EM-1 Electrolyte

SECTION 1: IDENTIFICATION

Product Identifier: EM-1 Electrolyte
Other Means of Identification: Etch-A-Matic General Purpose Electrolyte
Recommended Use: Electrolytic Etching Solution
Restrictions on Use: None known
Supplier Identifier: Sterling Marking Products Inc., 1147 Gainsborough Road, London, ON Canada N6H 5L5 1-800-265-5957, 519-434-5785
Emergency Phone Number: CANUTEC (613) 966-6666, Cellular *666

SECTION 2: HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the U.S. Hazardous Communication Standard (HCS 2012)

Classificaton

Skin irritation – Category 2
Eye irritation – Category 2A

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Label Elements:

Signal Word: Warning

Hazard Statements:

May cause skin irritation, H316
May cause eye irritation, H320
Harmful to aquatic organisms, May cause long-term adverse effects to aquatic environment, H413

Precautionary Statements:

Keep container tightly closed
Wear protective gloves and eye protection
Wash hands and skin thoroughly after handling
Take off contaminated clothing and wash it before reuse.
If in eyes, flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur consult a physician, preferably an ophthalmologist.
If ingested, there is no specific antidote. Do not induce vomiting. Seek prompt medical attention.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Percentage (%)	Other Identifiers
Calcium Chloride	10043.52-4	1 - 5%	Not known
Sodium Chloride	7647-14-5	1 - 5%	Common Salt
Citric Acid	77-92-9	1 - 5%	Not known
Cobalt Nitrate	10141-05-06	1 - 5%	Not known

Note: All ingredients are listed on the Domestic Substances List (DSL) and the Toxic Substances Control Act (TSCA) list.

SECTION 4: FIRST AID MEASURES

Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur consult a physician, preferably an ophthalmologist.
Skin Contact: Immediately flush affected area with water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation occurs. Remove contaminated clothing and launder before reuse. Discard contaminated leather articles such as shoes and belt.
Ingestion: Do **NOT** induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.
Notes to Physician: No specific antidote. Treatment based on sound judgement of physician and individual reactions of patient. First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection).

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

Water spray, carbon dioxide, dry chemical, foam.

General purpose synthetic foams (including AFFF) or protein foams may function but much less effectively.

Specific Hazards arising from the Product:

Hazardous Decomposition/Combustion Materials (under fire conditions):

The smoke may contain unidentified toxic and/or irritating compounds. Carbon monoxide. Carbon dioxide, Sodium Oxides.

Special Protective Equipment:

Fire fighters should wear full protective clothing including self-contained breathing equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures:

Wear appropriate protective equipment. Avoid contact with skin and eyes.

Environmental Precautionary Measures:

Prevent entry into sewers or streams, dike if needed. Dilute with plenty of water.

Procedure for Clean-up:

Small spills can be flushed with large amounts of water; larger spills should be collected for disposal. Absorb with an inert dry material and place in an appropriate waste disposal container.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling:
None required other than normal safe material handling procedures.
Conditions for Safe Storage:
Keep containers tightly closed. Store away from strong acids, strong bases and strong oxidizing agents. Store in accordance with good industrial practice.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Appropriate Engineering Controls:

Chemical Name	CAS Number	TLV	Toxicology
Calcium Chloride	10043.52-4	Not known	LD_{50} - 1000 mg/kg (rats, oral)
Sodium Chloride	7647-14-5	Not known	LD_{50} - 3 g/kg (oral, rats)
Citric Acid	77-92-9	Not known	LD_{50} - 5,040 mg/kg (mouse) 5,400 mg/kg (rat) LD_{50} - >2,000 mg/kg (rat)
Cobalt Nitrate	10141-05-06	Not known	LD_{50} - 434 mg/kg; rat, oral (anhydrous) 691 mg/kg; rat, oral (hexahydrate)

Personal Protective Equipment
Respiratory Protection:
Gloves: Use gloves chemically resistant to this material. Examples of acceptable glove barrier materials include Natural rubber gloves. Neoprene gloves. Nitrile gloves. Polyvinylchloride (PVC) gloves. Viton gloves. **NOTICE:** the selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials as well as the instructions/specifications provided by the glove supplier.
Skin Protection: The selection of personal protective equipment varies depending upon conditions of use. Skin contact should be prevented through use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance. Impervious clothing. Impervious boots.
Eyes: Chemical goggles; also wear a face shield if splashing hazard exists.
Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work station location.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid.
Colour: Pink
Odor: Slight.
pH at 20°C (68°F): 2.3.
Boiling Point: >100°C/212°F.
Freezing/Melting Point: Not determined
Vapour Pressure: Not determined
Vapour Density: Not determined
% Volatile by Volume: Not Available.
Evaporation Rate: Not Available.
Solubility: Completely soluble.
Viscosity: Not determined
Molecular Weight: Not available.
Other: Not available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity:
Not reactive.
Chemical Stability:
Stable.
Hazardous Polymerization:
Will not occur.
Conditions to Avoid:
Materials to Avoid:
Oxidizing materials. Strong acids or bases, strong oxidizing agents and strong reducing agents
Hazardous Decomposition Products:
Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide, Magnesium Oxides, Sulphur Oxides and Sodium Oxides.
Additional Information:
No additional remarks.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:
Ingestion:
Low toxicity. Small amounts swallowed incidental to normal handling operations are not likely to cause injury. Swallowing larger amounts may cause injury.
Skin Contact: May be an irritant to skin.
Inhalation: Brief exposure (minutes) is not likely to cause adverse effects.
Eye Contact: Irritating effect. May cause eye irritation.

Additional Information:

Chemical Name	CAS Number	TLV	Toxicology
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Carcinogenicity:

Carcinogenicity Comment: IARC (international Agency for Research on Cancer) – Substance is not listed, none of the ingredients are listed.

NTP (National Toxicity Program) – None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration) – None of the ingredients are listed.

Reproductive Toxicity/Teratogenicity/Embryotoxicity/Mutagenicity: None known.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological Information:
Ecotoxicity: material is practically non-toxic to aquatic organisms on an acute basis (EC50>100 mg/L in the most sensitive species tested). Rinse off of bigger amounts into drains may increase pH-values which may harm aquatic organisms.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.
Contaminated Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 14: TRANSPORT INFORMATION

DOT (U.S.): Non-Regulated Material
DOT Shipping Name: Etch-A-Matic EM-1 General Purpose Electrolyte
DOT Hazardous Class: Non-Regulated Material
DOT UN Number: Non-Regulated Material
DOT Packing Group: Non-Regulated Material Non-Regulated Material
DOT Reportable Quantity (lbs): Not available.
Note: No additional remarks.
Marine Pollutant: No.

TDG (Canada):
TDG Shipping Name: Etch-A-Matic EM-1 General Purpose Electrolyte
Hazard Class: Non-Regulated Material
UN Number: Non-Regulated Material
Packing Group: Non-Regulated Material
Note: No additional Remarks
Marine Pollutant: No.

SECTION 15: REGULATORY INFORMATION

U.S. TSCA Inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.
Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.
Note: Not available.

U.S. Regulatory Rules:

California Proposition 65: Not Listed.
MA Right to Know List: Not Listed.
New Jersey Right-to-Know List: Not Listed.
Pennsylvania Right-to-Know List: Not Listed.

WHMIS Hazardous Class:

Skin irritation – Category 2
Eye irritation – Category 2A

Hazard Pictograms:

SECTION 16: OTHER INFORMATION

Additional Information: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

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End of SDS.