Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
E-Kleen 120

Product Use
Alkaline 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 #: 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 - Oral - Category 4
Acute Toxicity - Dermal - Category 4
Skin Corrosion/Irritation - Category 1
Serious Eye Damage/Eye Irritation - Category 1
Carcinogenicity - Category 2
Hazardous to the Aquatic Environment - Acute - Category 3
Hazardous to the Aquatic Environment - Chronic - Category 3

GHS Label Elements

Symbol(s)

Signal Word
Danger

Hazard Statement(s)
Harmful if swallowed.
Harmful in contact with skin.
Causes severe skin burns and eye damage.
Suspected of causing cancer.
Harmful to aquatic life with long lasting effects.

Precautionary Statement(s)

Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
Do not breathe dusts or mists.

Response
IF exposed or concerned: Get medical advice/attention.
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.
Take off contaminated clothing and wash 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.

Statement of Unknown Toxicity
0% of the mixture consists of ingredient(s) of unknown acute toxicity.

---

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS</th>
<th>Component Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1310-73-2</td>
<td>Sodium Hydroxide</td>
<td>50-80</td>
</tr>
<tr>
<td>6834-92-0</td>
<td>Sodium metasilicate</td>
<td>15-25</td>
</tr>
<tr>
<td>497-19-8</td>
<td>Disodium carbonate</td>
<td>5-10</td>
</tr>
<tr>
<td>7722-88-5</td>
<td>Tetrasodium pyrophosphate</td>
<td>5-10</td>
</tr>
</tbody>
</table>
Safety Data Sheet

Material Name: E-Kleen 120

| 18662-53-8 | Nitrilotriacetic acid, trisodium salt monohydrate | 1-5 |
| NA | Surfactants | 3-5 |

**Section 4 - FIRST AID MEASURES**

**Inhalation**
If inhaled, immediately remove the affected person to fresh air. If the affected person is not breathing, apply artificial respiration. Call a physician if symptoms develop or persist.

**Skin**
Immediately flush skin with lots of running water for 30 minutes. Remove contaminated clothing and shoes. Wash before reuse. Get immediate medical attention. If skin still feels slippery, caustic maybe still present in large enough quantities to cause rash burn. Continue to wash the affective area until it does not feel slippery.

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

**Ingestion**
If conscious, drink large quantities of water or acidic beverages like tomato or orange juice or carbonated soft drinks. If vomiting does occur administer additional water. Never give anything by mouth to a person who is unconscious or is having convulsions. Call a physician immediately.

**Section 5 - FIRE FIGHTING MEASURES**

**Extinguishing Media**

**Suitable Extinguishing Media**
Water spray, dry chemical, carbon dioxide.

**Unsuitable Extinguishing Media**
None identified.

**Special Hazards Arising from the Chemical**
Contact with some metals, particularly magnesium, aluminum, zinc (galvanized) can rapidly generate hydrogen which can be explosive.

**Hazardous Combustion Products**
None known.

**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
Isolate area. Keep unnecessary personnel away. Wear appropriate protective equipment during cleanup.

Methods and Materials for Containment and Cleaning Up
Avoid the generation of dusts during clean-up. Scoop up gross quantities of spilled material. Sweep up remaining material and dispose of contaminated material.

Environmental Precautions
If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with product. (DO NOT USE SAWDUST). Neutralize the spilled material before disposal. Avoid inhalation of dust from the spilled material. Avoid contact with skin and eyes. Neutralize with dilute acid. Flush spill area with water followed by liberal coverage of sodium bicarbonate.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling
Avoid getting this material into contact with your skin and eyes.

