Material Safety Data Sheet

Section 1 – Chemical Product and Company Identification


Product Identity: Iodide Electrolyte Solution

Chemical Family: Not Applicable
Synonyms: None Available
Recommended Use: Laboratory chemicals

Manufacturer’s Name: AquaPhoenix Scientific, Inc., 9 Barnhart Dr., Hanover, PA 17331, (866) 632-1291
Emergency Contact Number (24hr): Chemtel (800) 255-3924

Issue Date: 04/10/13
Revision Date:

Section 2 – Hazard Identification

Emergency Overview
Harmful or fatal if swallowed. Harmful if absorbed through the skin. May cause allergic skin reaction. May irritate eyes, skin and respiratory tract. Affects central nervous system. Wash all areas of contact with plenty of water.

Appearance: Dark brown, oily liquid
Odor: Characteristic

Target Organs: eyes, respiratory tract, skin, central nervous system, cardiovascular system

Potential Health Effects/ Routes of Exposure:

Eyes: May cause irritation, burning, and stinging with possible damage to the cornea and conjunctiva.
Skin: May cause irritation, allergic rash. Absorption is possible.
Ingestion: Ingestion of large quantities displays symptoms similar to alcohol intoxication including depression, vomiting, drowsiness, coma, respiratory failure, convulsions, renal damage, which may proceed to anuria, uremia, and death.
Inhalation: Inhalation hazards generally not a problem unless heated. Symptoms may include headache, throat irritation, nausea, vomiting, dizziness and drowsiness.

Chronic Effect / Carcinogenicity: Repeated or high exposure may cause kidney damage, brain damage, or skin allergy. Not listed as a carcinogen (IARC, NTP, OSHA).

Aggravated Medical Conditions
No information available

These chemicals are considered hazardous by OSHA.
See section 11 for toxicological information. See section 12 for potential environmental effects.

Section 3 – Composition, Information on Ingredients

Iodine, CAS# 7553-56-2, >1% w/v
Potassium Iodide, CAS# 7681-11-0, >6% w/v
Ethylene Glycol, CAS# 107-21-1, <93% w/v

Section 4 – First Aid

Eyes: Immediately flush eyes with water for at least 15 minutes. Get medical assistance immediately.
Skin: Flush with water for 15 minutes. Get medical assistance if irritation develops.
Ingestion: Induce vomiting. Dilute with water. Get medical assistance.
Inhalation: Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

Notes to Physician Treat symptomatically.

Section 5 – Fire Fighting Measures
Flash Point: 111 C  Autoignition Temperature 362.8 C  
Explosion Limits Upper 15.30 vol %  Lower 3.20 vol %  
Extinguishing Media: Water, dry chemical, foam, or Carbon Dioxide. Water spray can keep containers cool.  
Unsuitable Extinguishing Media: No information available  
Fire & Explosion Hazards: Moderate explosion hazard. Dangerous fire hazard when exposed to heat, sparks, and open flames.  
Fire Fighting Instructions / Equipment: Use normal procedures. Use protective clothing. Use NIOSH-approved breathing equipment. Poisonous gases are produced in fire. Use water to keep surrounding containers cool.  
Hazardous Combustion Products: Irritating and highly toxic gases may be generated by combustion.  
Sensitivity to mechanical impact No information available.  
Sensitivity to static discharge No information available.  
Specific Hazards Arising from the Chemical: No information available  
NFPA Rating: (estimated) Health: 1; Flammable: 1; Reactivity: 0  

Section 6 – Accidental Release Measures  
Personal Precautions Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Remove all sources of ignition.  
Environmental Precautions Do not flush to sewer.  
Methods for Containment and Clean Up Contain spill. Do not flush to sewer. Ventilate area of spill. Use non-sparking equipment. Absorb with suitable material and place in chemical waste container.  

Section 7 – Handling and Storage  
Handling: Wash hands after handling. Avoid contact with skin and eyes. Empty containers can still be hazardous since they retain product residue.  
Storage: Keep container tightly closed in a cool, dry area. Protect from freezing and physical damage.  

Section 8 – Exposure Controls, Personal Protection  
Potassium Iodide, CAS# 7681-11-0, ACGIH TLV: 0.01 ppm, OSHA PEL: NA  
Iodine, CAS# 7553-56-2, ACGIH TLV: 0.01 ppm, OSHA PEL: 1mg/m3  
Ethylene Glycol, CAS# 107-21-1, ACGIH TLV: 100mg/m3 ceiling (aerosol only), OSHA PEL: NA  
Engineering Measures/ General Hygiene: Local/general exhaust is recommended. Ensure eyewash and safety showers are available.  
Personal Protection Equipment: Skin Protection: Chemical resistant gloves. Eye/Face Protection: Safety Glasses or goggles. Respiratory Protection: Normal ventilation is adequate. If exposure limit is exceeded, a full-face respirator with organic cartridge may be worn.  

Section 9 – Physical and Chemical Properties  
Appearance/Physical State: Dark brown, oily liquid  
Odor: Characteristic  
Boiling Point: Approx. 197 C  
Melting Point: Approx. -13 C  
Vapor Density: Not Available  
Evaporation Rate: Not Available  
pH: No Information Available  
Flammability: Flammable  
Solubility: Infinite  
Relative Density: No Information Available  
% Volatility: No Information Available  
Specific Gravity: Approx. 1.1  
Vapor Pressure: Approx. 0.06 mm @ 20 C  
Flash Point: No Information Available  
Coefficient of water/oil distribution: Not Available  
Odor Threshold: Not Available  
Decomposition Temperature: No Information Available  
Partition Coefficient n-octanol/water: Not Available  
Molecular Weight: Not Available  

Section 10 – Stability and Reactivity  
Chemical Stability: Stable under normal conditions of use and storage.  
Incompatible Materials: Strong acids, aliphatic amines, caustics, strong oxidizers such as Potassium Permanganate, Chromium Trioxide, Sodium Peroxide, Nitrates, Chlorates, and Perchlorates.  
Conditions to Avoid: Excess heat, Incompatible Materials, Ignition source, or Flame
Hazardous Decomposition Products: Oxides of carbon, oxides of potassium, acrid and irritating fumes
Hazardous Polymerization: Does not occur
Hazardous Reactions: None under normal processing.

Section 11 – Toxicological Information

Routes of Exposure/Symptoms/Corrosiveness – See Section 2
LD50 orl-rat: 4700 mg/kg (Ethylene Glycol); 14g/kg (Iodine) LC50 inhalation-rat: No Information Available
Irritation: No Information Available
Toxicologically Synergistic: No Information Available
Chronic Exposure
Carcinogenicity No Information Available
Sensitization No Information Available.
Mutagenic Effects No information Available
Reproductive Effects No information Available
Developmental Effects (Immediate/Delayed) No Information Available.
Teratogenicity No Information Available.
Other Adverse Effects No Information Available.
Endocrine Disruptor Information No Information Available.

Section 12 – Ecological Information

Ecotoxicity: Ethylene Glycol has a moderate acute and chronic toxicity to aquatic life. Has caused chromosomal damage to agricultural crops
Persistence and Degradability: Slightly persistent in water, with 2 to 20 day half-life Mobility: -0.32 (log Pow)
Bioaccumulation/ Accumulation: Not expected to significantly bioaccumulate

Section 13 – Disposal Considerations

All chemical waste generators must determine whether a discarded chemical is classified as hazardous waste. Comply with all local, state, and federal regulations.

Section 14 – Transport Information

DOT – Not Regulated

Section 15 – Regulatory Information (not meant to be all inclusive)

OSHA Status: These chemicals are considered hazardous by OSHA.
Canada DSL: These chemicals are on Canada’s DSL.
TSCA: These chemicals are listed on the TSCA Inventory.
SARA Title III Section 313: Not Applicable
RCRA Status: Not Applicable
CERCLA Reportable Quantity: Ethylene Glycol – 5,000lbs
WHMIS: Not Applicable.
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16 – Additional Information

Disclaimer: The information on this MSDS applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user’s responsibility to determine the suitability and completeness of this information for his own particular use. No warranty is implied regarding the accuracy of the data or the results to be obtained from the products use.