



# Fisher Scientific

Part of Thermo Fisher Scientific

## SAFETY DATA SHEET

Creation Date 02-Nov-2009

Revision Date 17-Feb-2014

Revision Number 1

### 1. Identification

<b>Product Name</b>	<b>Potassium Hydroxide</b>
<b>Cat No. :</b>	<b>P246-3; P250-1; P250-3; P250-10; P250-50; P250-500; P251-3; P251-50; P251-500; P258-12; P258-50; P258-50LC; P258-212</b>
<b>Synonyms</b>	Potassium hydrate; Lye; Caustic potash
<b>Recommended Use</b>	Laboratory chemicals
<b>Uses advised against</b>	No Information available

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

<b>Company</b>	<b>Emergency Telephone Number</b>
Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410 Tel: (201) 796-7100	CHEMTREC®, Inside the USA: 800-424-9300 CHEMTREC®, Outside the USA: 001-703-527-3887

### 2. Hazard(s) Identification

#### **Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to metals	Category 1
Acute oral toxicity	Category 3
Skin Corrosion/Irritation	Category 1 A
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

#### **Label Elements**

##### **Signal Word**

Danger

##### **Hazard Statements**

May be corrosive to metals  
Toxic if swallowed  
Causes severe skin burns and eye damage  
May cause respiratory irritation

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Use only outdoors or in a well-ventilated area

**Response**

Immediately call a POISON CENTER or doctor/physician

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Skin**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Ingestion**

Rinse mouth  
 Do NOT induce vomiting

**Storage**

Store locked up  
 Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition / information on ingredients

**Haz/Non-haz**

Component	CAS-No	Weight %
Potassium hydroxide	1310-58-3	100.0

### 4. First-aid measures

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

**Inhalation**

Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

**Ingestion**

Do not induce vomiting. Call a physician or Poison Control Center immediately.

<b>Most important symptoms/effects</b>	Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.
<b>Notes to Physician</b>	Treat symptomatically.

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire..
<b>Unsuitable Extinguishing Media</b>	Carbon dioxide (CO2)
<b>Flash Point</b>	Not applicable
<b>Method -</b>	No information available.
<b>Autoignition Temperature</b>	No information available.
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Sensitivity to mechanical impact</b>	No information available.
<b>Sensitivity to static discharge</b>	No information available.

### Specific Hazards Arising from the Chemical

Water reactive. Contact with metals may evolve flammable hydrogen gas. Thermal decomposition can lead to release of irritating gases and vapors.

**Hazardous Combustion Products** Oxides of potassium.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

<b>Health</b>	<b>Flammability</b>	<b>Instability</b>	<b>Physical hazards</b>
3	0	1	N/A

## 6. Accidental release measures

<b>Personal Precautions</b>	Use personal protective equipment. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing.
<b>Environmental Precautions</b>	Should not be released into the environment. See Section 12 for additional ecological Information.
<b>Methods for Containment and Clean Up</b>	Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

## 7. Handling and storage

<b>Handling</b>	Use only under a chemical fume hood. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing.
<b>Storage</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Corrosives area.

## 8. Exposure controls / personal protection

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### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium hydroxide	Ceiling: 2 mg/m <sup>3</sup>	(Vacated) Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Potassium hydroxide	Ceiling: 2 mg/m <sup>3</sup>		CEV: 2 mg/m <sup>3</sup>

#### Legend

**ACGIH** - American Conference of Industrial Hygiene

**OSHA** - Occupational Safety and Health Administration

**NIOSH IDLH**: Immediately Dangerous to Life or Health

#### Engineering Measures

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Personal Protective Equipment

##### Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

##### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

##### Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

##### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

## 9. Physical and chemical properties

Physical State	Solid
Appearance	Light yellow
Odor	odorless
Odor Threshold	No information available.
pH	13.5 (0.1M)
Melting Point/Range	360°C / 680°F
Boiling Point/Range	1320°C / 2408°F
Flash Point	Not applicable
Evaporation Rate	No information available.
Flammability (solid,gas)	No information available.
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available.
Vapor Density	No information available.
Relative Density	2.04
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available.
Decomposition temperature	No information available.
Viscosity	No information available.
Molecular Formula	KOH
Molecular Weight	56.1

## 10. Stability and reactivity

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<b>Reactive Hazard</b>	Yes
<b>Stability</b>	Water reactive. Moisture sensitive. Air sensitive.
<b>Conditions to Avoid</b>	Avoid dust formation. Incompatible products. Excess heat. Exposure to moist air or water.
<b>Incompatible Materials</b>	Water, Metals, Acids
<b>Hazardous Decomposition Products</b>	Oxides of potassium
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur
<b>Hazardous Reactions</b>	None under normal processing

## 11. Toxicological information

### Acute Toxicity

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium hydroxide	214 mg/kg ( Rat )	Not listed	Not listed

**Toxicologically Synergistic Products** No information available.

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** Causes severe burns by all exposure routes

**Sensitization** No information available.

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Potassium hydroxide	1310-58-3	Not listed				

**Mutagenic Effects** Mutagenic effects have occurred in experimental animals.

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system.

**STOT - repeated exposure** None known.

**Aspiration hazard** No information available.

**Symptoms / effects, both acute and delayed** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** Tumorigenic effects have been reported in experimental animals.. See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Potassium hydroxide	Not listed	80 mg/L LC50 96 h	Not listed	Not listed

**Persistence and Degradability** No information available.

**Bioaccumulation/ Accumulation** No information available

### Mobility

Component	log Pow
Potassium hydroxide	0.83

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

## 14. Transport information

### DOT

UN-No UN1813  
 Proper Shipping Name Potassium hydroxide, solid  
 Hazard Class 8  
 Packing Group II

### TDG

UN-No UN1813  
 Proper Shipping Name POTASSIUM HYDROXIDE, SOLID  
 Hazard Class 8  
 Packing Group II

### IATA

UN-No UN1813  
 Proper Shipping Name POTASSIUM HYDROXIDE, SOLID  
 Hazard Class 8  
 Packing Group II

### IMDG/IMO

UN-No UN1813  
 Proper Shipping Name POTASSIUM HYDROXIDE, SOLID  
 Hazard Class 8  
 Packing Group II

## 15. Regulatory information

### International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Potassium hydroxide	X	X	-	-	-		X	X	X	X	X

**Legend:**

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

TSCA 12(b) Not applicable

SARA 313 Not applicable

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	Yes

**Clean Water Act**

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Potassium hydroxide	X	1000 lb	-	-

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Potassium hydroxide	1000 lb	-

California Proposition 65 This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Potassium hydroxide	X	X	X	-	X

**U.S. Department of Transportation**

Reportable Quantity (RQ):	Y
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

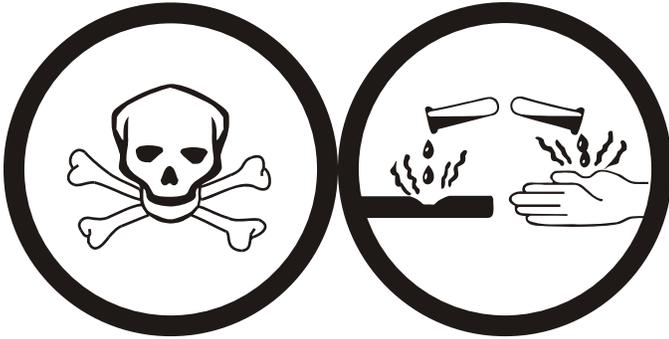
Other International Regulations

Mexico - Grade No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class D1B Toxic materials  
E Corrosive material

**16. Other information**

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Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of SDS**