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

Component Exposure Limits

<table>
<thead>
<tr>
<th>Component</th>
<th>Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Hydroxide</td>
<td>1310-73-2</td>
</tr>
<tr>
<td>ACGIH:</td>
<td>2 mg/m3 Ceiling</td>
</tr>
<tr>
<td>NIOSH:</td>
<td>2 mg/m3 Ceiling</td>
</tr>
<tr>
<td></td>
<td>10 mg/m3 IDLH</td>
</tr>
<tr>
<td>OSHA (US):</td>
<td>2 mg/m3 TWA</td>
</tr>
<tr>
<td>Mexico:</td>
<td>2 mg/m3 Ceiling</td>
</tr>
<tr>
<td>Tetrasodium pyrophosphate</td>
<td>7722-88-5</td>
</tr>
<tr>
<td>NIOSH:</td>
<td>5 mg/m3 TWA</td>
</tr>
</tbody>
</table>
EU - Occupational Exposure (98/24/EC) - Binding Biological Limit Values and Health Surveillance Measures
There are no biological limit values for any of this product's components.

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)
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
Use of protective coveralls and long sleeves is recommended to prevent skin contact. Use of an impervious apron is recommended.

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
Use of impervious gloves is recommended.

Protective Materials
Eye wash fountain and emergency showers are recommended.

---

**Section 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Appearance</th>
<th>White to Light Tan Powder</th>
<th>Physical State</th>
<th>Powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>Not available</td>
<td>Color</td>
<td>Light Tan Powder</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not available</td>
<td>Boiling Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not available</td>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point Range</td>
<td>Not available</td>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition</td>
<td>Not available</td>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Explosive Limit</td>
<td>Not available</td>
<td>Decomposition</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper Explosive Limit</td>
<td>Not available</td>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
</tbody>
</table>
### Section 10 - STABILITY AND REACTIVITY

**Reactivity**
Explosive HYDROGEN GAS may be released if aqueous solutions of this material come into contact with reactive metals (IRON, ZINC, ALUMINUM).

**Chemical Stability**
Stable under normal conditions.

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

**Conditions to Avoid**
Avoid contact with extreme heat.

**Incompatible Materials**
This product may react with strong acids.

**Hazardous decomposition products**

**Thermal decomposition products**
Upon thermal decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

### 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:
- Sodium Hydroxide (1310-73-2)
- Dermal LD50 Rabbit 1350 mg/kg
- Sodium metasilicate (6834-92-0)
- Oral LD50 Rat 1153 mg/kg

Water Solubility | Completely | Partition coefficient: n-octanol/water | Not available
--- | --- | --- | ---
Vapor Density (air=1) | Not available | Specific Gravity (water=1) | Not available
Viscosity | Not available | Solubility (Other) | Not available
Density | Not available | VOC | 0
Disodium carbonate (497-19-8)
Oral LD50 Rat 4090 mg/kg
Dermal LD50 Mouse 2210 mg/kg
Inhalation LC50 Rat 2300 mg/m3 2 h
Tetrasodium pyrophosphate (7722-88-5)
Oral LD50 Rat 1000 - 3000 mg/kg
Nitrilotriacetic acid, trisodium salt monohydrate (18662-53-8)
Oral LD50 Rat 1100 mg/kg (related to Nitrilotriacetic acid trisodium salt)
Inhalation LC50 Rat >5 mg/L 4 h (no deaths occurred) (related to Nitrilotriacetic acid trisodium salt)

**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>IARC</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrilotriacetic acid, trisodium salt monohydrate</td>
<td>Monograph 73 [1999]; Monograph 48 [1990] (evaluated as a group) (Group 2B (possibly carcinogenic to humans))</td>
<td>Present</td>
</tr>
</tbody>
</table>

**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

Ecotoxicity
Because of the high pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

