

Safety Data Sheet


according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: December 16, 2020

1 Identification

- **Product identifier**
- **Trade name: Potassium Hydroxide, ACS Grade**
- **Product code:** PH1003-K
- **CAS Number:**
1310-58-3
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331 USA
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Distributor:**
AquaPhoenix Scientific
860 Gitts Run Road,
Hanover, PA 17331
(717) 632-1291
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Met. Corr. 1 H290 May be corrosive to metals.
Acute Tox. 4 H302 Harmful if swallowed.
Skin Corr. 1A H314 Causes severe skin burns and eye damage.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**

GHS05 GHS07
- **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:**

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P234	Keep only in original container.
P260	Do not breathe dust.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection.
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.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a poison center/doctor.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
1310-58-3 Potassium hydroxide

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
Seek immediate help for blistering or open wounds.
- **After eye contact:**
Protect unharmed eye.
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed:**
Strong caustic effect on skin and mucous membranes.
Gastric or intestinal disorders when ingested.
- **Danger:**
Danger of gastric perforation.
Causes serious eye damage.
Harmful if swallowed.

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

If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** No relevant information available.
- **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
- **Environmental precautions**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Methods and material for containment and cleaning up**
Sweep up and place into an appropriate container.
Send for recovery or disposal in suitable receptacles.
- **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.

7 Handling and storage

- **Handling**
- **Precautions for safe handling:**
Heating occurs when water is added.
Thorough dedusting.
Any deposit of dust which cannot be avoided must be regularly removed.
Do not dry clean dust covered objects and floors.
Use only in well ventilated areas.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
Unsuitable material for receptacle: aluminium.

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- Unsuitable material for receptacle: steel.
- Unsuitable material for receptacle: glass or ceramic.
- **Information about storage in one common storage facility:**
 - Store away from foodstuffs.
 - Store away from metals.
 - Store away from water.
 - Do not store together with acids.
- **Further information about storage conditions:**
 - Keep containers tightly sealed.
 - Protect from humidity and water.
 - This product is hygroscopic.
 - Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· Control parameters

· Components with limit values that require monitoring at the workplace:

1310-58-3 Potassium hydroxide

REL (USA)	Ceiling limit value: 2 mg/m ³
TLV (USA)	Ceiling limit value: 2 mg/m ³
EL (Canada)	Ceiling limit value: 2 mg/m ³
EV (Canada)	Ceiling limit value: 2 mg/m ³
LMPE (Mexico)	Ceiling limit value: 2 mg/m ³

· Exposure controls

· General protective and hygienic measures:

- The usual precautionary measures for handling chemicals should be followed.
- 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.

· Engineering controls: Provide adequate ventilation.

· Breathing equipment:

- Not required under normal conditions of use.
- Use suitable respiratory protective device when high concentrations are present.

· Protection of hands:



Protective gloves

· Material of gloves

- Nitrile rubber, NBR
- Neoprene gloves
- Natural rubber, NR
- Sensibilization by the components in the glove materials is possible.

· Eye protection:

- Contact lenses should not be worn.

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Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Alkaline resistant protective clothing
 - **Limitation and supervision of exposure into the environment**
- No relevant information available.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· Appearance:

Form: Solid

Color: White

· Odor: Odorless

· Odor threshold: Not determined.

· pH-value: Not applicable.

· Melting point/Melting range: 360 °C (680 °F)

· Boiling point/Boiling range: 1327 °C (2420.6 °F)

· Flash point: The product is not flammable.

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

· Auto-ignition temperature: Not determined.

· Decomposition temperature: Not determined.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits

Lower: Not determined.

Upper: Not determined.

· Oxidizing properties: Non-oxidizing.

· Vapor pressure: Not determined.

· Density at 20 °C (68 °F): 2.04 g/cm³ (17.02 lbs/gal)

· Relative density: Not determined.

· Vapor density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with

Water: Soluble.

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

· Viscosity

Dynamic: Not applicable.

Kinematic: Not applicable.

· Other information: No relevant information available.

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10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Heating occurs when water is added.
Corrosive action on metals.
Strong exothermic reaction with acids.
Attacks materials containing glass and silicate.
Reacts with carbon dioxide.
Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid** No relevant information available.
- **Incompatible materials**
Metals.
Acids.
- **Hazardous decomposition products**
Under fire conditions only:
Metal oxide smoke.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Harmful if swallowed.
- **LD/LC50 values that are relevant for classification:**

1310-58-3 Potassium hydroxide		
Oral	LD50	273 mg/kg (rat)
- **Primary irritant effect:**
- **On the skin:** Strong caustic effect on skin and mucous membranes.
- **On the eye:** Strong caustic effect.
- **Sensitization:** Based on available data, the classification criteria are not met.
- **IARC (International Agency for Research on Cancer):**
Substance is not listed.
- **NTP (National Toxicology Program):**
Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration):**
Substance is not listed.
- **Probable route(s) of exposure:**
Ingestion.
Inhalation.
Eye contact.
Skin contact.
- **Acute effects (acute toxicity, irritation and corrosivity):**
Causes severe skin burns and eye damage.
Harmful if swallowed.

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- **Repeated dose toxicity:** No relevant information available.
- **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.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
- **Other adverse effects** No relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|---------------------------------------|----------------------------|
| · UN-Number | |
| · DOT, ADR/RID/ADN, IMDG, IATA | UN1813 |
| · UN proper shipping name | |
| · DOT, IMDG, IATA | POTASSIUM HYDROXIDE, SOLID |
| · ADR/RID/ADN | 1813 KALIUMHYDROXID, FEST |
| · Transport hazard class(es) | |

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· DOT



· Class 8
· Label 8

· ADR/RID/ADN



· Class 8 (C6)
· Label 8

· IMDG, IATA



· Class 8
· Label 8

· Packing group

· DOT, ADR/RID/ADN, IMDG, IATA II

· Environmental hazards Not applicable.

· Special precautions for user

Warning: Corrosive substances

· Hazard identification number (Kemler code): 80

· EMS Number: F-A, S-B

· Segregation groups Alkalis

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

· Transport/Additional information:

· DOT

· Hazardous substance: 1000 lbs, 454 kg

15 Regulatory information

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

· United States (USA)

· SARA

· Section 302 (extremely hazardous substances):

Substance is not listed.

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· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed or exempt.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity for females:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **EPA (Environmental Protection Agency):**

Substance is not listed.

· **IARC (International Agency for Research on Cancer):**

Substance is not listed.

· **Canadian Domestic Substances List (DSL):**

Substance is not listed.

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.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity – Category 4

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

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers