FROM: Fisher Scientific TO: Extension PAGES: 1

**** MATERIAL SAFETY DATA SHEET ****

Potassium Hydroxide Solution 40% To 50%
19430

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Potassium Hydroxide Solution 40% To 50%
Catalog Numbers:
CRNSP2364, FL 2013 5, FL2013 5, FL20135, NC9544729, NC9666467, SP236 20, SP236 4, SP236 4 001, SP236 500, SP23620, SP236200, SP23620LC, SP2364, SP2364 001, SP2364001, SP2364LC, SP236500, SP236P20, XXSP23620LI, XXSP23656LI-NE
Synonyms:
None
Company Identification: Fisher Scientific
1 Reagent Lane
Fairlawn, NJ 07410
For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
1310-58-3	Potassium hydroxide	40-50	215-181-3
7732-18-5	Water	Balance	231-791-2

Hazard Symbols: C
Risk Phrases: 35

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Appearance: clear to slightly turbid.
Danger! Causes skin burns. Causes eye burns. Causes digestive tract burns. Causes respiratory tract burns. Corrosive.
Target Organs: None.

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

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Inhalation:
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 soap and 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 to fresh air immediately. If breathing is difficult, give oxygen. DO NOT use mouth-to-mouth respiration.

Notes to Physician:
Treat symptomatically and

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:
Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. 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:
Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Neutralize spill with a weak acid such as vinegar or acetic acid.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:
Wash thoroughly after handling. Remove contaminated clothing and

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wash before reuse. Use with adequate ventilation. 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. Corrosives area.

**** 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

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Potassium hydroxide	C 2 mg/m3	2 mg/m3 TWA	none listed
Water	none listed	none listed	none listed

OSHA Vacated PELs:
Potassium hydroxide:
No OSHA Vacated PELs are listed for this chemical.
Water:
No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:
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:
Wear appropriate gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:
Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State:	Liquid
Appearance:	clear to slightly turbid
Odor:	odorless
pH:	12.0 (0.1 M sol.)
Vapor Pressure:	2.6 mm Hg @ 20 C
Vapor Density:	0.62
Evaporation Rate:	Not available.
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Viscosity:	3.7 cP
Boiling Point:	271-293F
Freezing/Melting Point:	48 deg F
Autoignition Temperature:	Not available.
Flash Point:	Not available.
NFPA Rating:	Not published.
Explosion Limits, Lower:	Not available.
Upper:	Not available.
Decomposition Temperature:	Not available.
Solubility:	Completely soluble in water
Specific Gravity/Density:	1.51
Molecular Formula:	Solution
Molecular Weight:	0

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:
Stable.
Conditions to Avoid:
Incompatible materials, acids, metals.
Incompatibilities with Other Materials:
Not available.
Hazardous Decomposition Products:
Oxides of potassium.
Hazardous Polymerization: Not available.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTECS#:
CAS# 1310-58-3: TT2100000
CAS# 7732-18-5: ZC0110000
LD50/LC50:
CAS# 1310-58-3: Oral, rat: LD50 = 273 mg/kg.
CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg.
Carcinogenicity:
Potassium hydroxide -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Water -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology:
No data available.
Teratogenicity:
No information reported.

Reproductive Effects:
No data available.
Neurotoxicity:
No data available.
Mutagenicity:
No data available.
Other Studies:
No data available.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecotoxicity:
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Not available.
Fish: Mosquito Fish: LC50 = 80.0 mg/L; 24 Hr.; Unspecified
Environmental Fate:
No information found.
Physical/Chemical:
No information found.
Other:
Not available.

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of in a manner consistent with federal, state, and local regulations.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT
Shipping Name: POTASSIUM HYDROXIDE, SOLUTION
Hazard Class: 8
UN Number: UN1814
Packing Group: II
Canadian TDG
Shipping Name: POTASSIUM HYDROXIDE SOLUTION
Hazard Class: 8(9.2)
UN Number: UN1814

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL
TSCA
CAS# 1310-58-3 is listed on the TSCA inventory.
CAS# 7732-18-5 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA
Section 302 (RQ)
CAS# 1310-58-3: final RQ = 1000 pounds (454 kg)
Section 302 (TPQ)
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 1310-58-3: acute, reactive.
Section 313
No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
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CAS# 1310-58-3 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

Potassium hydroxide can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
Water is not present on state lists from CA, PA, MN, MA, FL, or NJ.
California No Significant Risk Level:
None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C
Risk Phrases:
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 37/39 Wear suitable 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
CAS# 7732-18-5: No information available.

Canada

CAS# 1310-58-3 is listed on Canada's DSL/NDSL List.
CAS# 7732-18-5 is listed on Canada's DSL/NDSL List.
This product has a WHMIS classification of E.
CAS# 1310-58-3 is not listed on Canada's Ingredient Disclosure List.
CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 1310-58-3: OEL-AUSTRALIA:TWA 2 mg/m3
OEL-BELGIUM:STEL 2 mg/m3
OEL-DENMARK:TWA 2 mg/m3
OEL-FINLAND:TWA 2 mg/m3
OEL-FRANCE:STEL 2 mg/m3
OEL-JAPAN:STEL 2 mg/m3
OEL-THE NETHERLANDS:TWA 2 mg/m3
OEL-SWITZERLAND:TWA 2 mg/m3
OEL-UNITED KINGDOM:TWA 2 mg/m3;STEL 2 mg/m3
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 6/21/1999 Revision #0 Date: Original.

The information above is believed to be accurate and represents the best

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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 way 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.