Component Analysis - Aquatic Toxicity

<table>
<thead>
<tr>
<th>Component Analysis</th>
<th>Aquatic Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Hydroxide</td>
<td>1310-73-2</td>
</tr>
<tr>
<td>Fish:</td>
<td>LC50 96 h Oncorhynchus mykiss 45.4 mg/L [static]</td>
</tr>
<tr>
<td>Sodium metasilicate</td>
<td>6834-92-0</td>
</tr>
<tr>
<td>Fish:</td>
<td>LC50 96 h Brachydanio rerio 210 mg/L [semi-static]; LC50 96 h Brachydanio rerio 210 mg/L</td>
</tr>
<tr>
<td>Disodium carbonate</td>
<td>497-19-8</td>
</tr>
<tr>
<td>Fish:</td>
<td>LC50 96 h Lepomis macrochirus 300 mg/L [static]; LC50 96 h Pimephales promelas 310 - 1220 mg/L [static]</td>
</tr>
<tr>
<td>Invertebrate:</td>
<td>EC50 48 h Daphnia magna 265 mg/L IUCLID</td>
</tr>
<tr>
<td>Nitrilotriacetic acid, trisodium salt monohydrate</td>
<td>18662-53-8</td>
</tr>
<tr>
<td>Fish:</td>
<td>LC50 96 h Pimephales promelas 93 - 170 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 175 - 225 mg/L [static]; LC50 96 h Lepomis macrochirus 252 mg/L; LC50 96 h Pimephales promelas 470 mg/L [static]; LC50 96 h Oryzias latipes 560 - 1000 mg/L; LC50 96 h Oryzias latipes 560 - 1000 mg/L [semi-static]; LC50 96 h Oncorhynchus mykiss 72 - 133 mg/L [static]; LC50 96 h Poecilia reticulata 560 - 1000 mg/L [semi-static]; LC50 96 h Poecilia reticulata 560 - 1000 mg/L; LC50 96 h Pimephales promelas 114 mg/L (related to Nitrilotriacetic acid trisodium salt)</td>
</tr>
<tr>
<td>Invertebrate:</td>
<td>LC50 48 h Daphnia magna 560 - 1000 mg/L IUCLID (related to Nitrilotriacetic acid trisodium salt)</td>
</tr>
</tbody>
</table>

---

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
As shipped, this product would be considered a D002 (corrosive) waste. The U.S. EPA has not published waste numbers for this product's components. 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.

Section 14 - TRANSPORT INFORMATION

US DOT Information:
Shipping Name: Sodium hydroxide, solid
Hazard Class: 8
UN/NA #: UN1823
Packing Group: II
Required Label(s): Corrosive

TDG Information:
Shipping Name: Sodium hydroxide, solid
Hazard Class: 8
UN#: UN1823
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>Sodium Hydroxide</td>
<td>1310-73-2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>CERCLA:</td>
<td>1000 lb final RQ; 454 kg final RQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</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>Sodium Hydroxide</td>
<td>1310-73-2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Tetrasodium pyrophosphate</td>
<td>7722-88-5</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Nitrilotriacetic acid, trisodium salt monohydrate</td>
<td>18662-53-8</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer

<table>
<thead>
<tr>
<th>Nitrilotriacetic acid, trisodium salt monohydrate</th>
<th>18662-53-8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carc:</td>
<td>carcinogen , 4/1/1989</td>
</tr>
</tbody>
</table>

**Canada Regulations**

This material is a controlled product under Canadian WHMIS regulations.

**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>Sodium Hydroxide</th>
<th>1310-73-2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1%</td>
</tr>
<tr>
<td>Sodium metasilicate</td>
<td>6834-92-0</td>
</tr>
<tr>
<td></td>
<td>1%</td>
</tr>
<tr>
<td>Disodium carbonate</td>
<td>497-19-8</td>
</tr>
<tr>
<td></td>
<td>1%</td>
</tr>
<tr>
<td>Tetrasodium pyrophosphate</td>
<td>7722-88-5</td>
</tr>
<tr>
<td></td>
<td>1%</td>
</tr>
</tbody>
</table>

**Component Analysis - Inventory**

**Sodium Hydroxide (1310-73-2)**

<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>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Sodium metasilicate (6834-92-0)**

<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>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Disodium carbonate (497-19-8)**
Section 16 - OTHER INFORMATION

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

NFPA Ratings
Health: 3 Fire: 0 Reactivity: 1
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.