Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
E-Kleen 163-A

Product Use
Aluminum Cleaner.

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.
Acute Toxicity - Dermal - Category 4

GHS Label Elements

Signal Word
Warning

Hazard Statement(s)
Harmful in contact with skin

Precautionary Statement(s)
Prevention
Wear protective gloves/protective clothing/eye protection/face protection
Response
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
Call a POISON CENTER or doctor if you feel unwell
Specific treatment (see label)

Storage
None needed according to classification criteria

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

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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>60-100</td>
</tr>
<tr>
<td>7320-34-5</td>
<td>Potassium pyrophosphate</td>
<td>10-20</td>
</tr>
<tr>
<td>111-76-2</td>
<td>2-Butoxyethanol</td>
<td>1-5</td>
</tr>
<tr>
<td>10555-76-7</td>
<td>Sodium Metaborate</td>
<td>1.5-2.5</td>
</tr>
</tbody>
</table>

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Section 4 - FIRST AID MEASURES

Inhalation
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin
Immediately flush skin with lots of running water for 5 minutes. Remove contaminated clothing and shoes. Wash before reuse. Get immediate medical attention.

Eyes
Immediately flush with lots of running water for 15 minutes, lifting the upper and lower eye lids occasionally. Washing eyes within several seconds is essential to achieve maximum effectiveness. Get immediate medical attention.

Ingestion
Do not induce vomiting. Give large quantities of water or milk. Get immediate medical attention. Do not give anything by mouth to an unconscious or convulsing person.
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.

Fire Fighting Measures
Firefighters should wear full protective clothing including self contained breathing apparatus.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Isolate area. Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up.

Methods and Materials for Containment and Cleaning Up
Contain the discharged material. Stop source of leak if possible. Block any potential routes to water systems. Ventilate the contaminated area. Absorb spilled product with a commercial oil absorbent, such as sand or earth. Shovel absorbed material into appropriate container for disposal. Wear appropriate protective equipment and clothing during clean-up. Avoid skin contact and inhalation of vapors during disposal of spills. Isolate area. Keep unnecessary personnel away. Follow all Local, State, Federal and Provincial regulations for disposal. Surfaces may become slippery after spillage.

Environmental Precautions
Comply with regulations for spill reporting.

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 container, as if they were full.

Conditions for Safe Storage, Including any Incompatibilities
None needed according to classification criteria
Keep in a closed container away from incompatible materials.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION
Component Exposure Limits

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH</th>
<th>NIOSH:</th>
<th>Europe:</th>
<th>OSHA (US):</th>
<th>Mexico:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol</td>
<td>20 ppm TWA</td>
<td>5 ppm TWA; 24 mg/m3 TWA</td>
<td>20 ppm TWA; 98 mg/m3 TWA</td>
<td>50 ppm TWA; 240 mg/m3 TWA</td>
<td>26 ppm TWA LMPE-PPT; 120 mg/m3 TWA LMPE-PPT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potential for dermal absorption</td>
<td>Possibility of significant uptake through the skin</td>
<td>prevent or reduce skin absorption</td>
<td>75 ppm STEL [LMPE-CT]; 360 mg/m3 STEL [LMPE-CT]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>700 ppmIDLH</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Biological limit value**

There are no biological limit values for any of this product's components.

**Engineering Controls**

Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces.

**Individual Protection Measures, such as Personal Protective Equipment**

**Eye/face protection**

Safety glasses or chemical goggles. 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**

Use of protective coveralls and long sleeves is recommended to prevent skin contact.

**Respiratory Protection**

Use a NIOSH approved HEPA filter, or supplied air respirators when exposures reach the OSHA established PELs.

**Glove Recommendations**

Use impervious gloves.

