Advanced Calibration Designs, Inc.
2025 W. McMillan St. Tucson, AZ 85705
USA . 800.737.0224 . www.goACD.com

SAFETY DATA SHEET

Product Name

HYDROGEN SULFIDE ELECTROLYTE

Printing Date: 11/3/2015
Revision Date: 07/15/2015

1. IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product Name: **HYDROGEN SULFIDE ELECTROLYTE**

Product Code: 193-0105-00

Recommended Use of the Chemical and Restriction on Use: Industrial use

Details of Manufacturer or Importer: Advanced Calibration Designs, Inc.
2024 W. McMillan St.
Tucson, AZ 85705 USA

Phone Number: 520-290-2855

Emergency Telephone Number: 1-800-222-1222

2. HAZARDS IDENTIFICATION

Hazardous Nature		Corrosion Skin Corr. 1B H314	Causes severe skin burns and eye damage.
Label Elements			
Signal Word Danger	Danger		
Hazard Statements	H314		Causes severe skin burns and eye damage.
Precautionary Statements			
	P260		Do not breathe dust/fume/gas/mist/vapors/spray.
	P280		Wear protective gloves/protective clothing/eye protection/face protection.
	P264		Wash hands thoroughly after handling.
	P303+P361+P353 IF ON SKIN (or hair):		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 contact lenses, if present and easy to do. Continue rinsing.
	P321		Specific treatment (see on this label).
	P304+P340		IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P363		Wash contaminated clothing before reuse.
	P301+P330+ P331		IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
	P310		Immediately call a POISON CENTER/doctor.
	P405		Store locked up.
	P501		Dispose of contents/container in accordance with local/regional/national regulations.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Characterization: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Hazardous Components:			
7664-38-2	Phosphoric acid	Skin Corr. 1B, H314	75-<85%

4. FIRST AID MEASURES

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.

Skin Contact:
In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.

Eye Contact:
In case of eye contact, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.

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Ingestion:
If swallowed, do not induce vomiting. Give water, milk, or milk of magnesia. Do not give anything by mouth to an unconscious person. Seek immediate medical attention.

Information for Doctor

Symptoms Caused by Exposure:

Inhalation:	Burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting
Skin Contact:	Severe irritation or burns.
Eye Contact:	Severe irritation or burns.
Ingestion:	Severe irritation or burns.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:
Use fire extinguishing methods suitable to surrounding conditions.

Specific Hazards Arising from the Chemical:
Emits toxic fumes under fire conditions. Non-combustible liquid.

Special Protective Equipment and Precautions for Fire Fighters:
Wear approved self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:
Wear approved self-contained breathing apparatus and full protective clothing. Evacuate all non-essential personnel from affected area. Do not breathe vapors/mists. Ensure adequate ventilation.

Environmental Precautions:
In the event of a major spill, prevent spillage from entering drains or water courses.

Methods and Materials for Containment and Cleaning Up:
Stop leak if safe to do so and neutralize spill with soda ash or lime. Absorb spill with sand, earth, vermiculite or some other absorbent material. Collect the spilled material and place into a suitable container for disposal. Provide adequate ventilation. Flush spill area with water.

7. HANDLING AND STORAGE

Precautions for Safe Handling:
Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapors/mists. Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

Conditions for Safe Storage:
Store in a cool, dry and well ventilated area. Keep container tightly closed when not in use. Keep away from strong bases, finely powdered metals. Check regularly. Protect from physical damage.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards:	
7664-38-2 Phosphoric acid	
NES	STEL: 3 mg/m³ TWA: 1 mg/m³

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor below occupational exposure standards.

Personal Protective Equipment (PPE):

Respiratory Protection:
Respiratory protection required if airborne concentration exceeds TLV. At concentrations up to 12 ppm, a high efficient particulate filter is recommended. Above this level, a self-contained breathing apparatus is advised.

Skin Protection:
Polyvinyl alcohol gloves. Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing).

