

Millennium Signatures Marking Systems Inc.

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SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION AND COMPANY DETAIL

Product Name: X4R-412 Electrolyte
Product Code(s): X4R-412 Electrolyte
Recommended Use: For use in the Electro-Chemical Etching Process
Manufacturers Name: Millennium Signatures Marking Systems, Inc.
Address: 12-1550 Yorkton Crt
Burlington, ON L7P 5B7

Emergency Telephone: (905) 639-0909, available during office hours, 8:00am - 5:00pm EST, Monday - Friday, in English.
Fax Number: (905)639-0919
Date Prepared: January 4, 2017

HMIS	
H	2
F	0
R	1
PPE†	
† Sec. 8	

SECTION 2 – HAZARDS IDENTIFICATION



Hazardous Pictogram:

Signal Word:

WARNING

Precautionary Statement: Harmful if swallowed.
Do not swallow.
Avoid Skin and Eye contact.

Inhalation: N/A

Ingestion: Significant amounts of cobalt has the potential for causing blood, heart, thyroid, and pancreas damage. Nausea, vomiting and possible facial discoloration.

Skin contact: Possibility of allergic reaction (allergic and hypersensitive persons should not be on job involving cobalt dust). Dermatitis may possibly be aggravated.

Eye contact: Possible serious irritation.

This product, when used specifically as directed and for its intended purpose (i.e. mild electrolytic etching) and in conjunction with proper work procedures and policies and sound hygienic practices, does not constitute a hazard to personnel.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components (specific chemical identity/ Common name):

SOLIDS: Cobalt Nitrate (trade secret) 2%
Ammonium Salts (trade secret) 2%

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LIQUIDS: Surfactant (trade secret) 1%

TRADE SECRET: The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 – FIRST AID MEASURES

Skin contact: Wash thoroughly with plenty of soap and water.
Eye contact: Flush thoroughly with water for fifteen minutes and call physician.
Ingestion: Drink water and give emetic, call physician.
Inhalation: N/A

Always seek medical attention if irritation continues.

SECTION 5 – FIRE-FIGHTING MEASURES

Suitable extinguishing media: N/A
Special fire fighting procedures: N/A
Unusual fire and explosions hazards: N/A

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled:
SMALL SPILLS: Flush with water to sewer.
LARGE SPILLS: Use suitable absorbent and dispose of in dot approved waste containers.
WASTE DISPOSAL: To be performed in compliance with all current local, state and federal regulations.

SECTION 7 – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in the event of spillage or chemical release:
Waste disposal method: To be performed in compliance with all current local, state and federal regulations.
Precautions to be taken in Handling and Storage: Keep container tightly closed, and keep from freezing (32°F). Wash hands thoroughly after handling.
Other Precautions: Remove contaminated clothing as soon as possible and wash before reuse.

SECTION 8 – EXPOSURE CONTROLS – PERSONAL PROTECTION

Occupation Exposure Limits: N/A Personal
Protective Equipment:
Respiratory System: N/A
Skin and Body: Optional apron
Hands: Wear rubber gloves
Eyes: Wear safety goggles
Other/Special: Local exhaust sufficient

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SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Color: Reddish
Odor: Slight odor
Odor Threshold: N/A
pH: 1.3 to 1.7
Boiling Point: 212°F
Melting / Freezing Point: Melting - N/A / Freezing - below 32°F
Flash Point: N/A
Fire Hazards in presence of various substances: N/A
Auto-ignition temperature: N/A
Explosive Properties: N/A
Lower explosion limit: N/A
Oxidizing properties: N/A
Vapor Pressure (mm Hg.): @25°C (77°F):23.7
Evaporation Rate: N/A
Density: N/A
Solubility: Complete (100%)
Vapor Density: N/A

SECTION 10 – REACTIVITY DATA

Stability: Stable
Conditions to avoid: N/A
Incompatibility: (materials to avoid) If solution dries; cellulosic type materials (wood and cotton), oxidizers.
Hazardous Decomposition or By-products: None; But surrounding fire may release nitrogen oxide gas.
Hazardous polymerization: Will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

Carcinogenicity: NTP: N/A IARC: No OSHA: No

Health Hazards (Acute & Chronic);

Nausea, vomiting and possible facial discoloration.

Significant amounts of cobalt has the potential for causing blood, heart, thyroid, and pancreas damage.
Possibility of allergic reaction (allergic and hypersensitive persons should not be on job involving cobalt dust).
Dermatitis may possibly be aggravated.
Irritation to skin.
Possible serious irritation to eyes.

SECTION 12 – ECOLOGICAL INFORMATION

N/A

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SECTION 13 – DISPOSAL CONSIDERATIONS

Observe all federal, state and local environmental regulations.

SECTION 14 – TRANSPORT INFORMATION

Special Precautions: Keep container tightly closed. Keep from freezing (32 degrees [F]).

This is a Non-Hazardous product. **UN Number**

US DOT (United States Department of Transportation): Not Regulated

IMO/IMDG (International Maritime Dangerous Goods): Not Regulated

IATA (International Air Transport Association): Not Regulated

ADR (Agreement on Dangerous Goods by Road (Europe)): Not Regulated

RID (Regulations Concerning The International Transport of Dangerous Goods (Europe)): Not Regulated

AND (European Agreement Concerning The Carriage of dangerous Goods by Inland Waterways): Not Regulated

SECTION 15 – TRANSPORT INFORMATION

IRRITANT

Safety Phrases: N/A

Risk Phrases: N/A

Regulations: N/A

SECTION 16 – OTHER INFORMATION

Source of key data used to

Compile Safety Data Sheet: Material Safety Data Sheet. Essentially similar to U.S. Department of Labor Form OSHA-20

Issue Date: 15 May 1990

Changes to Issue: 07 June 2016

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