Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
E-Kleen 156

Product Use
Aluminum Cleaner.

Details of the supplier of the safety data sheet
Electrochemical Products Inc.
17000 West Lincoln Ave
New Berlin, WI 53151
Phone: 262-786-9330
Emergency Phone #: NCEC (#EPI-29003) +1 202 464 2554, +44 1865 407333
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 - Inhalation - Vapor - Category 1
Skin Corrosion/Irritation - Category 1
Serious Eye Damage/Eye Irritation - Category 1
Hazardous to the Aquatic Environment - Acute - Category 2

GHS Label Elements

Symbol(s)

Signal Word
Danger

Hazard Statement(s)
Fatal if inhaled
Causes severe skin burns and eye damage
Toxic to aquatic life

Precautionary Statement(s)
Safety Data Sheet

Material Name: E-Kleen 156
SDS ID: EPI-0380c

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>60-80</td>
</tr>
<tr>
<td>7664-38-2</td>
<td>Phosphoric acid</td>
<td>10-20</td>
</tr>
<tr>
<td>79-14-1</td>
<td>Hydroxyacetic acid</td>
<td>5-10</td>
</tr>
<tr>
<td>NA1</td>
<td>Surfactants</td>
<td>5-10</td>
</tr>
</tbody>
</table>

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
Remove contaminated shoes and clothing. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. If skin surface is not damaged, clean affected area thoroughly with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists.

Eyes
Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.

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

Section 5 - FIRE FIGHTING MEASURES

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

Hazardous Combustion Products
Toxic gases/fumes are given off during burning or thermal decomposition.

Fire Fighting Measures
Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this SDS.

Methods and Materials for Containment and Cleaning Up
Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps. Sweep up material and place into a sealable, properly labeled container for disposal.

Environmental Precautions
Do not flush to sewer. Comply with regulations for spill reporting.
Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling
Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing.

Conditions for Safe Storage, Including any Incompatibilities
Store in a well-ventilated place. Keep container tightly closed
Store locked up
Store in a well-ventilated place. Keep container tightly closed.

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>Phosphoric acid</td>
<td>1 mg/m3 TWA</td>
<td>3 mg/m3 STEL</td>
<td>1 mg/m3 TWA</td>
<td>1 mg/m3 TWA</td>
<td>1 mg/m3 TWA LMPE-PPT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 mg/m3 STEL [LMPE-CT]</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
Wear chemical goggles and face shield.
Skin Protection
The use of protective coveralls and long sleeved clothing is recommended for prolonged or repeated contact.

Respiratory Protection
If ventilation is not sufficient to effectively prevent buildup of vapor/mist/fume/dust, appropriate NIOSH/MSHA respiratory protection must be provided.

Glove Recommendations
Wear impervious gloves.

Protective Materials
Eye wash fountain and emergency showers are recommended. Use good industrial hygiene practices in handling this material.

---

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>light beige solution</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
</tr>
<tr>
<td>Color</td>
<td>Pale yellow</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>&lt;1</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>Not available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</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>
<tr>
<td>Vapor Density (air=1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity (water=1)</td>
<td>1.13 - 1.16</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Complete</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility (Other)</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
Avoid extreme heat.

Incompatible Materials
Avoid contact with alkalies and bases.

Hazardous decomposition products
None identified.

Thermal decomposition products
Oxides of Carbon, Nitrogen and Phosphorous may be emitted if product burns.

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
Phosphoric acid (7664-38-2)
Oral LD50 Rat 1530 mg/kg
Dermal LD50 Rabbit 2740 mg/kg
Inhalation LC50 Rat >850 mg/m3 1 h
Hydroxyacetic acid (79-14-1)
Oral LD50 Rat 1950 mg/kg
Inhalation LC50 Rat 7100 µg/m3 4 h

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**
None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA

**Germ Cell Mutagenicity**
No data available.

**Tumorigenic Data**
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>Hydroxyacetic acid</td>
<td>79-14-1</td>
</tr>
<tr>
<td>Fish:</td>
<td>LC50 96 h Brachydanio rerio &gt;5000 mg/L [static]</td>
</tr>
</tbody>
</table>

---

**Section 13 - DISPOSAL CONSIDERATIONS**

**Disposal Methods**
Waste must be handled in accordance with all federal, state, provincial, and local regulations. Transport waste material to an authorized waste location, or incinerate under controlled conditions. Dispose of
waste material according to Local, State, Federal, and Provincial Environmental Regulations. Do not allow this material to drain into sewers/water supplies.

Section 14 - TRANSPORT INFORMATION

US DOT Information:
Shipping Name: Corrosive Liquid, (Contains: Phosphoric Acid, liquid)
Hazard Class: 8
UN/NA #: UN1804
Packing Group: II
Required Label(s): Corrosive

TDG Information:
Shipping Name: Corrosive Liquid, (Contains: Phosphoric Acid, liquid)
Hazard Class: 8
UN#: UN1804
Packing Group: II
Required Label(s): Corrosive

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations
This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

<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>Phosphoric acid</td>
<td>7664-38-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CERCLA:</td>
<td>5000 lb final RQ; 2270 kg final RQ</td>
<td></td>
<td></td>
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</tbody>
</table>

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>Phosphoric acid</td>
<td>7664-38-2</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.
Safety Data Sheet

Material Name: E-Kleen 156

<table>
<thead>
<tr>
<th>Component</th>
<th>Inventory</th>
<th>DCI Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>1 %</td>
<td>7664-38-2</td>
</tr>
<tr>
<td>Hydroxyacetic acid</td>
<td>1 %</td>
<td>79-14-1</td>
</tr>
</tbody>
</table>

Component Analysis - Inventory

Water (7732-18-5)

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<thead>
<tr>
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</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>
<td>Yes</td>
</tr>
</tbody>
</table>

Phosphoric acid (7664-38-2)

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

Hydroxyacetic acid (79-14-1)

<table>
<thead>
<tr>
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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>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: 2 Fire: 0 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

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; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA -
Other Information

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