SAFETY DATA SHEET

Emerald® Premium MXEH

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name
Emerald® Premium MXEH

Product code
900002893

Product Use
Fountain Solution for Heatset Web.

Manufactured by
FUJIFILM Hunt Chemicals U.S.A., Inc.
40 Boroline Road
Allendale, NJ 07401-0320

Distributed Internationally by
FUJIFILM Hunt Chemicals U.S.A., Inc.
40 Boroline Road
Allendale, NJ 07401-0320

Distributed in Canada by
FUJIFILM Canada, Inc.
600 Suffolk Ct.
Mississauga, Ontario L5R 4G4

Distributed in the USA by
FUJIFILM North American Corporation,
Graphic Systems Division
200 Summit Lake Drive
Valhalla, NY 10595-1356

SDSs are available at the following website(s):
http://www.fujifilmusa.com/msds

Company Phone Number
U.S.A: 800-473-3854 Canada: 800-263-5018

Emergency Telephone
Transport-CHEMTREC Inside NA: 800-424-9300
Transport CHEMTREC Outside NA: 703-527-3887
Transport-CANUTEC Inside Canada: 613-996-6666
Medical Emergency (24 hour): 877-935-7387

E-mail
EHS@fujifilm.com

2. HAZARDS IDENTIFICATION

Classification

Skin corrosion/irritation
Category 2

Serious eye damage/eye irritation
Category 1

GHS Label elements, including precautionary statements

Danger
Hazard Statements
Causes skin irritation
Causes serious eye damage

Precautionary Statements

Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Response
IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse

Storage
Not applicable

Disposal
Not applicable

Hazards not otherwise classified (HNOC)
Not classified

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL BUTYL ETHER</td>
<td>112-34-5</td>
<td>5-10%</td>
</tr>
<tr>
<td>NONIONIC SURFACTANT</td>
<td>2687-94-7</td>
<td>1-5%</td>
</tr>
<tr>
<td>AMMONIUM NITRATE</td>
<td>6484-52-2</td>
<td>1-5%</td>
</tr>
<tr>
<td>ACETIC ACID</td>
<td>64-19-7</td>
<td>1-5%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First aid measures for different exposure routes

General advice
If symptoms persist, call a physician.

Eye contact
In case of contact with substance, immediately flush eyes with running water for at least 30 minutes. Keep eye wide open while rinsing. Do not rub affected area. Call a physician immediately.

Skin contact
IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get
medical advice/attention.

Inhalation
Move to fresh air. If symptoms persist, call a physician. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors.

Ingestion
If swallowed, do not induce vomiting - seek medical advice.

Protection of First-aiders
Use personal protective equipment.

**Most important symptoms/effects, acute and delayed**

May cause redness, itching, and pain. Burning feeling and temporary redness.

**Indication of immediate medical attention and special treatment needed, if necessary**

Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**

None known.

**Specific hazards arising from the chemical**

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

**Hazardous Combustion Products**


**Explosion Data**

- Sensitivity to Mechanical Impact: none
- Sensitivity to Static Discharge: none

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid contact with the skin and the eyes. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental precautions**

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

**Methods and materials for containment and cleaning up**

**Methods for Containment**

Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**

Use personal protective equipment. Soak up with inert absorbent material. Pick up and
transfer to properly labeled containers. Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

### 7. HANDLING AND STORAGE

**Precautions for safe handling**

Wear personal protective equipment. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Ensure adequate ventilation.

**Conditions for safe storage, including any incompatibilities**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Guidelines**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL BUTYL ETHER</td>
<td>TWA: 10 ppm inhalable fraction and vapor</td>
<td>TWA: 10 ppm</td>
<td>IDLH: 50 ppm</td>
<td></td>
</tr>
<tr>
<td>ACETIC ACID</td>
<td>STEL: 15 ppm TWA: 10 ppm</td>
<td>TWA: 25 mg/m³ (vacated) TWA: 10 ppm STEL: 15 ppm</td>
<td>STEL: 37 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

**Exposure controls**

**Engineering Measures**

Ventilation systems

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection**

Tightly fitting safety goggles. Face-shield.

**Skin and body protection**

Wear protective gloves/clothing.

**Respiratory protection**

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations**

When using do not eat, drink or smoke. Take off contaminated clothing and wash before reuse. Regular cleaning of equipment, work area and clothing is recommended.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear, Green</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>4.0</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.04</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 201 °F / &gt; 94 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point / melting range</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>Not available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>completely soluble</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild</td>
</tr>
<tr>
<td>Physical State @20°C</td>
<td>Liquid</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>&gt; 212 °F / &gt; 100 °C</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
Stable under recommended storage conditions.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to Avoid
Excessive heat. Freezing. This product contains an ammonia compound. Do not allow this solution to come in contact with household or industrial bleaches (Sodium Hypochlorite). Mixing of these chemicals can result in the release of hazardous or toxic gases. Inhalation of these gases may cause severe respiratory irritation.

