



MATERIAL SAFETY DATA SHEET  
Potassium Hydroxide

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Potassium Hydroxide

**Catalog Numbers:** BP/P300, P/5560/60, P/5560/71, P/5600/53, P/5600/60, P/5600/61, P/5600/65, P/5600/68, P/5600/71, P/5640/53, P/5640/60, P/5640/65, P/5640/68, P/5640/70, P/5640/71

**Synonyms:** Caustic potash; Lye; Potassium hydrate

**Company Identification:** Fisher Scientific UK  
Bishop Meadow Road, Loughborough  
Leics. LE11 5RG

**For information in Europe, call:** (01509) 231166

**Emergency Number, Europe:** 01509 231166

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
1310-58-3	Potassium hydroxide (KOH)	100.0	215-181-3

**Hazard Symbols:** C



**Risk Phrases:** 22 35

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

*Harmful if swallowed. Causes severe burns. Corrosive. Water-reactive.*

#### Potential Health Effects

**Eye:** Causes severe eye burns. May cause irreversible eye injury. Contact may cause ulceration of the conjunctiva and cornea. Eye damage may be delayed.

**Skin:** Causes skin burns. May cause deep, penetrating ulcers of the skin.

**Ingestion:** Harmful if swallowed. May cause circulatory system failure. May cause perforation of the digestive tract. Causes severe digestive tract burns with abdominal pain, vomiting, and possible death.

**Inhalation:** Harmful if inhaled. Irritation may lead to chemical pneumonitis and pulmonary edema. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma.

**Chronic:** Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated eye contact may cause conjunctivitis.

### Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

- Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure.
- Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
- Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

**Notes to Physician:**

### Section 5 - Fire Fighting Measures

- General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water with caution and in flooding amounts. Contact with moisture or water may generate sufficient heat to ignite nearby combustible materials.
- Extinguishing Media:** For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

### Section 6 - Accidental Release Measures

- General Information:** Use proper personal protective equipment as indicated in Section 8.
- Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions.

### Section 7 - Handling and Storage

- Handling:** Wash thoroughly after handling. Use with adequate ventilation. Do not allow water to get into the container because of violent reaction. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.
- Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from strong acids. Keep away from water. Keep away from metals. Keep away from flammable liquids. Keep away from organic halogens.

### Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:**

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**Exposure Limits**

CAS# 1310-58-3:

United Kingdom, WEL - STEL: 2 mg/m<sup>3</sup> STEL

Belgium - STEL: 2 mg/m<sup>3</sup> VLE

France - VLE: 2 mg/m<sup>3</sup> VLCT

Japan: 2 mg/m<sup>3</sup> Ceiling

Malaysia: 2 mg/m<sup>3</sup> Ceiling

Spain: 2 mg/m<sup>3</sup> VLA-EC

**Personal Protective Equipment**

**Eyes:** Wear safety glasses and chemical goggles or face shield if handling liquids.

**Skin:** Wear appropriate gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** 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.

## Section 9 - Physical and Chemical Properties

**Physical State:** Solid  
**Color:** white or yellow  
**Odor:** odorless  
**pH:** 13.5 (0.1M solution)  
**Vapor Pressure:** Not available  
**Viscosity:** Not available  
**Boiling Point:** 2408 deg F ( 1,320.00°C)  
**Freezing/Melting Point:** 680 deg F ( 360.00°C)  
**Autoignition Temperature:** Not applicable  
**Flash Point:** Not applicable.  
**Explosion Limits: Lower:** Not available  
**Explosion Limits: Upper:** Not available  
**Decomposition Temperature:** Not available  
**Solubility in water:** Soluble  
**Specific Gravity/Density:** 2.04  
**Molecular Formula:** KOH  
**Molecular Weight:** 56.1047

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable. Readily absorbs carbon dioxide and moisture from the air and deliquesces (to absorb atmospheric water vapor and become liquid).  
**Conditions to Avoid:** Moisture, contact with water.  
**Incompatibilities with Other Materials** Water, metals, acids.  
**Hazardous Decomposition Products** Oxides of potassium.  
**Hazardous Polymerization** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:** CAS# 1310-58-3: TT2100000  
**LD50/LC50:** RTECS:  
**CAS# 1310-58-3:** Draize test, rabbit, skin: 50 mg/24H Severe;  
Oral, rat: LD50 = 273 mg/kg;  
. .  
**Carcinogenicity:** Potassium hydroxide (KOH) - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
**Other:** See actual entry in RTECS for complete information.

## Section 12 - Ecological Information

**Ecotoxicity:** Fish: Mosquito Fish: LC50 = 80.0 mg/L; 24 Hr.; Unspecified

## Section 13 - Disposal Considerations

Products considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local authority or advice. Empty containers must be decontaminated before returning for recycling.

## Section 14 - Transport Information

	<b>IATA</b>	<b>IMO</b>	<b>RID/ADR</b>
<b>Shipping Name:</b>	POTASSIUM HYDROXIDE, SOLID	POTASSIUM HYDROXIDE, SOLID	POTASSIUM HYDROXIDE, SOLID
<b>Hazard Class:</b>	8	8	8
<b>UN Number:</b>	1813	1813	1813
<b>Packing Group:</b>	II	II	II

USA RQ: CAS# 1310-58-3: 1000 lb final RQ; 454 kg final RQ

## Section 15 - Regulatory Information

### European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 22 Harmful if swallowed.

R 35 Causes severe burns.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 1310-58-3: 1

Canada

CAS# 1310-58-3 is listed on Canada's DSL List

### US Federal

TSCA

CAS# 1310-58-3 is listed on the TSCA Inventory.

## Section 16 - Other Information

**MSDS Creation Date:** 6/21/1999

**Revision #6 Date** 3/16/2007

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.*

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