

**HYDROFLUX ELECTROLYTE SOLUTION**

**SECTION 1 - IDENTIFICATION**

**MSDS Name:** ELECTROLYTE SOLUTION

**Catalog Numbers:** HF-08

**Synonyms:** Caustic potash, Lye, Potassium hydrate, Potassium Hydroxide

**Company Identification:** Romanoff International Supply Corp., 9 Deforest Street, Amityville NY, 11701

**For information, call:** +1-631-842-2400

**Emergency Number (CHEMTEL) ACCOUNT #MIS4594445 COLLECT CALLS ACCEPTED):**

**USA, CANADA, PUERTO RICO & US VIRGIN ISLANDS:** 1-800-255-3924

**AUSTRALIA:** 1-300-954-583 **BRAZIL:** 0-800-591-6042 **CHINA:** 400-120-0751

**INDIA:** 000-800-100-4086 **MEXICO:** 800-099-0731 **ALL OTHER COUNTRIES:** 1-813-248-0585

**SECTION 2 - HAZARD IDENTIFICATION**

**EMERGENCY OVERVIEW**

Appearance: clear, odorless liquid. **Danger!** Corrosive. Harmful if swallowed. Causes severe eye and skin burns. Causes severe digestive and respiratory tract burns.

**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:** 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.

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

GHS label elements, including precautionary statements:

Signal Word: Danger

Pictogram(s):



**Hazard Statements**

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage  
H318 Causes serious eye damage.  
H402 Harmful to aquatic life.

## Precautionary Statements

P234 Keep only in original container.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/eye protection/face protection.  
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361+ P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse SKIN with water/ shower.  
P305 + P351 + P338 + IF IN EYES: Rinse cautiously with water for several minutes. Remove P310 contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.  
P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.  
P363 Wash contaminated clothing before reuse.  
P390 Absorb spillage to prevent material damage.  
P405 Store locked up.  
P406 Store in corrosive resistant stainless steel container with a resistant inner liner.  
P501 Dispose of contents/container in accordance with local/state/national regulations.

## SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS#	Chemical Name	Percent	EINECS/ELINCS
1310-58-3	Potassium hydroxide (KOH)	40-50	215-181-3
7732-18-5	Water	Balance	231-791-2

## 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. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

**Notes to Physician:** Treat symptomatically and supportively.

## SECTION 5 - FIREFIGHTING MEASURES

**Flash Point:** None.

**Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Auto Ignition Temp:** Non-combustible.

**Special Fire Fighting Procedures:** Wear self-contained breathing apparatus and full protective clothing. In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers.

**Unusual Fire/Explosion Hazards:** Not combustible, however the product can react with metals such as aluminum, tin, zinc to form flammable and explosive hydrogen gas.

**Fire-Fighting Measures:** Potassium hydroxide does not burn or support combustion. Use extinguishing agents compatible with potassium hydroxide and appropriate for the surrounding fire. If water is used, care should be taken, since it can generate heat and cause spattering if applied directly to potassium hydroxide.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Environmental Precautions:** Do not discharge into drains, water courses or onto the ground.

**Containment and Cleaning:** Cleanup personnel must wear proper protective equipment. Completely contain spilled material with dikes, sandbags, etc., and prevent run-off into ground or surface waters or sewers. Recover as much material as possible into containers for disposal. Remaining material may be neutralized with dilute hydrochloric or acetic acid. Neutralization products, both liquid and solid, must be recovered for disposal.

**Waste Control Procedures:** All disposals of this material must be done in accordance with federal, state and local regulations. Waste characterization and compliance with disposal regulations are the responsibilities of the waste generator.

## 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

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Potassium hydroxide (KOH)	C 2 mg/m <sup>3</sup>	none listed	none listed

**OSHA Vacated PELs:** Potassium hydroxide (KOH): C 2 mg/m<sup>3</sup>

### 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 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 liquid

**Odor:** odorless

**pH:** >14

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** 270 deg F

**Freezing/Melting Point:** 20 deg F

**Autoignition Temperature:** Not applicable.

**Flash Point:** Not applicable.

**Decomposition Temperature:** Not available.

**NFPA Rating:** (estimated) Health: 3; Flammability: 0; Reactivity: 1

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**Solubility:** Soluble in water

