

Millennium Signatures Marking Systems Inc.

Phone: 905-639-0909

Email: info@millenniumsignatures.com

SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION AND COMPANY DETAIL

Product Name: X4R-411 Electrolyte
Product Code(s): X4R-411
Recommended Use: For use in the Electro-Chemical Etching Process
Manufacturers Name: Millennium Signatures Marking Systems, Inc.
Address: 12-1550 Yorkton Court
Burlington, ON

Emergency Telephone: (905) 639-0909, available during office hours, 8:30am - 4:00pm EST, Monday - Friday, in English.

Fax Number: (905) 639-0909

Date Prepared: January 4, 2017

| HMIS | |
|----------|---|
| H | 1 |
| F | 0 |
| R | 1 |
| PPE+ | |
| † Sec. 8 | |

SECTION 2 – HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components (specific chemical identity/ Common name):

SOLIDS:

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 3 – HAZARD INFORMATION

Inhalation: N/A

Ingestion: Large amounts may cause vomiting, cramps and/or diarrhea, and possibly affect blood pressure.

Skin contact:

Eye contact: N/A

SECTION 4 – FIRST AID MEASURES

Skin contact: Flush thoroughly with water for fifteen minutes.

Eye contact: Flush thoroughly with water for fifteen minutes.

Ingestion: Induce vomiting and call physician.

Inhalation: N/A

Always seek medical attention if irritation continues.

SAFETY DATA SHEET

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: None

SECTION 8 – EXPOSURE CONTROLS – PERSONAL PROTECTION

Occupation Exposure Limits: N/A Personal

Protective Equipment:

Respiratory System: N/A

Skin and Body: Optional apron

Hands: Optional for sensitive skin, rubber gloves

Eyes: For extra protection, wear safety goggles

Other/Special: Local exhaust sufficient

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: Aqua

Odor: Slight odor

Odor Threshold: N/A

pH: 1.8 to 2.2

Boiling Point: 212°F

SAFETY DATA SHEET

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; oxidizers **Hazardous**
Decomposition or By-products: None
Hazardous polymerization: Will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

Carcinogenicity: NTP: No IARC: No OSHA: No

Health Hazards (Acute & Chronic);

Ingestion of large amounts may cause vomiting, cramps and/or diarrhea, and possibly affect blood pressure.

SECTION 12 – ECOLOGICAL INFORMATION

N/A

SECTION 13 – DISPOSAL CONSIDERATIONS

Observe all federal, state and local environmental regulations.

SAFETY DATA SHEET

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 Form OSHA-20
26 February 1987

Issue Date: 31 March 2016

Changes to Issue:

WE CANNOT ANTICIPATE ALL CONDITIONS UNDER WHICH THIS INFORMATION AND OUR PRODUCTS, OR THE PRODUCTS OF OTHER MANUFACTURERS IN COMBINATION WITH OUR PRODUCTS MAY BE USED. WE ACCEPT NO RESPONSIBILITY FOR RESULTS OBTAINED BY THE APPLICATIONS OF THIS INFORMATION OR THE SAFETY AND SUITABILITY OF OUR PRODUCTS, EITHER ALONE OR IN COMBINATION WITH OTHER PRODUCTS. USERS ARE ADVISED TO MAKE THEIR OWN TESTS TO DETERMINE THE SAFETY AND SUITABILITY OF EACH SUCH PRODUCT OR PRODUCT COMBINATION FOR THEIR OWN PURPOSES. UNLESS OTHERWISE AGREED IN WRITING, WE SELL THE PRODUCTS WITHOUT WARRANTY, AND BUYERS AND USERS ASSUME ALL RESPONSIBILITY AND LIABILITY FOR LOSS OR DAMAGE ARISING FROM THE HANDLING AND USE OF OUR PRODUCTS, WHETHER USED ALONE OR IN COMBINATION WITH OTHER PRODUCTS.

THE FORMULAS USED FOR THESE PRODUCTS ARE CONSIDERED CONFIDENTIAL TRADE SECRETS. THIS INFORMATION IS FOR OUR CUSTOMERS EYES ONLY.

© MILLENNIUM SIGNATURES MARKING SYSTEMS INC.