

Material Safety Data Sheet

Version 5.0
 Revision Date 03/13/2010
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Potassium hydroxide

Product Number : P5958
 Brand : Sigma-Aldrich

Company : Sigma-Aldrich
 3050 Spruce Street
 SAINT LOUIS MO 63103
 USA

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2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Toxic by ingestion, Corrosive

GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H301 : Toxic if swallowed.
 H314 : Causes severe skin burns and eye damage.
 H402 : Harmful to aquatic life.

Precautionary statement(s)

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/physician.

HMIS Classification

Health hazard: 3
 Flammability: 0
 Physical hazards: 1

NFPA Rating

Health hazard: 3
 Fire: 0
 Reactivity Hazard: 1
 Special hazard.: W

Potential Health Effects

Inhalation : May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Skin : May be harmful if absorbed through skin. Causes skin burns.

Eyes : Causes eye burns.

Ingestion : Toxic if swallowed. Causes burns.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Caustic potash

Formula : HKO

Molecular Weight : 56.11 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Potassium hydroxide			
1310-58-3	215-181-3	019-002-00-8	-

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

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

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Gives off hydrogen by reaction with metals. The product itself does not burn.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Absorbs carbon dioxide (CO₂) from air.

Air sensitive. strongly hygroscopic

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Potassium hydroxide	1310-58-3	C	2 mg/m3	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye, skin, & Upper Respiratory Tract irritation				
		C	2 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Face shield and safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form solid

Safety data

pH 13.5
Melting point 361 °C (682 °F)
Boiling point 1,320 °C (2,408 °F)
Flash point no data available
Ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Vapour pressure 1 hPa (1 mmHg) at 719 °C (1,326 °F)
1 hPa (1 mmHg) at 714 °C (1,317 °F)
Density 2.044 g/cm3
Water solubility soluble

10. STABILITY AND REACTIVITY

Chemical stability

Heat of solution is very high, and with limited amounts of water, violent boiling may occur Stable under recommended storage conditions.

Conditions to avoid

Do not heat above melting point.

Materials to avoid

Nitro compounds, Organic materials, Magnesium, Copper, Water, reacts violently with:, Metals, Light metals, Contact with aluminum, tin and zinc liberates hydrogen gas. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts., vigorous reaction with:, Alkali metals, Halogens, Azides, Anhydrides

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Potassium oxides

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 273 mg/kg

Skin corrosion/irritation

Skin - rabbit - Severe skin irritation - 24 h

Serious eye damage/eye irritation

Eyes - rabbit - Eye irritation - 24 h

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure (GHS)

no data available

Specific target organ toxicity - repeated exposure (GHS)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion	Toxic if swallowed. Causes burns.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.

Additional Information

RTECS: TT2100000

12. ECOLOGICAL INFORMATION**Toxicity**

Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 80 mg/l - 96 h

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN-Number: 1813 Class: 8 Packing group: II
Proper shipping name: Potassium hydroxide, solid
Reportable Quantity (RQ): 1000 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

UN-Number: 1813 Class: 8 Packing group: II EMS-No: F-A, S-B
Proper shipping name: POTASSIUM HYDROXIDE, SOLID
Marine pollutant: No

IATA

UN-Number: 1813 Class: 8 Packing group: II
Proper shipping name: Potassium hydroxide, solid

15. REGULATORY INFORMATION

OSHA Hazards

Toxic by ingestion, Corrosive

DSL Status

All components of this product are on the Canadian DSL list.

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Potassium hydroxide	1310-58-3	2007-03-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Potassium hydroxide	1310-58-3	2007-03-01

New Jersey Right To Know Components

Potassium hydroxide

CAS-No.
1310-58-3

Revision Date
2007-03-01

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information

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