



KEYERA

Spent Potassium Hydroxide/Sulfide Solution

SECTION 1. IDENTIFICATION

Product Identifier	Spent Potassium Hydroxide/Sulfide Solution
Other Means of Identification	Petroleum Processing Residue
Product Family	Oilfield Residue
Recommended Use	Oilfield waste.
Restrictions on Use	Not applicable.
Manufacturer / Supplier	Keyera and Affiliates Suite 200, The Ampersand, West Tower 144 - 4th Avenue SW Calgary, Alberta T2P 3N4
Main Telephone No.	Keyera and Affiliates, 1-403-205-8300 / 1-888-699-4853 (Mon. -Fri. 8 AM - 5 PM)
Transportation Emergencies Only:	Canada - CANUTEC 1-613-996-6666 or Cell *666 USA - CHEMTREC 1-800-424-9300

SECTION 2. HAZARD IDENTIFICATION

Classification

Corrosive to metals - Category 1; Acute toxicity (Oral) - Category 4; Skin corrosion - Category 1A; Serious eye damage - Category 1

Label Elements



Danger

Hazard Statement(s):

- May be corrosive to metals.
- Harmful if swallowed.
- Causes severe skin burns and eye damage.
- Causes serious eye damage.

Prevention:

- Keep only in original container.
- Do not breathe dusts or mists.
- Wash hands thoroughly after handling.
- Wear protective gloves/protective clothing/eye protection/face protection.

Response:

- IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell. Rinse mouth.
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- 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.

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Immediately call a POISON CENTRE or doctor.
 Wash contaminated clothing before reuse.
 Absorb spillage to prevent material damage.

Storage:

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

General Hygiene Comments :

Do NOT eat, drink or store food in work areas.

Remove contaminated clothing and protective equipment before entering eating areas or leaving work area.

Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers
Potassium hydroxide	1310-58-3	30 - 32	Not available
Water	7732-18-5	68 - 70	Not available
Solids	Not applicable	<1	Not available

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. Immediately call a Poison Centre or doctor.

Skin Contact

Immediately wash skin with soap and plenty of water for at least 20 minutes. Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). If persistent irritation occurs, obtain medical attention. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact

Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Have eyes examined and tested by medical personnel.

Ingestion

Rinse mouth with water. Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting unless directed to do so by medical personnel.

Immediate Medical Attention and Special Treatment

Target Organs

Not applicable.

Special Instructions

Causes chemical burns. Obtain medical treatment immediately!

Medical Conditions Aggravated by Exposure

None known.

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SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Use alcohol-resistant foam, carbon dioxide, or dry chemical spray.

Unsuitable Extinguishing Media

Do not use water in a stream or jet.

Specific Hazards Arising from the Product

Can emit toxic fumes under fire conditions.

Not known to generate any hazardous decomposition products in a fire.

Special Protective Equipment and Precautions for Fire-fighters

Thermal decomposition can lead to the release of corrosive and toxic gases and vapours. Wear full protective clothing and self-contained breathing apparatus if the situation calls for it.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Remove or isolate incompatible materials as well as other hazardous materials. All personnel involved in containment and cleanup should wear the appropriate protective equipment, including self-contained breathing apparatus.

Environmental Precautions

It is good practice to prevent releases into the environment. Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas. For large spills, dike the area to prevent spreading.

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. Avoid generating dust. Discharge material in appropriate facilities for recycling or disposal.

Other Information

Report leaks/spills to local health, safety and environmental authorities, as required.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid generating vapours or mists. Avoid breathing in this product. Avoid repeated or prolonged skin contact. Keep containers tightly closed when not in use or empty.

Conditions for Safe Storage

Store in a well ventilated area away from all sources of ignition. Avoid storage in confined spaces or near incompatible materials, oxidizers, or materials that support combustion.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Potassium hydroxide	2 mg/m ³	Not available	Not available	Not available	Not available	

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Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Individual Protection Measures

Eye/Face Protection

Wear safety glasses or chemical safety goggles, or other suitable eye and face protection as required.

Skin Protection

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

Respiratory Protection

Use appropriate OSHA/NIOSH approved respirator if exposure limits are exceeded or if irritation or other symptoms

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Cloudy yellow liquid.
pH	14
Melting Point/Freezing Point	~ 3 °C (estimated) (freezing)
Flash Point	38 °C (closed cup)
Relative Density (water = 1)	1.26 at 22°C (71.6°F)
Solubility	Soluble in all proportions in water

Other Information

Physical State	Liquid
Molecular Formula	KOH (active component)
Molecular Weight	56.1 g/mol (as KOH)

SECTION 10. STABILITY AND REACTIVITY

Reactivity

No reactivity test data was located.

Chemical Stability

Normally stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Generation of dust. Water, moisture or humidity. Prolonged exposure to air. Incompatible materials.

Incompatible Materials

Alkali metals, aluminum, azides, copper, halogens, magnesium, metal/light metals, nitro compounds, organic material, tin, zinc.

Corrosive to: aluminum alloys, copper, magnesium, zinc, and other metals.

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Hazardous Decomposition Products

Hazardous decomposition products are not expected to form during normal storage. Potassium oxides may form as a corrosion byproduct.

SECTION 11. TOXICOLOGICAL INFORMATION

Information presented below is for the entire product, unless otherwise specified.

Skin Corrosion/Irritation

Very corrosive : AVOID skin contact.

Serious Eye Damage/Irritation

Causes serious eye damage based on skin corrosion information.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

No information was located.

Skin Absorption

No information was located.

Ingestion

May cause gastrointestinal irritation. Symptoms may include abdominal pain, stomach upset, nausea, vomiting, and diarrhea.

Aspiration Hazard

Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Conclusions cannot be drawn from the limited studies available.

Respiratory and/or Skin Sensitization

No information was located for respiratory sensitization. No information was located for skin sensitization.

Carcinogenicity

No information was located.

Reproductive Toxicity

Development of Offspring

Conclusions cannot be drawn from the limited studies available.

Sexual Function and Fertility

Conclusions cannot be drawn from the limited studies available.

Effects on or via Lactation

Conclusions cannot be drawn from the limited studies available.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life.

Persistence and Degradability

No information was located.

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Bioaccumulative Potential

No information was located.

Mobility in Soil

If released into the environment, this product can move rapidly through the soil. Contamination of groundwater could occur. Contamination of soil distant from the release could occur.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	3266	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (POTASSIUM HYDROXIDE, POTASSIUM SULFIDE SOLUTION)	8	II
US DOT	3266	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (POTASSIUM HYDROXIDE, POTASSIUM SULFIDE SOLUTION)	8	II

Special Precautions Not applicable

Transport in Bulk according to International Maritime Organization Instruments

Not applicable

Emergency Response Guide No. GUIDE 154

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

This section is not required by WHMIS.

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - Not assig** **Flammability - 0** **Instability - 0**

SDS Prepared By Bureau Veritas Canada
Phone No. 1-800-386-7247

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Revision Indicators Not applicable

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Key to Abbreviations ACGIH® = American Conference of Governmental Industrial Hygienists
AIHA® = AIHA® Guideline Foundation NFPA = National Fire Protection Association NIOSH = National Institute for Occupational Safety and Health
OSHA = US Occupational Safety and Health Administration
RTECS® = Registry of Toxic Effects of Chemical Substances

References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).
HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).

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SDS representative sample(s) :

Wapiti 03-19-067-07-W6M Spent KOH Caustic
Keyera - Alberta Envirofuels Spent Caustic