

## Lectroetch Electrolyte 2611A

**SECTION 1: IDENTIFICATION**

**Product Identifier:** Lectroetch Electrolyte 2611A  
**Other Means of Identification:** N/A  
**Recommended Use:** Electrolytic Etching Solution  
**Restrictions on Use:** None known  
**Supplier Identifier:** Sterling Marking Products Inc., 349 Ridout Street North, London, ON  
Canada N6A 2N8 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)*

**Classification**

Respiratory Sensitivity 1, H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Mutagenicity 2, H341 - Suspected of causing genetic defects.  
Carcinogenicity 1B, H350 - May cause cancer.  
Reproductive 1B, H360 - May damage fertility or the unborn child.  
Skin Corrosive 1A, H314 - Causes severe skin burns and eye damage.  
Aquatic Acute 1, H400 - Very toxic to aquatic life.  
Aquatic Chronic 1, H410 - Very toxic to aquatic life with long lasting effects.  
Eye Irritation – Category 2A, H319 - Causes serious eye irritation.  
Skin Sensitivity – Category 2B, H317 - May cause an allergic skin reaction.

**Label Elements:**

**Signal Word: Danger**

**Hazard Determining Components of Labelling:**

Cobalt Nitrate

**Hazard Statements:**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Suspected of causing genetic defects.  
May cause cancer.  
May damage fertility or the unborn child.  
Causes severe skin burns and eye damage.  
Very toxic to aquatic life.  
Very toxic to aquatic life with long lasting effects.  
Causes serious eye irritation.  
May cause an allergic skin reaction.

**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. Contaminated clothing must not be removed from the workplace.

Avoid release to the environment.

Do not breathe dust or mists.

Wear respiratory protection.

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.

If on skin, remove all contaminated clothing and rinse with water/shower.

**7% of the mixture consists of ingredients of unknown toxicity.**

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Description:** Mixture of substances listed below with non-hazardous additions

<b>Dangerous Components:</b>		
RTECS: EV 9800000	Trade Secret ⚠ Eye Irritant 2, H319	2% - 12%
CAS: 10141-05-6	Cobalt Nitrate ⚠ Respiratory Sensitivity 1, H334; Mutagenity 2, H341; Carcinogenity 1B, H350; Reproductive 1B, H360 ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ⚠ Skin Sensitivity – Category 2B, H317	2% - 12%
RTECS: BP 4550000	Trade Secret ⚠ Acute Toxicity 4, H302; Eye Irritant 2A, H319	2% - 12%
CAS: 77-92-9 RTECS: GE 7350000	Citric Acid ⚠ Eye Irritant 2A, H319	≤2.5%

**Note:** All ingredients are listed on the Domestic Substances List (DSL) and the Toxic Substances Control Act (TSCA) list or are exempt from requirements under 40 CFR 720.30.

### 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 wash affected area with soap and water and rinse thoroughly. Remove contaminated clothing and shoes. Get medical attention if irritation occurs. Remove contaminated clothing and laundry before reuse

**Ingestion:** Do **NOT** induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Give copious amount of water and fresh air. 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.

### SECTION 5: FIRE-FIGHTING MEASURES

**Extinguishing Media.**

**Suitable Extinguishing Media:**

Water fog or fine spray, carbon dioxide, dry chemical, foam. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function but much less effectively.

**Specific Hazards arising from the Product:**

**Hazardous combustion products**

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

**Unusual Fire & Explosion Hazards:**

Take precautionary measures against static discharges.

**Specific Hazards:**

Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>), Calcium Oxides, Cobalt/Cobalt Oxides, Hydrogen Chloride gas, Nitrogen Oxides (NO<sub>x</sub>), Sulfur Oxides and Sodium Oxides.

**Hazardous Decomposition/Combustion Materials (under fire conditions):**

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

**Special Protective Equipment:**

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

**Special Fire Fighting Procedures:**

Keep run-off water out of sewers and water sources. Dike for water control. If risk of water pollution occurs, notify appropriate authorities.

Use water to keep fire exposed containers cool and disperse vapours. Move container from fire area if it can be done without risk.

## 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:**

**Personal Protective Equipment**

**Respiratory Protection:**

**Gloves:** Use gloves chemically resistant to this material. Examples of acceptable glove barrier materials include nitrile or latex 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. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled clothing and wash before reuse. Wash hands before breaks and at the end of work. Store protective clothing separately. Avoid contact with the eyes and skin.

