

## Material Safety Data Sheet

Version 4.0

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## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Potassium hydroxide

Product Number : 306568

Brand : Sigma-Aldrich

Company : Sigma-Aldrich Canada, Ltd  
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CANADA

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## 2. HAZARDS IDENTIFICATION

## Emergency Overview

## WHMIS Classification

D1B Toxic Material Causing Immediate and  
E Serious Toxic Effects

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
<b>Potassium hydroxide</b>			
1310-58-3	215-181-3	019-002-00-8	-

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### 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.

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### 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.

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### 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.

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### 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 (CO<sub>2</sub>) 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	2006-11-29	Canada. British Columbia OEL
		CEV	2 mg/m3	2005-12-17	Canada. Ontario OELs
		(c)	2 mg/m3	2007-01-01	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		C	2 mg/m3	2006-12-29	Canada. Quebec OELs
Remarks	A substance which may not be recirculated in accordance with section 108				

### 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.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form pellets

### 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

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## 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

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**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.

**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

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**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

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**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.

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**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

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**15. REGULATORY INFORMATION****DSL Status**

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

**WHMIS Classification**

D1B Toxic Material Causing Immediate and  
E Serious Toxic Effects

Toxic by ingestion  
Corrosive

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**16. OTHER INFORMATION****Further information**

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