect from moisture.

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

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

Recommended storage temperature: Ambient temperature

Keep container tightly closed and in a well-ventilated place. Unsuitable container/equipment material:

Aluminium Zinc

**SECTION 8: Exposure controls/personal protection**

**Control parameters**

Ingredient (Designation)	Regulatory information	Country	Limit value type (country of origin)	Limit value
Potassium hydroxide	NIOSH	US	STV	2 mg/m <sup>3</sup>

## Engineering controls

### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

### Personal protection equipment (PPE)

Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

#### *Eye/face protection*

Eye glasses with side protection

#### *Skin protection*

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

#### By short-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,12 mm
Breakthrough time:	> 480 min

#### By long-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,38 mm
Breakthrough time:	> 480 min

#### *Respiratory protection*

Respiratory protection necessary at: aerosol or mist formation If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

#### *Additional information*

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

#### *Environmental exposure controls*

no data available

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

- |                     |                   |
|---------------------|-------------------|
| (a) Appearance      |                   |
| Physical state:     | solid             |
| Color:              | white             |
| (b) Odor:           | odorless          |
| (c) Odor threshold: | no data available |

### Safety relevant basic data

- |  |                                      |
|--|--------------------------------------|
| (d) pH:                                      | 14 (50 g/l; H <sub>2</sub> O; 20 °C) |
| (e) Melting point/freezing point:            | 360 °C                               |
| (f) Initial boiling point and boiling range: | 1320 °C (1013 hPa)                   |
| (g) Flash point:                             | no data available                    |
| (h) Evaporation rate:                        | no data available                    |
| (i) Flammability (solid, gas):               | not applicable                       |
| (j) Flammability or explosive limits         |                                      |
| Lower explosion limit:                       | no data available                    |
| Upper explosion limit:                       | no data available                    |
| (k) Vapor pressure:                          | 1 mmHg (719 °C)                      |
| (l) Vapor density:                           | no data available                    |
| (m) Density:                                 | 2.04 g/cm <sup>3</sup> (20 °C)       |
| (n) Solubility(ies)                          |                                      |
| Water solubility:                            | soluble (20 °C)                      |
| Soluble (g/L) in Ethanol:                    | no data available                    |
| (o) Partition coefficient: n-octanol/water:  | no data available                    |
| (p) Auto-ignition temperature:               | no data available                    |
| (q) Decomposition temperature:               | not applicable                       |
| (r) Viscosity                                |                                      |
| Kinematic viscosity:                         | no data available                    |
| Dynamic viscosity:                           | no data available                    |
| (s) Explosive properties:                    | not applicable                       |
| (t) Oxidising properties:                    | not applicable                       |

### Other information

- |                        |                              |
|------------------------|------------------------------|
| Bulk density:          | no data available            |
| Refraction index:      | 1.409-1.411 (589 nm; 420 °C) |
| Dissociation constant: | no data available            |
| Surface tension:       | no data available            |
| Henry's Law Constant:  | no data available            |

## SECTION 10: Stability and reactivity

### Reactivity

no data available

### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

**Possibility of hazardous reactions**

Exothermic reaction with:  
Strong acid

**Conditions to avoid**

Avoid high temperatures or direct sunlight.  
Protect from moisture.

**Incompatible materials**

Unsuitable container/equipment material:  
Metal

**Hazardous decomposition products**

No known hazardous decomposition products.

**SECTION 11: Toxicological information****Information on toxicological effects****Acute effects**

*Acute oral toxicity:*  
LD50: > 273 mg/kg - Rat - (RTECS)

*Acute dermal toxicity:*  
no data available

*Acute inhalation toxicity:*  
no data available

**Irritant and corrosive effects**

*Primary irritation to the skin:*  
Causes severe skin burns and eye damage.

*Irritation to eyes:*  
Causes serious eye damage.

*Irritation to respiratory tract:*  
not applicable

**Respiratory or skin sensitization**

In case of skin contact: not sensitizing  
In case of inhalation: not sensitizing

**STOT-single exposure**

not applicable

**STOT-repeated exposure**

not applicable

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

No indication of human carcinogenicity.

**Germ cell mutagenicity**

No indications of human germ cell mutagenicity exist.

**Reproductive toxicity**

No indications of human reproductive toxicity exist.

**Aspiration hazard**

not applicable

**Other adverse effects**

no data available

**SECTION 12: Ecological information****Ecotoxicity****Fish toxicity:**

no data available

**Daphnia toxicity:**

no data available

**Algae toxicity:**

no data available

**Bacteria toxicity:**

no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

Partition coefficient: n-octanol/water: no data available

**Mobility in soil:**

no data available

**Other adverse effects**

no data available



**SECTION 13: Disposal considerations**

**Waste treatment methods**

**Appropriate disposal / Product**

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.

**Appropriate disposal / Package**

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information**

**Land transport (DOT)**

UN-No.:	UN1813
Proper Shipping Name:	POTASSIUM HYDROXIDE, SOLID
Class(es):	8
Hazard label(s):	8
Packing group:	II
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	

**Sea transport (IMDG)**

UN-No.:	1813
Proper Shipping Name:	POTASSIUM HYDROXIDE, SOLID
Class(es):	8
Hazard label(s):	8
Packing group:	II
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	
Segregation group:	18
EmS-No.	F-A S-B
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code not relevant	

**Air transport (ICAO-TI / IATA-DGR)**

UN-No.:	1813
Proper Shipping Name:	POTASSIUM HYDROXIDE, SOLID
Class(es):	8
Classification code:	
Hazard label(s):	8
Packing group:	II
Special precautions for user:	

<b>SECTION 15: Regulatory information</b>
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**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**National regulations**

**Toxic Substances Control Act (TSCA)**

Listed

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**SARA 313 Components**

Not listed.

**Massachusetts Right To Know Components**

Listed

**Pennsylvania Right To Know Components**

Listed

**New Jersey Right To Know Components**

Listed

**California Prop. 65 Components**

Not listed.

## SECTION 16: Other information

### Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists  
DOT - Department of Transportation  
IARC - International Agency for Research on Cancer  
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations  
ICAO-TI - International Civil Aviation Organization-Technical Instructions  
IMDG - International Maritime Code for Dangerous Goods  
LTV - Long Term Value  
NIOSH - National Institute for Occupational Safety and Health  
NTP - National Toxicology Program  
OSHA - Occupational Safety & Health Administration  
PBT - Persistent, Bioaccumulative and Toxic  
PEL - Permissible Exposure Limit  
STV - Short Term Value  
SVHC - Substances of Very High Concern  
TDG - Transport of Dangerous Goods  
TLV - Threshold Limit Value  
vPvB - very Persistent, very Bioaccumulative

### Key literature references and sources for data

This Safety Data Sheet has been prepared based on information available for public as TOXNET information, European Chemicals Agency (ECHA) substance dossier, papers from international cancer research institutes (IARC Monographs), U.S. National Toxicology Program data, U.S. Agency for Toxic Substances and Disease Control (ATSDR), PubChem websites and SDS from our raw material manufacturers.

Revision date	Version	Print date
23.08.2022	1.3	2022-08-23

### Additional information

Indication of changes: Section 8: Update of DNEL and/or PNEC data

If you need an explanation of the change, contact the supplier (SDS@avantorsciences.com).

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