





# **Safety Data Sheet**

# 1. IDENTIFICATION

Product Identifier: Potassium Hydroxide (KOH) 10%

Product Code(s): J0326

Synonyms: Caustic Potash Solution.

**Recommended Use:** For invitro veterinary use only.

Uses Advised Against: Not for use on humans.

**Supplier:** Jorgensen Laboratories

1450 Van Buren Avenue, Loveland, CO 80538

Phone: (970) 669-2500 or (800) 525-5614 Fax: (970) 663-5042

Emergency Phone Number: U.S. and Canada: (800) 535-5053 International: (352) 323-3500 (INFOTRAC)

# 2. HAZARDS IDENTIFICATION

Hazard Classifications: Skin Corrosion/Irritation: Category 1A

Eye Damage/ Irritation: Category 1

Signal Word: DANGER

**Hazard Statements:** Causes severe skin burns and serious eye damage.

Pictograms:



**Precautionary Statements:** 

**Prevention:** Do not breathe fumes, mists, vapors or spray.

Wash thoroughly after handling.

Wear protective gloves, protective clothing, eye protection, and face protection.

**Response:** Immediately call a poison center or doctor.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

Wash contaminated clothing before reuse.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

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If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

Storage: Store locked up.

**Disposal:** Dispose of contents and container in accordance with local, regional, national, and

international regulations.

**Hazards Not Otherwise** 

Classified:

This product is harmful to aquatic life. Avoid release to the environment. This product may

be mutagenic (see Section 11).

**Toxicity Statement:** Not applicable.

# 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	Common Name / Synonyms	CAS#	% by Weight
Water	-	7732-18-5	91.0
Potassium Hydroxide	Caustic Potash	1310-58-3	9.01

Trade Secret Statement: Not applicable.

# 4. FIRST AID MEASURES

First Aid Procedures:

**Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial

respiration. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious, or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a poison center or doctor/physician immediately.

**Ingestion:** Do not induce vomiting, unless directed to do so by medical personnel. Rinse mouth with

water. If vomiting occurs, keep head low so that vomit does not enter lungs. Never give anything by mouth to an unconscious person. Call a poison center or doctor/physician

immediately.

**Skin Contact:** Remove contaminated clothing and shoes immediately. Wash skin with plenty of water for at

least 15 minutes. Wash clothing before reuse. Call a poison center or doctor/physician

immediately.

Eye Contact: Check for and remove contact lenses, if present and easy to do. Immediately flush eyes with

gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids

occasionally. Call a poison center or doctor/physician immediately.

General Advice: Poison information centers in each state can provide additional assistance for scheduled

poisons. Ensure that those providing first aid and medical personnel are aware of the

material(s) involved and take precautions to protect themselves.

Symptoms and Effects: Corrosive. Causes severe burns and tissue damage if swallowed, inhaled, or exposed to the

skin or eyes.

Immediate Medical Care/

Special Treatment:

Immediate medical attention is required. Call a poison center or doctor/physician

immediately. Treat symptomatically.

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# 5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water spray, dry powder, alcohol resistant foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a solid (straight) water stream as it may scatter and spread fire.

**Hazardous Combustion** 

Products:

Potassium oxides, hydrogen.

Specific Hazards: Corrosive. Excessive thermal conditions may cause decomposition and yield potassium

oxides. Contact with metals may yield hazardous hydrogen gas.

Special Protective Equipment/ Precautions for Firefighters: As in any fire, wear MSHA/NIOSH-approved (or equivalent), self-contained, positive-

pressure or pressure-demand breathing apparatus and full protective gear.

# 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Protective Equipment:

Ventilate area of leak or spill. Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Keep upwind. Wear appropriate personal

protective equipment (see Section 8). Avoid contact with eyes, skin, and clothing.

Emergency Procedures: In case of chemical emergency, or if unsure how to address an accidental release, consult a

professional (see Section 1).

**Methods for Containment:** Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer,

basements, or confined areas. Dike the spilled material, where this is possible. Product should not be released to the environment. Contain and recover liquid when possible.

Methods for Cleanup: Absorb spill with an inert material (e.g. vermiculite, dry sand, earth, cloth, or fleece) and

place in a non-combustible container for reclamation or disposal. Do not flush to sewer.

Clean contaminated surface thoroughly. Residues from spills can be diluted with water and neutralized with an acidic material. Never return spills in original containers for reuse. Clean

up in accordance with all applicable regulations.

# 7. HANDLING AND STORAGE

Handling: Wear personal protective equipment (see Section 8). Provide sufficient air exchange and/or

exhaust in work areas. Avoid contact with skin, eyes, and clothing. Do not breathe vapors or spray mist. Do not ingest. When using, do not eat, drink, or smoke. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty, as they retain product residues. Observe all warnings and precautions listed for this product. As with all bases, never add water directly to this product.

Instead, add bases to water to prevent violent eruption of the solution.

Storage: Store in a dry, ventilated area. Store at 15-25 °C. Store away from heat and incompatible

materials (see section 10). Store in original container. Do not store in metallic containers. Keep containers tightly closed and upright. Keep away from food, drink, and animal

foodstuffs. Keep out of the reach of children. Comply with all national, state, and local codes

pertaining to the storage, handling, dispensing, and disposal of this product.