Eye and Face Protection:
Eye and face protectors for protection against splashing materials or liquids.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:
Form: Liquid
Color: Colorless liquid.
Odor: No information available
Odor Threshold: Not determined.
pH-Value: <1
Melting point/Melting range: Not applicable
Initial Boiling Point/Boiling Range: 158 °C
Flash Point: Not applicable
Flammability: Noncombustible liquid.
Auto-ignition Temperature: Not applicable
Decomposition Temperature: Not determined.
Explosion Limits:
Lower: Not applicable
Upper: Not applicable
Vapor Pressure at 20 °C: 2.2 mm Hg
Density: Not applicable
Relative Density at 20 °C: 1.685 g/cm³
Vapor Density at 20 °C: 3.4 g/cm³
Evaporation Rate: No information available
Solubility in Water: Miscible

10. STABILITY AND REACTIVITY

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Chemical Stability: Stable at ambient temperature and under normal conditions of use.

Conditions to Avoid: No further relevant information available.

Incompatible Materials: Strong bases and finely powdered metals.

Hazardous Decomposition Products: Oxides of phosphorus.

11. TOXICOLOGICAL INFORMATION

Toxicity:

LD_{50}/LC_{50} Values Relevant for Classification:		
7664-38-2 Phosphoric acid		
Oral	LD_{50}	1530 mg/kg (rat)
Dermal	LD_{50}	2740 mg/kg (rabbit)
Inhalation	LC_{50}/1 h	>850 mg/m³ (rat)

Acute Health Effects

Inhalation: May cause severe irritation of the respiratory system. Skin: May cause severe irritation or burns.

Eye: May cause severe irritation or burns.

Ingestion: May cause severe burns to the mouth, esophagus and stomach.

Skin Corrosion / Irritation: Causes severe skin burns. Serious Eye Damage / Irritation: Causes serious eye damage.

Respiratory or Skin Sensitization: No sensitizing effects known.

Germ Cell Mutagenicity: Based on classification principles, the classification criteria are not met. Carcinogenicity: This product does NOT contain any IARC listed chemicals.

Reproductive Toxicity: Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Single Exposure:
Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:
Based on classification principles, the classification criteria are not met.

Aspiration Hazard: Based on classification principles, the classification criteria are not met.

Chronic Health Effects:
Material is extremely destructive to the mucus membranes and upper respiratory tract, eyes, and skin.

Existing Conditions Aggravated by Exposure: No information available

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12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available

Aquatic toxicity: No information available

Persistence and Degradability: No information available

Bio accumulative Potential: No information available

Mobility in Soil: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods and Containers:
Dispose according to applicable local and state government regulations.

Special Precautions for Landfill or Incineration:
Please consult your state Land Waste Management Authority for more information.

14. TRANSPORT INFORMATION

UN Number	
ADG, IMDG, IATA	UN1805
Proper Shipping Name	
ADG	1805 PHOSPHORIC ACID, SOLUTION
IMDG, IATA	PHOSPHORIC ACID, SOLUTION
Dangerous Goods Class	
ADG Class:	8 (C1) Corrosive substances.
IMDG Class:	8 Corrosive substances.
Packing Group:	
ADG, IMDG, IATA	III
Marine pollutant:	No
EMS Number:	F-A,S-B
Hazchem Code:	2R
Special Provisions:	223
Limited Quantities:	5L
Packaging & IBCs - Packing Instruction:	P001, IBC03, LP01
Packaging & IBCs - Special Packing Provisions:	Not applicable
Portable Tanks & Bulk Containers - Instructions:	T4
Portable Tanks & Bulk Containers - Special Provisions:	TP1

15. REGULATORY INFORMATION

Inventory of Chemical Substances:	
7664-38-2	Phosphoric acid
7732-18-5	Water

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:
Poisons Schedule: 6

16. OTHER INFORMATION

Creation Date: 11/2/2015

Prepared by: Advanced Calibration Designs, Inc. www.goacd.com

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society) LC_{50}: Lethal concentration, 50 percent

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LD_{50}: Lethal dose, 50 percent

IARC: International Agency for Research on Cancer

STEL: Short Term Exposure Limit

TWA: Time Weighted Average

NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)

Disclaimer