

Millennium Signatures Marking Systems Inc.

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SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION AND COMPANY DETAIL

Product Name: X4R-413 Electrolyte
Product Code(s): X4R-413 Electrolyte
Recommended Use: For use in the Electro-Chemical Etching Process
Manufacturers Name: Millennium Signatures Marking Systems Inc.
Address: 12-1550 Yorkton Court
Burlington ON, L7P 5B7
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Date Prepared: January 4, 2017

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PPE+	
† Sec. 8	

SECTION 2 – HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components (specific chemical identity/ Common name):

SOLIDS: Cobalt Chloride 4% (TRADE SECRET) **LIQUIDS:**

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

SECTION 3 – HAZARD INFORMATION

Inhalation: N/A

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

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

SECTION 4 – FIRST AID MEASURES

Skin contact: Wash thoroughly with plenty of soap and water

Eye contact: Flush thoroughly with water for fifteen minutes.

Ingestion: Induce vomiting and call physician immediately.

Inhalation: N/A

Always seek medical attention if irritation continues.

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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

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Color: Purplish
Odor: Slight odor
Odor Threshold: N/A
pH: 6.0 to 6.5
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 Max Temp: 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

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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) with dried solutions; cellulosic - type materials (wood, cotton) **Hazardous**
Decomposition or By-products:
None, but surrounding fire may produce toxic hydrogen cyanide or hydrogen thiocyanate.
Hazardous polymerization: WILL NOT OCCUR.

SECTION 11 – TOXICOLOGICAL INFORMATION

Carcinogenicity: NTP: N/A IARC: No OSHA: No
Health Hazards (Acute & Chronic); if you ingest significant amounts of cobalt has the potential for causing blood, heart, and thyroid or pancreas damage. Possibility of allergic reaction or irritation to skin. Possibility of serious irritation to eyes. Nausea. Dermatitis possibly aggravated from exposure.

SECTION 12 – ECOLOGICAL INFORMATION

N/A

SECTION 13 – DISPOSAL CONSIDERATIONS

Observe all federal, state and local environmental regulations.

SECTION 14 – TRANSPORT INFORMATION

Keep container tightly closed and keep from freezing (32° F).

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

SAFETY DATA SHEET

Form OSHA-20

Issue Date: 15 May 1990
Changes to Issue: 31 March 2015

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