Advanced Calibration Designs

Hydrogen Sulfide Electrolyte

(Revised September 02, 2010)

Material Safety Data Sheet

Emergency Phone: (800) 424-9300

International Emergency Phone: 703-527-3887

Section 1 - Identification

Product Code:	193-0105-00
Product Name:	Hydrogen Sulfide Electrolyte
Used in Part Number:	210-0750-05, 510-0450-0X, 510-0451-0X, 510-0455-0X 510-0550-02, 510-0650-00, 510-2050-00, 510-2050-05, 510-2050-LT, 510-2055-LT
Synonyms:	None
Chemical Family:	Inorganic acids (major component - phosphoric acid) in water
CAS #:	7664-38-2 in 7732-18-5.
Molecular Formula:	H_3PO_4 in H_2O.

Section 2 - Ingredients

Chemical	CAS #	%	OSHA/PEL	ACGIH TLV
Phosphoric acid	7664-38-2	75 < x < 85	1 mg/m^3 TWA 3 mg/m^3 STEL	1 mg/m^3 TWA 3 mg/m^3 STEL
Water	7732-18-5	Remainder	None	None

Section 3 - Physical Data

Boiling Point:	158°C (316°F).
% Volatiles:	N/A
Solubility in Water:	Miscible.
Specific Gravity (H_2O = 1):	1.685.
Freezing / Melting Point:	N/A
Evaporation Rate (butyl acetate = 1):	N/A
Vapor Density (air = 1):	3.4
Vapor Pressure:	2.2 mm @ 20°C
Appearance and Odor:	Colorless liquid
Other:	pH < 1

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Section 4 - Fire and Explosion Hazard Data

Flash Point (°F):	N/A
Flammable Limits in Air, % by volume:	Lower: N/A Upper: N/A
Autoignition Temperature:	N/A
Extinguishing Media:	Noncombustible. Use extinguishing agent appropriate to surrounding fire.
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Emits toxic fumes under fire conditions.

Section 5 - Health Data

OSHA (PEL):	H_3PO_4	1 mg/m^3
	H_2O	None
ACGIH (TLV):	H_3PO_4	1 mg/m^3
	H_2O	None

ANIMAL TOXICITY

LDLO unr-man:		220 mg/kg
LD50:	Oral - rat	1530 mg/kg
	Skin - rabbit	2740
Carcinogenicity:		No

EFFECTS OF EXPOSURE

Acute Effects

Ingestion:	Harmful. Material is extremely destructive to tissue of the mucus membranes and upper respiratory tract, eyes, and skin. Inhalation may be fatal as a result of spasm, inflammation and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.
Skin Contact:	Harmful, see ingestion above.
Eye Contact:	Harmful, see ingestion above.
Inhalation:	Harmful, see ingestion above.

Medical Conditions, if any, aggravated by the chemical: None identified.

Other health hazards:	N/A.
Most likely routes of entry:	Ingestion, inhalation, eye contact, skin contact.

Section 5 - Health Data *(continued)*

Chronic Effects

Ingestion:	Material is extremely destructive to the mucus membranes and upper respiratory tract, eyes, and skin.
Skin Contact:	May cause severe irritation or burns.
Eye Contact:	May cause severe irritation or burns.
Inhalation:	May cause severe irritation of the respiratory system.
Other:	N/A

EMERGENCY AND FIRST AID PROCEDURES

Ingestion:	Call a physician. Do NOT induce vomiting. If conscious, give water, milk, or milk of magnesia.
Skin Contact:	Immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Eye Contact:	See skin contact above.
Inhalation:	Remove individual to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Section 6 - Reactivity

Incompatibility:	Strong bases, finely powdered metals.
Hazardous Decomposition Products:	Oxides of phosphorus.
Stability:	Stable
Hazardous Polymerization:	Will not occur.
Other:	None

Section 7 - Environmental Information

RCRA Code:	N/A
TSCA Registered:	Yes
Spill and Leak Procedures:	Wear self-contained breathing apparatus and full protective clothing. Stop leak if you can do so without risk. Ventilate area. Neutralize spill with soda ash or lime. With clean shovel, carefully place material into clean, dry container and cover; remove from area. Flush spill area with water.
Waste Disposal:	Dispose in accordance with all applicable federal, state, and local environmental regulations.

Section 8 - Protection Information

Ventilation Requirement:	Use general or local exhaust ventilation to meet TLV requirements.
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.
Protective Gloves:	Polyvinyl alcohol gloves.
Eye/Face Protection:	Safety goggles and face shield, uniform, protective suit are recommended.

Section 9 - Special Precautions

Handling and Storage:	Keep container tightly closed. Store in corrosion-proof area.
Other Precautions:	None

Section 10 - Transportation Information - U.S. Department of Transportation

Per 49CFR:	172.101 with exception 173.4.
Proper Shipping Name:	Phosphoric acid.
Hazardous Class:	8
Packaging Group:	III
UN#:	1805
Reportable Quantity:	5,000 lbs.

Section 11 - Comments

This data is offered in good faith as typical values and not as a product specification. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.