

Potassium Hydroxide 45% w/w

SECTION 1. IDENTIFICATION

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|--------------------------------------|--|
| Product Identifier | Potassium Hydroxide 45% w/w |
| Other Means of Identification | Lye, Caustic Potash |
| Product Code(s) | PO4540 |
| Product Family | Inorganic solution |
| Recommended Use | Industrial. |
| Restrictions on Use | None known. |
| Supplier Identifier | Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995 |
| Emergency Phone No. | CANUTEC CANADA, 613-996-6666, 24 Hours |
| SDS No. | 0403 |
| Date of Preparation | March 01, 2016 |

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Acute toxicity (Oral) - Category 4; Skin corrosion - Category 1; Serious eye damage - Category 1

Label Elements



Signal Word:
Danger

Hazard Statement(s):

Harmful if swallowed.

Causes severe skin burns and eye damage.

Precautionary Statement(s):

Prevention:

Wash hands and skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Keep only in original container.

Response:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF SWALLOWED: Immediately call a POISON CENTRE or doctor.

IF ON SKIN: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

| Chemical Name | CAS No. | % | Other Identifiers |
|---------------------|-----------|---------------|------------------------------|
| Potassium hydroxide | 1310-58-3 | 40.00 - 55.00 | Caustic potash solid, Potash |
| Water | 7732-18-5 | 45.00 - 60.00 | Dihydrogen Oxide |

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation or a rash occurs, get medical advice or attention.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Immediately call a Poison Centre or doctor.

Ingestion

Immediately call a Poison Centre or doctor. Rinse mouth with water. Do not induce vomiting.

First-aid Comments

All first aid procedures should be periodically reviewed by a doctor familiar with the material and its condition of use in the workplace.

Most Important Symptoms and Effects, Acute and Delayed

If in eyes: contact causes severe burns with redness, swelling, pain and blurred vision. Permanent damage including blindness can result.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice

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

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agents compatible with product and suitable for surrounding fire.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Heating increases the release of toxic vapour. Closed containers may rupture violently when heated releasing contents.

In a fire, the following hazardous materials may be generated: flammable hydrogen.

Special Protective Equipment and Precautions for Fire-fighters

A full-body encapsulating chemical protective suit with positive pressure SCBA may be necessary.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Emergency responders: use the personal protective equipment recommended in Section 8 of this safety data sheet. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Remove or isolate incompatible materials as well as other hazardous materials.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Never add water to a corrosive. Always add corrosives slowly to COLD water. Only use where there is adequate ventilation. Do not breathe in this product. Do not get in eyes, on skin or on clothing. Prevent accidental contact with incompatible chemicals. Keep containers tightly closed when not in use or empty. Wash hands thoroughly after handling this material.

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity). Store in the original, labelled, shipping container. Comply with all applicable health and safety regulations, fire and building codes.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

| Chemical Name | ACGIH TLV® | | OSHA PEL | | AIHA WEEL | |
|---------------------|-----------------|------|-----------------|---------|-----------|-----|
| | TWA | STEL | TWA | Ceiling | 8-hr TWA | TWA |
| Potassium hydroxide | | | | 2 mg/m3 | | |
| Water | Not established | | Not established | | | |

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Respiratory Protection

For non-routine or emergency situations: wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

| | |
|------------------------------|---|
| Appearance | Clear colourless liquid. |
| Odour | Odourless |
| Odour Threshold | Not available |
| pH | Not available |
| Melting Point/Freezing Point | -29 °C (-20 °F) (melting); -29 °C (-20 °F) (freezing) |

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| Initial Boiling Point/Range | 132.2 °C (270.0 °F) |
| Flash Point | Not applicable |
| Evaporation Rate | Not available |
| Flammability (solid, gas) | Not applicable |
| Upper/Lower Flammability or Explosive Limit | Not applicable (upper); Not applicable (lower) |
| Vapour Pressure | 2 mm Hg (0 kPa) at 20 °C (68 °F) |
| Vapour Density (air = 1) | Not available |
| Relative Density (water = 1) | 1.457 (estimated) at 15 °C |
| Solubility | Soluble in water; Not available (in other liquids) |
| Partition Coefficient, n-Octanol/Water (Log Kow) | Not available |
| Auto-ignition Temperature | Not available |
| Decomposition Temperature | Not available |
| Viscosity | Not available (kinematic); Not available (dynamic) |
| Other Information | |
| Physical State | Liquid |

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources. Water, moisture or humidity.

Incompatible Materials

Metals (e.g. aluminum), water, strong acids (e.g. hydrochloric acid).

Hazardous Decomposition Products

None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

| Chemical Name | LC50 | LD50 (oral) | LD50 (dermal) |
|---------------------|---------------|---------------------|-----------------------|
| Potassium hydroxide | Not available | 205 mg/kg (rat) | > 1260 mg/kg (rabbit) |
| Water | Not available | > 89840 mg/kg (rat) | Not available |

Skin Corrosion/Irritation

Contact can cause pain, redness, burns, and blistering. Permanent scarring can result.

Serious Eye Damage/Irritation

Contact causes severe burns with redness, swelling, pain and blurred vision. Permanent damage including blindness can result.

STOT (Specific Target Organ Toxicity) - Single Exposure

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Inhalation

May cause severe nose and throat irritation, severe lung injury. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest.

Ingestion

Harmful

May cause severe irritation or burns to the mouth, throat and stomach.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause dermatitis. Symptoms may include dry, red, cracked skin (dermatitis).

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

| Chemical Name | IARC | ACGIH® | NTP | OSHA |
|---------------------|------------|------------|------------|------------|
| Potassium hydroxide | Not Listed | Not Listed | Not Listed | Not Listed |
| Water | Not Listed | Not Listed | Not Listed | Not Listed |

Reproductive Toxicity**Development of Offspring**

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal Methods**

Dispose of contents and container in accordance with local, regional, national and international regulations. Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

SECTION 14. TRANSPORT INFORMATION

| Regulation | UN No. | Proper Shipping Name | Transport Hazard Class(es) | Packing Group |
|--------------|--------|-------------------------------|----------------------------|---------------|
| Canadian TDG | UN1814 | Potassium Hydroxide, Solution | 8 | II |

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

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Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 3** **Flammability - 0** **Instability - 0**

SDS Prepared By Alphachem Limited

Phone No. (905)-821-2995

Date of Preparation March 01, 2016

Date of Last Revision March 01, 2016

Disclaimer This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.