# 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Exposure Limits:** Potassium Hydroxide: OSHA (PEL): 2 mg/m<sup>3</sup>

ACGIH (TLV): 2 mg/m<sup>3</sup>

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Engineering Controls: Ensure adequate ventilation. Ventilation rates should be matched to conditions. If

applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not

been established, maintain airborne levels to an acceptable level.

**Personal Protective Measures:** 

**Eye/Face Protection:** Wear safety glasses with side shields or goggles and a face shield. Maintain approved eye

wash station and accessible rinse facilities in work area.

**Skin Protection:** Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical

resistant gloves.

Respiratory Protection: An air-purifying, NIOSH-approved respirator with appropriate cartridge or canister may be

permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or if any other circumstances exist where air-purifying respirators may not provide adequate protection.

Specific Requirements for Personal Protective Equipment:

Ensure that glove material is compatible with this product. This information is available from glove manufacturers. If respiratory protection is required, use full face protection as well.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Colorless, transparent liquid.

Odor: Odorless.

Odor Threshold: No information found.

Formula Weight: 56.10 (as KOH)

**pH:** 14 at 20 °C

Melting/Freezing Point: -3 °C

**Boiling Point/Range:** 101 °C

**Decomposition Temperature:** No information found.

Flash Point: Not applicable.

Auto-ignition Temperature: Not applicable.

Flammability: Not flammable.

Flammability/Explosive Limits: Not applicable.

**Solubility:** Miscible with water.

**Vapor Pressure:** 1 mmHg at 714 °C (as KOH)

Vapor Density: No information found.

**Specific Gravity:** 1.11 (Water = 1)

**Evaporation Rate:** No information found.

Viscosity: No information found.

Partition Coefficient No information found.

(n-octanol/water):

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# 10. STABILITY AND REACTIVITY

Reactivity Data: Corrosive. See Section 11.

**Chemical Stability:** Stable under normal conditions. Sensitive to air.

Conditions to Avoid: Excessive heat or cold, excessive ambient moisture, exposure to air, incompatible

materials.

Incompatible Materials: Acids, oxidizers, metals, anhydrides, halogens, nitromethane, chlorinated solvents, organic

materials, phosphorous.

**Hazardous Decomposition** 

**Products:** 

Potassium oxides, hydrogen.

**Possibility of Hazardous** 

Reactions:

May react vigorously or violently with the incompatible materials listed above. Excessive thermal conditions may cause decomposition and yield potassium oxides. Contact with

metals may yield hazardous hydrogen gas.

Hazardous Polymerization: Will not occur.

# 11. TOXICOLOGICAL INFORMATION

**Routes of Exposure:** Inhalation, ingestion, skin contact, eye contact.

Acute Effects: Causes burns to the eyes, skin, respiratory tract, and gastrointestinal tract. May enter lungs

if swallowed or vomited. Liquid and vapors are corrosive. May cause tissue damage.

**Chronic Effects:** Prolonged or repeated exposure has a destructive effect on tissue. May affect genetic

material.

**Toxicological Data:** Potassium Hydroxide: LD50 Oral, Rat: 273 mg/kg

Corrosive to eyes and skin based on human and animal data.

Water: No information found.

Symptoms of Exposure: Irritation, burning, coughing, sneezing, choking sensation, hoarseness, difficulty breathing,

shock, nausea, vomiting, diarrhea.

Carcinogenic Effects: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

#### 12. ECOLOGICAL INFORMATION

Ecotoxicological Data: Potassium Hydroxide: LC50, Western Mosquitofish (Gambusia affinis): 80 mg/L 96 h

Water: No information found.

Persistence and Degradability: Expected to be readily biodegradable.

Environmental Effects: Harmful to aquatic life. May adversely affect pH of aquatic ecosystems. Avoid exposure to

the environment.

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# 13. DISPOSAL INFORMATION

**Disposal Instructions:** All wastes must be handled in accordance with local, state, and federal regulations.

Minimize exposure to product waste (see Section 8).

Contaminated Packaging: Because emptied containers may retain product residue, follow label warnings even after

container is emptied. Offer rinsed packaging material to local recycling facilities.

Waste Codes: D002: Waste Corrosive Material (pH ≤ 2 or pH ≥12.5 or corrosive to steel)

# 14. TRANSPORT INFORMATION

DOT:

UN Number: UN1814

Proper Shipping Name: Potassium Hydroxide Solution

Hazard Class: 8

Packing Group:

ERG Number: 154

**Environmental Hazard** 

Regulations:

No information found.

Other Transport Precautions: No information found.

# 15. REGULATORY INFORMATION

# **U.S. Federal Regulations:**

OSHA: This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard

Communication Standard, 29 CFR 1910.1200.

**TSCA Inventory:** All components of this product are on the U.S. TSCA Inventory.

U.S. EPCRA (SARA Title III):

Section 302: No information found.

Sections 311/312:

Hazard Category	List (Yes/No)	
Section 311 – Hazardous Chemical	Yes	
Immediate Hazard	Yes	
Delayed Hazard	No	
Fire Hazard	No	
Pressure Hazard	No	
Reactivity Hazard	No	

Section 313: No information found.

CERCLA Reportable Quantities: Potassium Hydroxide: 1000 lb

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#### International Inventories:

Country or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

<sup>\*</sup>A "Yes" indicates that the listed component(s) of this product comply with the inventory requirements administered by the governing country(s)

#### 16. OTHER INFORMATION

Disclaimer:

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**Reason for Revision:** Update of Section 2, 11 over 11/20/2014 version.

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