Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
E-Tec 522

Product Use
water based. wax.

Manufacturer Information
Electrochemical Products Inc.
17000 West Lincoln Ave
New Berlin, WI 53151
Phone: 262-786-9330
Emergency Phone #: Chemtrec #800-424-9300 (CCN7498)
E-mail: us-sales@epi.com
www.epi.com
Fax: 262-786-9403

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.
Skin Corrosion/Irritation - Category 1
Serious Eye Damage/Eye Irritation - Category 1

GHS Label Elements

Symbol(s)

Signal Word
Danger

Hazard Statement(s)
Causes severe skin burns and eye damage

Precautionary Statement(s)
Prevention
Wear protective gloves/protective clothing/eye protection/face protection  
Wash thoroughly after handling  
Do not breathe dusts or mists  

**Response**  
IF INHALED: Remove person to fresh air and keep comfortable for breathing  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
Immediately call a POISON CENTER or doctor  
Specific treatment (see label)  

**Storage**  
Store locked up  

**Disposal**  
Dispose of contents/container in accordance with local/regional/national/international regulations  

**Other Hazards**  
Do not ingest. Do not get in eyes, on skin or on clothing. Wash thoroughly after handling. Avoid breathing vapor or mist. Use with adequate ventilation. In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable. Keep container closed.  

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### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS  

<table>
<thead>
<tr>
<th>CAS</th>
<th>Component Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>7732-18-5</td>
<td>Water</td>
<td>45-50</td>
</tr>
<tr>
<td>Trade Secret</td>
<td>Paraffin waxes and Hydrocarbon waxes</td>
<td>48-53</td>
</tr>
<tr>
<td>110-91-8</td>
<td>Morpholine</td>
<td>0.5-1</td>
</tr>
</tbody>
</table>

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### Section 4 - FIRST AID MEASURES  

**Inhalation**  
If inhaled, immediately remove the affected person to fresh air.  

**Skin**
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.

**Eyes**
Flush immediately with water for at least 15 minutes. Do not rub eyes. If irritation persists, get medical attention.

**Ingestion**
If swallowed, give milk or water to dilute. Seek medical attention immediately. Never give anything by mouth to an unconscious person. Call a physician immediately.

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**Section 5 - FIRE FIGHTING MEASURES**

**Extinguishing Media**

**Suitable Extinguishing Media**
Dry chemical, foam, carbon dioxide, water fog.

**Unsuitable Extinguishing Media**
None identified.

**Special Hazards Arising from the Chemical**
None identified.

**Hazardous Combustion Products**
Carbon monoxide and carbon dioxides.

**Special Protective Equipment and Precautions for Firefighters**
None identified.

**Fire Fighting Measures**
Use methods suitable to fight surrounding fire.

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**Section 6 - ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures**
Wear protective gloves and eye/face protection.

**Methods and Materials for Containment and Cleaning Up**
Contain the spill. Mop up or squeegee into container or absorb with inert material.

**Environmental Precautions**
Do not allow to enter sewers or waterways.

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**Section 7 - HANDLING AND STORAGE**
Precautions for Safe Handling
Wash thoroughly after handling. Containers, even those that have been emptied, will retain product residue and vapors. Always obey hazard warnings on containers as if they were full.

Conditions for Safe Storage, Including any Incompatibilities
Store locked up
Keep containers closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible materials (see Section 10).

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

<table>
<thead>
<tr>
<th>Component Exposure Limits</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraffin waxes and Hydrocarbon waxes</td>
<td>Trade Secret</td>
</tr>
<tr>
<td>ACGIH:</td>
<td>2 mg/m3 TWAfume</td>
</tr>
<tr>
<td>NIOSH:</td>
<td>2 mg/m3TWAfume</td>
</tr>
<tr>
<td>Mexico:</td>
<td>2 mg/m3TWA LMPE-PPT fume</td>
</tr>
<tr>
<td></td>
<td>6 mg/m3STEL [LMPE-CT] fume</td>
</tr>
<tr>
<td>Morpholine</td>
<td>110-91-8</td>
</tr>
<tr>
<td>ACGIH:</td>
<td>20 ppm TWA</td>
</tr>
<tr>
<td>Skin - potential significant contribution to overall exposure by the cutaneous route</td>
<td></td>
</tr>
<tr>
<td>NIOSH:</td>
<td>20 ppmTWA; 70 mg/m3TWA</td>
</tr>
<tr>
<td></td>
<td>30 ppmSTEL; 105 mg/m3STEL</td>
</tr>
<tr>
<td>Potential for dermal absorption</td>
<td></td>
</tr>
<tr>
<td>Europe:</td>
<td>10 ppmTWA; 36 mg/m3TWA</td>
</tr>
<tr>
<td></td>
<td>20 ppm STEL; 72 mg/m3 STEL</td>
</tr>
<tr>
<td>OSHA (US):</td>
<td>20 ppmTWA; 70 mg/m3TWA</td>
</tr>
<tr>
<td>prevent or reduce skin absorption</td>
<td></td>
</tr>
<tr>
<td>Mexico:</td>
<td>20 ppmTWA LMPE-PPT; 70 mg/m3TWA LMPE-PPT</td>
</tr>
</tbody>
</table>
Biological limit value
There are no biological limit values for any of this product's components.