**Specific Gravity/Density:** unknown

## SECTION 10 - STABILITY AND REACTIVITY

**Chemical Stability:** Stable. Readily absorbs carbon dioxide and moisture from the air and deliquesces.

**Conditions to Avoid:** Incompatible materials, moisture, acids, metals.

**Incompatibilities with Other Materials:** Reacts with chlorine dioxide, nitrobenzene, nitromethane, nitrogen trichloride, peroxidized tetrahydrofuran, 2,4,6-trinitrotoluene, bromoform+ crown ethers, acids alcohols, sugars, germanium cyclopentadiene, maleic dicarbide. Corrosive to metals such as aluminum, tin, and zinc to cause formation of flammable hydrogen gas.

**Hazardous Decomposition Products:** Oxides of potassium.

**Hazardous Polymerization:** Has not been reported.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### Potassium Hydroxide Only

**RTECS#:**

**CAS#** 1310-58-3: TT2100000

**LD50/LC50:**

CAS# 1310-58-3:

Draize test, rabbit, skin: 50 mg/24H Severe;

Oral, rat: LD50 = 273 mg/kg;

**Carcinogenicity:**

CAS# 1310-58-3: 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:** Fish: Mosquito Fish: LC50 = 80.0 mg/L; 24 Hr.; Unspecified No data available.

**Environmental:** No information found.

**Physical:** No information found.

**Other:** No information available.

## SECTION 13 - DISPOSAL CONSIDERATIONS

Collect and reclaim or dispose in sealed containers at licensed waste disposal site if possible. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. Empty containers or liners may retain some product residues.

## SECTION 14 - TRANSPORT INFORMATION

	US DOT	IATA	RID/ADR	IMO	Canada TDG
<b>Shipping Name:</b>	POTASSIUM HYDROXIDE, SOLUTION	N/A	N/A	N/A	POTASSIUM HYDROXIDE SOLUTION
<b>Hazard Class:</b>	8	N/A	N/A	N/A	8(9.2)
<b>UN Number:</b>	UN1814	N/A	N/A	N/A	UN1814
<b>Packing Group:</b>	II	N/A	N/A	N/A	II

## SECTION 15 - REGULATORY INFORMATION

### US FEDERAL

**TSCA** CAS# 1310-58-3 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:

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** CAS# 1310-58-3 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts. California No Significant Risk Level: None of the chemicals in this product are li

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

This product has a WHMIS classification of D1B, E.

CAS# 1310-58-3 is listed on Canada's Ingredient Disclosure List.

**Exposure Limits**

CAS# 1310-58-3: OEL-AUSTRALIA:TWA 2 mg/m<sup>3</sup> OEL-BELGIUM:STEL 2 mg/m<sup>3</sup>

OEL-DENMARK:TWA 2 mg/m<sup>3</sup> OEL-FINLAND:TWA 2 mg/m<sup>3</sup> OEL-FRANCE:STEL 2 m

g/m<sup>3</sup> OEL-JAPAN:STEL 2 mg/m<sup>3</sup> OEL-THE NETHERLANDS:TWA 2 mg/m<sup>3</sup> OEL-SWI

TZERLAND:TWA 2 mg/m<sup>3</sup> OEL-UNITED KINGDOM:TWA 2 mg/m<sup>3</sup>;STEL 2 mg/m<sup>3</sup> OEL

IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEAL

AND, SINGAPORE, VIETNAM check ACGI TLV

**SECTION 16 - OTHER INFORMATION**

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**MSDS Creation Date:** 07/07/2019

**Manufacturer Disclaimer:**

*This Material Safety Data Sheet is prepared in accordance with U.S. OSHA, Canadian WHMIS, and European Community Safety Data Sheet directives. This document is offered pursuant to OSHA's Hazard Communication Standard 29 CFR 1910.1200. The information and recommendations contained in this Material Safety Data Sheet have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS was prepared, and are offered in good faith. However, no warranty, guaranty or representation is expressed or implied as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in combination with other products, and determine its environmental regulatory compliance obligations under any applicable EC, national or state laws. Romanoff International Supply Corporation assumes no responsibility for injury to the end user caused by the material even if proper safety procedures are followed. The end user should determine the suitability of the information for their particular usage. The end user assumes the risk in the use of this material. The information in this document may be changed periodically.*