Incompatible Materials

Hazardous Decomposition Products
None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Acute toxicity
Inhalation
Inhalation of vapors in high concentration may cause irritation of respiratory system.

Eyes
Corrosive to the eyes and may cause irreversible eye damage.

Skin
Irritating to skin. May cause itching.

Ingestion
Ingestion may cause stomach discomfort.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>LC50 (lethal concentration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL BUTYL ETHER</td>
<td>= 3384 mg/kg (Rat)</td>
<td>= 2700 mg/kg (Rabbit)</td>
<td></td>
</tr>
<tr>
<td>NONIONIC SURFACTANT</td>
<td>= 2050 mg/kg (Rat)</td>
<td>= 2000 mg/kg (Rabbit) &gt; 2 g/kg (Rabbit)</td>
<td></td>
</tr>
<tr>
<td>AMMONIUM NITRATE</td>
<td>= 2217 mg/kg (Rat)</td>
<td></td>
<td>&gt; 88.8 mg/L (Rat) 4 h</td>
</tr>
<tr>
<td>ACETIC ACID</td>
<td>600 mg/kg (Rabbit) [NZ CCID]</td>
<td>1060 mg/kg (Rabbit)</td>
<td>11.4 mg/L (Rat) 4 h</td>
</tr>
</tbody>
</table>

Information on toxicological effects
No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure
Irritation
Corrosivity
Sensitization
Mutagenic Effects
Reproductive Toxicity
Carcinogenicity

Irritating to skin.
Corrosive to eyes.
No information available.
No information available.
No information available.
None known.

STOT - single exposure
STOT - repeated exposure
Target Organ Effects
Aspiration hazard

No information available.
No information available.
Eyes, Respiratory system, Skin, Teeth.
No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae toxicity</th>
<th>Toxicity to fish</th>
<th>Toxicity to microorganisms</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETIC ACID</td>
<td></td>
<td>Pimephales promelas: 79 mg/L at 96 h</td>
<td>65: 48 h Daphnia magna mg/L EC50 Static</td>
<td></td>
</tr>
</tbody>
</table>

ATE: Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity

Persistence and degradability

No information available.

Bioaccumulation

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Octanol Water Partition Coefficient (log pow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMMONIUM NITRATE</td>
<td>-3.1</td>
</tr>
<tr>
<td>ACETIC ACID</td>
<td>-0.31</td>
</tr>
</tbody>
</table>

Mobility

No information available.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

Dispose of in accordance with local regulations.

Contaminated packaging
14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>DOT</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG</td>
<td>Not regulated</td>
</tr>
<tr>
<td>MEX</td>
<td>Not regulated</td>
</tr>
<tr>
<td>ICAO</td>
<td>Not regulated</td>
</tr>
<tr>
<td>IATA</td>
<td>Not regulated</td>
</tr>
<tr>
<td>IMDG</td>
<td>Not regulated</td>
</tr>
<tr>
<td>ADR/RID</td>
<td>Not regulated</td>
</tr>
<tr>
<td>ADN</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Listing Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Yes</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>No</td>
</tr>
<tr>
<td>PICCS</td>
<td>No</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>No</td>
</tr>
<tr>
<td>ENCS</td>
<td>No</td>
</tr>
<tr>
<td>IECSC</td>
<td>No</td>
</tr>
<tr>
<td>KECL</td>
<td>No</td>
</tr>
<tr>
<td>AICS</td>
<td>No</td>
</tr>
</tbody>
</table>

*Yes - All component(s) of this product are included or are exempt from listing on the inventory.

*No - Indicates the component(s) of this product are either not listed or have not been determined to be listed on the inventory.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

TSCA Sections 4, 5 and 12(b)
This product does not contain any chemicals regulated by TSCA Sections 4, 5 or 12(b).

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:
### SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

### Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETIC ACID</td>
<td>5000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

### CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETIC ACID</td>
<td>5000</td>
<td></td>
<td>RQ 5000 lb final RQ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RQ 2270 kg final RQ</td>
</tr>
</tbody>
</table>

### U.S. State Regulations

#### California Proposition 65

This product does not contain any Proposition 65 chemicals.

#### U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL BUTYL ETHER</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>AMMONIUM NITRATE</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>ACETIC ACID</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

### International Regulations

#### Canada - NDSL

This product does not contain any NDSL chemicals.

#### Mexico - Grade

Slight risk, Grade 1

#### Mexico - Carcinogen Status and Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETIC ACID</td>
<td></td>
<td>Mexico: TWA 10 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: TWA 25 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: STEL 15 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: STEL 37 mg/m³</td>
</tr>
</tbody>
</table>

### Other Regulations

No information available
16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and chemical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>Physical hazards</td>
</tr>
<tr>
<td>HMIS</td>
<td>Health Hazard</td>
<td>Flammability</td>
<td>Physical Hazard</td>
<td>Personal protection</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>B</td>
</tr>
</tbody>
</table>

Prepared By: FUJIFILM Environment, Health and Safety, phone: 800-473-3854
Revision Date: 03-Dec-2015
Revision Note: No information available
Disclaimer: The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

end