**Protective Materials**

Eye wash fountain and emergency showers are recommended.
### Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Clear</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Characteristic</td>
</tr>
<tr>
<td><strong>Odor Threshold</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Melting Point</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Freezing Point</strong></td>
<td>32 °F (0 °C)</td>
</tr>
<tr>
<td><strong>Boiling Point Range</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Autoignition</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Lower Explosive Limit</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Upper Explosive Limit</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Vapor Density (air=1)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Water Solubility</strong></td>
<td>Complete</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Density</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Physical State</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Clear</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>8.2 - 10.5</td>
</tr>
<tr>
<td><strong>Boiling Point</strong></td>
<td>232 °F (111 °C)</td>
</tr>
<tr>
<td><strong>Evaporation Rate</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Flash Point</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Decomposition</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Vapor Pressure</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Specific Gravity (water=1)</strong></td>
<td>1.13 - 1.155</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Solubility (Other)</strong></td>
<td>Not available</td>
</tr>
</tbody>
</table>

### Section 10 - STABILITY AND REACTIVITY

**Reactivity**
Will not occur.

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

**Possibility of Hazardous Reactions**
Will not occur.

**Conditions to Avoid**
None identified.

**Incompatible Materials**
Strong acids.

**Hazardous decomposition products**
No data available.
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 LD50 Rat >90 mL/kg
- Potassium pyrophosphate (7320-34-5)
  - Oral LD50 Mouse 2000 mg/kg
- 2-Butoxyethanol (111-76-2)
  - Oral LD50 Rat 470 mg/kg
  - Dermal LD50 Rabbit 99 mg/kg
- Inhalation LC50 Rat 450 ppm 4 h
- Sodium Metaborate (10555-76-7)
  - Oral LD50 Rat 2330 mg/kg (related to Sodium metaborate)

Immediate Effects
No information on significant adverse effects.

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>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol</td>
<td>111-76-2</td>
</tr>
</tbody>
</table>

- ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
- IARC: Monograph 88 [2006](Group 3 (not classifiable))
- DFG: Category 4 (no significant contribution to human cancer)

Germ Cell Mutagenicity
No data available.

Reproductive Toxicity
No data available.
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.

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### Section 12 - ECOLOGICAL INFORMATION

#### Component Analysis - Aquatic Toxicity

<table>
<thead>
<tr>
<th>Substance</th>
<th>Aquatic Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium pyrophosphate</td>
<td>7320-34-5</td>
</tr>
<tr>
<td>Fish:</td>
<td>LC50 96 h Oncorhynchus mykiss &gt;100 mg/L</td>
</tr>
<tr>
<td>Invertebrate:</td>
<td>EC50 48 h water flea &gt;100 mg/L</td>
</tr>
<tr>
<td>2-Butoxyethanol</td>
<td>111-76-2</td>
</tr>
<tr>
<td>Fish:</td>
<td>LC50 96 h Lepomis macrochirus 1490 mg/L [static]; LC50 96 h Lepomis macrochirus 2950 mg/L</td>
</tr>
<tr>
<td>Invertebrate:</td>
<td>EC50 48 h Daphnia magna &gt;1000 mg/L EPA</td>
</tr>
</tbody>
</table>

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### Section 13 - DISPOSAL CONSIDERATIONS

**Disposal Methods**
Waste must be handled in accordance with all federal, state, provincial, and local regulations. In case of large spills, follow all facility Emergency Response Procedures. Do not allow this material into sewers/water supplies. Do not reuse container. Dispose of container and any unused contents in accordance with Federal, State, Provincial and Local Waste Regulations.

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### Section 14 - TRANSPORT INFORMATION

**US DOT Information:**
No Classification assigned.

**TDG Information:**

No Classification assigned.

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### Section 15 - REGULATORY INFORMATION

**U.S. Federal Regulations**

None of this product's 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.

**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>2-Butoxyethanol</td>
<td>111-76-2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Not listed under California Proposition 65**

**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>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol</td>
<td>111-76-2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Component Analysis - Inventory**

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

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</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>
</tr>
</tbody>
</table>

**Potassium pyrophosphate (7320-34-5)**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</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>No</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 Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR’s Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of
Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.