**Breathing equipment:** is not required.

**Description:** Mixture of substances listed below with non-hazardous additions

Components with Occupational Exposure Limits:		
CAS Number	Name	Exposure Limits
RTECS: EV 9800000	Trade Secret	REL Short-Term Value: 20 mg/m <sup>3</sup> Long-Term Value: 10 mg/m <sup>3</sup> TLV Short-Term Value: 20 mg/m <sup>3</sup> Long-Term Value: 20 mg/m <sup>3</sup>
CAS: 10141-05-6	Cobalt Nitrate	PEL Long-term Value: 0.1* mg/m <sup>3</sup> as Co; * for metal dust and fume REL Long-term Value: 0.05* mg/m <sup>3</sup> as Co; metal dust and fume TLV Long-term Value: 0.02* mg/m <sup>3</sup> as Co; BEI
Components with Biological Limit Values:		
CAS: 10141-05-6	Cobalt Nitrate	BEI 15 µg/L, urine, end of shift at end of workweek, Cobalt (background) BEI 1 µg/L, urine, end of shift at end of workweek, Cobalt (background, semi-quantitative)

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Liquid.

**Colour:** Red colour

**Odor:** Slight.

**pH at 20°C (68°F):** 2.0

**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.

**Not Flammable.**

**82.4% Water, 15% solids.**

**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

**Additional Information:**

No additional remarks.

**Hazardous Decomposition Products:** Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>), Calcium Oxides, Cobalt/Cobalt Oxides, Hydrogen Chloride gas, Nitrogen Oxides (NO<sub>x</sub>), Sulfur Oxides and Sodium Oxides.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**Likely Routes of Exposure:**

**Ingestion:**

Swallowing will lead to a corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

**Skin Contact:** Strong caustic effect on skin and mucous membranes

**Inhalation:** Sensitization possible through inhalation.

**Eye Contact:** Irritating effect. Causes serious eye irritation.

**Additional Information:**

**Acute Test of Product:**

CAS Number	Name	LD50
RTECS: EV 9800000	Trade Secret	1,650 mg/kg (rat)
RTECS: EV 4550000	Trade Secret	2,301 mg/kg (rat)
CAS: 77-92-9	Citric Acid	Oral: 5,040 mg/kg (mouse), 5,400 mg/kg (rat) Dermal: >2,000 mg/kg (rat)

**Carcinogenicity:**

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

CAS: 10141-05-6	Cobalt Nitrate	2B
-----------------	----------------	----

**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**

**Toxicity**

**Aquatic Toxicity:**

Avoid release into the environment. Run-off from fire control or dilution water may cause pollution.

<b>Trade Secret</b>	
EC-50	2,400 mg/l (Water Flea)

**Other Information:**

Ecotoxicity: material is very toxic to aquatic organisms on an acute basis. Poisonous to fish. Rinse off into drains may increase pH-values which may harm aquatic organisms. Must not be allowed to reach bodies of water or drainage ditches undiluted or on-neutralized. Even small amounts are a danger to drinking water if it leaks into the ground.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Disposal of Waste Method:** Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations. Do not allow product to reach sewage systems.

**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:** Lectroetch 2611A

**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:** Lectroetch 2611A

**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.

**Classification**

Respiratory Sensitivity 1, H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Mutagenicity 2, H341 - Suspected of causing genetic defects.  
Carcinogenicity 1B, H350 - May cause cancer.  
Reproductive 1B, H360 - May damage fertility or the unborn child.  
Skin Corrosive 1A, H314 - Causes severe skin burns and eye damage.  
Aquatic Acute 1, H400 - Very toxic to aquatic life.  
Aquatic Chronic 1, H410 - Very toxic to aquatic life with long lasting effects.  
Eye Irritation – Category 2A, H319 - Causes serious eye irritation.  
Skin Sensitivity – Category 2B, H317 - May cause an allergic skin reaction.

**Label Elements:****Signal Word: Danger****Hazard Determining Components of Labelling:**

Cobalt Nitrate

**Hazard Statements:**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Suspected of causing genetic defects.  
May cause cancer.  
May damage fertility or the unborn child.  
Causes severe skin burns and eye damage.  
Very toxic to aquatic life with long lasting effects.  
Very toxic to aquatic life.  
Causes serious eye irritation.  
May cause an allergic skin reaction.

**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. Contaminated clothing must not be removed from the workplace.  
Avoid release to the environment.  
Do not breathe dust or mists.  
Wear respiratory protection.  
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.  
If on skin, remove all contaminated clothing and rinse with water/shower.

**7% of the mixture consists of ingredients of unknown toxicity.**

**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.

**Disclaimer:** NOTICE TO READER: Sterling Marking Products Inc. disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or the information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this SDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Sterling Marking Products Inc. Sales Office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be correct, Sterling Marking Products Inc. makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Sterling Marking Products' control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

*End of SDS.*