Engineering Controls
Local exhaust is suggested for use, where possible, in enclosed or confined spaces.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection
Safety glasses. It is generally recognized that contact lenses should not be worn when working with chemicals because they may contribute to the severity of an eye injury.

Skin Protection
Wear rubber gloves, long sleeved shirt and trousers.

Respiratory Protection
Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits.

Glove Recommendations
Wear rubber gloves.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Opaque liquid</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild, characteristic</td>
</tr>
<tr>
<td>Color</td>
<td>Tan</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>212 °F</td>
</tr>
<tr>
<td>Freezing point</td>
<td>32 °F (0 °C)</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>(Approx. equal to Water)</td>
</tr>
<tr>
<td>Boiling Point Range</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Explosive Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper Explosive Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Material Name: E-Tec 522

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vapor Density (air=1)</strong></td>
<td>(Approx. equal to water)</td>
</tr>
<tr>
<td><strong>Specific Gravity (water=1)</strong></td>
<td>0.99 - 1.02</td>
</tr>
<tr>
<td><strong>Water Solubility</strong></td>
<td>Completely</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Solubility (Other)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Density</strong></td>
<td>Not available</td>
</tr>
</tbody>
</table>

**Section 10 - STABILITY AND REACTIVITY**

**Reactivity**
No known hazardous reactions.

**Chemical Stability**
This is a stable material.

**Possibility of Hazardous Reactions**
None identified. Hazardous polymerization will not occur.

**Incompatible Materials**
Strong oxidizing agents, acids.

**Hazardous decomposition products**
None identified. Carbon monoxide and carbon dioxides.

**Thermal decomposition products**
None identified.

**Section 11 - TOXICOLOGICAL INFORMATION**

**Acute and Chronic Toxicity**

**Component Analysis - LD50/LC50**
The components of this material have been reviewed in various sources and the following selected endpoints are published:
Water (7732-18-5)
Oral LD50Rat >90 mL/kg
Morpholine (110-91-8)
Oral LD50Rat 1050 mg/kg
Inhalation LC50Rat 8000 ppm 8 h

**Immediate Effects**
No information on significant adverse effects.
Safety Data Sheet

Material Name: E-Tec 522

Delayed Effects
No information on significant adverse effects.

Irritation/Corrosivity Data
No data available.

Respiratory Sensitization
No data available.

Dermal Sensitization
No data available.

Component Carcinogenicity

<table>
<thead>
<tr>
<th>Component</th>
<th>Carcinogenicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morpholine</td>
<td>110-91-8</td>
</tr>
</tbody>
</table>

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 71 [1999]; Monograph 47 [1989](Group 3 [not classifiable])

Germ Cell Mutagenicity
No data available.

Reproductive Toxicity
No data available.

Specific Target Organ Toxicity - Single Exposure
No data available.

Specific Target Organ Toxicity - Repeated Exposure
No data available.

Aspiration hazard
No data available.

Medical Conditions Aggravated by Exposure
No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>Aquatic Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morpholine</td>
<td>110-91-8</td>
</tr>
</tbody>
</table>

Fish: LC50 96 h Lepomis macrochirus 350 mg/L [static]; LC50 96 h Oncorhynchus mykiss 375 - 460 mg/L; LC50 96 h Brachydanio rerio >1000 mg/L [static]

Algae: EC50 96 h Pseudokirchneriella subcapitata 28 mg/L [static] EPA
Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:
No Classification assigned.

TDG Information:
No Classification assigned.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations
None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

All components are on the U.S. EPA TSCA Inventory List. Supplier(s) of proprietary component(s) have stated that their components appear on the Canadian DSL/NDSL.

SARA Section 311/312 (40 CFR 370 Subparts B and C)
Acute Health: no Chronic Health: no Fire: no Pressure: no Reactivity: no

U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraffin waxes and Hydrocarbon waxes</td>
<td>Trade Secret</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Morpholine</td>
<td>110-91-8</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</tbody>
</table>

Not listed under California Proposition 65

Canada Regulations
Not a controlled product under WHMIS.

Canadian WHMIS Ingredient Disclosure List (IDL)
Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in
products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL.

<table>
<thead>
<tr>
<th>Component</th>
<th>IDL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morpholine</td>
<td>110-91-8</td>
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<tr>
<td>1 %</td>
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</table>

### Component Analysis - Inventory

**Water (7732-18-5)**

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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>DSL</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Paraffin waxes and Hydrocarbon waxes (Trade Secret)**

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</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>DSL</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</tbody>
</table>

**Morpholine (110-91-8)**

<table>
<thead>
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<tbody>
<tr>
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<td>DSL</td>
<td>EIN</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Section 16 - OTHER INFORMATION

**HMIS Rating**

Health: 1 Fire: 0 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

**NFPA Ratings**

Health: 1 Fire: 0 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**Key / Legend**

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic