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Material Safety Data Sheet

Electrode Cleaner MSDS

Section 1: Chemical Product and Company Identification

Product Name: Electrode Cleaner

Catalog Codes: SLE2062

CAS#: Mixture.

RTECS: Not applicable.

TSCA: TSCA 8(b) inventory: Hydrochloric acid; Water; Pepsin

CI#: Not available.

Synonym: Enzyme/HCl

Chemical Name: Proteolytic Enzyme Hydrochloric Acid Solution

Chemical Formula: Not applicable.

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Hydrogen chloride	7647-01-0	0.74
Water	7732-18-5	99.3
Pepsin	9001-75-6	<5

Toxicological Data on Ingredients:

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of inhalation (lung sensitizer). Slightly hazardous in case of skin contact (corrosive, irritant, permeator), of eye contact (irritant, corrosive), of ingestion, . Non-corrosive for lungs.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Classified 3 (Not classifiable for human.) by IARC [Hydrogen chloride]. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Pepsin]. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to upper respiratory tract, skin, eyes, , teeth. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

Skin Contact:

Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

Serious Skin Contact: Not available.

Inhalation:

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

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances: Non-explosive in presence of open flames and sparks, of shocks.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep locked up.. Keep container dry. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 25°C (77°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

Hydrogen chloride STEL: 7.5 (mg/m³) from ACGIH (TLV) [United States] STEL: 5 (ppm) from ACGIH (TLV) [United States] CEIL: 5 (ppm) from NIOSH CEIL: 7.5 (mg/m³) from NIOSH CEIL: 5 (ppm) from OSHA (PEL) [United States] CEIL: 7 (mg/m³) from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Not available.

Taste: Not available.

Molecular Weight: Not applicable.

Color: Clear Colorless.

pH (1% soln/water): <7 (This is actually the pH of the solution as is)

Boiling Point: The lowest known value is 100°C (212°F) (Water).

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: The only known value is 1 (Water = 1) (Water).

Vapor Pressure: The highest known value is 2.3 kPa (@ 20°C) (Water).

Vapor Density: 0.7 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether.

Solubility:

Easily soluble in cold water, hot water. Soluble in diethyl ether.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances:

Reactive with oxidizing agents. Slightly reactive to reactive with alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Reacts violently (moderate reaction with heat of evolution) with water especially when water is added to the product. Isolate hydrogen chloride from heat, direct, alkalies (reacts vigorously), organic materials, and oxidizers (especially nitric acid and chlorates), amines, copper and alloys (e.g. brass), hydroxides, zinc (galvanized materials). Hydrogen chloride causes aldehydes and epoxides to violently polymerize. It reacts with oxidizers releasing chlorine gas. (Hydrogen chloride)

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact.

Toxicity to Animals:

LD50: Not available. LC50: Not available.

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified 3 (Not classifiable for human.) by IARC [Hydrogen chloride]. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Pepsin]. Contains material which may cause damage to the following organs: upper respiratory tract, skin, eyes, , teeth.

Other Toxic Effects on Humans:

Hazardous in case of inhalation (lung sensitizer). Slightly hazardous in case of skin contact (irritant, permeator), of ingestion, .

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: May affect genetic material. (Pepsin)

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: May cause skin irritation and possible tissue damage. May be absorbed through skin. Eyes: May cause eye irritation. May cause respiratory tract irritation. Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting and diarrhea, and possible digestive tract tissue damage. Chronic Potential Health Effects: Skin: Repeated or prolonged skin contact may cause dermatitis. Eyes: Eyes: Repeated or prolonged eye contact may cause conjunctivitis. Inhalation: Repeated or prolonged exposure may cause irritation. Ingestion: no information. The toxicological properties of this substance have not been fully investigated.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: Not available.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:

Connecticut hazardous material survey.: Hydrochloric acid Illinois toxic substances disclosure to employee act: Hydrochloric acid Illinois chemical safety act: Hydrochloric acid New York release reporting list: Hydrochloric acid Rhode Island RTK hazardous substances: Hydrochloric acid Pennsylvania RTK: Hydrochloric acid Minnesota: Hydrochloric acid Massachusetts RTK: Hydrochloric acid Massachusetts spill list: Hydrochloric acid New Jersey: Hydrochloric acid New Jersey spill list: Hydrochloric acid Louisiana RTK reporting list: Hydrochloric acid Louisiana spill reporting: Hydrochloric acid TSCA 8(b) inventory: Hydrochloric acid; Water; Pepsin TSCA 4(a) proposed test rules: Hydrochloric acid SARA 302/304/311/312 extremely hazardous substances: Hydrochloric acid SARA 313 toxic chemical notification and release reporting: Hydrochloric acid CERCLA: Hazardous substances.: Hydrochloric acid: 5000 lbs. (2268 kg);

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

R42- May cause sensitization by inhalation. S2- Keep out of the reach of children. S23- Do not breathe gas/fumes/vapour/spray [***] S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 0

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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