



Material Safety Data Sheet

Creation Date 02-Nov-2009

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Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Potassium Hydroxide
Cat No.	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
Synonyms	Potassium hydrate; Lye; Caustic potash
Recommended Use	Laboratory chemicals
Company Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410 Tel: (201) 796-7100	Emergency Telephone Number CHEMTREC®, Inside the USA: 800-424-9300 CHEMTREC®, Outside the USA: 703-527-3887

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview

Causes severe burns by all exposure routes. Harmful if swallowed. Water reactive.

Appearance Light yellow

Physical State Solid

Odor odorless

Target Organs Eyes, Respiratory system, Skin, Gastrointestinal tract (GI)

Potential Health Effects

Acute Effects

Principle Routes of Exposure

Eyes

Causes severe burns. May cause blindness or permanent eye damage.

Skin

Causes severe burns. May be harmful in contact with skin. Repeated exposure may cause skin dryness or cracking.

Inhalation

Causes severe burns. May be harmful if inhaled.

Ingestion

Harmful if swallowed. Causes severe burns.

Chronic Effects

Tumorigenic effects have been reported in experimental animals.. Mutagenic effects have occurred in experimental animals..

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Preexisting eye disorders. Skin disorders.

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.

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point Method Not applicable
No information available.

Autoignition Temperature No information available.

Explosion Limits

Upper No data available

Lower No data available

Suitable Extinguishing Media Substance is nonflammable; use agent most appropriate to extinguish surrounding fire..

Unsuitable Extinguishing Media Carbon dioxide (CO2).

Hazardous Combustion Products No information available.

Sensitivity to mechanical impact No information available.

Sensitivity to static discharge 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.

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 **Health 3** **Flammability 0** **Instability 1** **Physical hazards N/A**

6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions** 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.
- Environmental Precautions** Should not be released into the environment.
- Methods for Containment and Clean Up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. HANDLING AND STORAGE

- Handling** 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.
- Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Corrosives area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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.

Exposure Guidelines

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

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

NIOSH IDLH: Immediately Dangerous to Life or Health

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

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical State** Solid
- Appearance** Light yellow
- Odor** odorless
- Odor Threshold** No information available.
- pH** 13.5 (0.1M)
- Vapor Pressure** No information available.
- Vapor Density** No information available.
- Viscosity** No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point/Range	1320°C / 2408°F
Melting Point/Range	360°C / 680°F
Decomposition temperature °C	No information available.
Flash Point	Not applicable
Evaporation Rate	No information available.
Specific Gravity	2.04
Solubility	Soluble in water
log Pow	No data available
Molecular Weight	56.1
Molecular Formula	KOH

10. STABILITY AND REACTIVITY

Stability	Moisture sensitive. Air sensitive. Absorbs moisture from air and becomes liquid.
Conditions to Avoid	Avoid dust formation. Incompatible products. Excess heat. Exposure to moist air or water.
Incompatible Materials	Water, Metals, Acids
Hazardous Decomposition Products	Oxides of potassium
Hazardous Polymerization	Hazardous polymerization does not occur
Hazardous Reactions .	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

Irritation	Causes severe burns by all exposure routes
Toxicologically Synergistic Products	No information available.
Chronic Toxicity	
Carcinogenicity	There are no known carcinogenic chemicals in this product
Sensitization	No information available.
Mutagenic Effects	Mutagenic effects have occurred in experimental animals.

Reproductive Effects	No information available.
Developmental Effects	No information available.
Teratogenicity	No information available.
Other Adverse Effects	Tumorigenic effects have been reported in experimental animals.. See actual entry in RTECS for complete information.
Endocrine Disruptor Information	No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Do not empty into drains.

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available

Mobility

Component	log Pow
Potassium hydroxide	0.65
	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
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14. TRANSPORT INFORMATION

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	-	215-181-3	-		X	X	X	X	KE-29139 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 No
 Chronic Health Hazard No
 Fire Hazard No
 Sudden Release of Pressure Hazard No
 Reactive Hazard No

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
Not applicable

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

E Corrosive material
D1B Toxic materials



16. OTHER INFORMATION

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Revision Summary "****", and red text indicates revision

REVIEWEDDATE: May 22/2012**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 MSDS