1. Identification of Substance and Manufacturer:
E-VAC EVACUATION SYSTEM CLEANER CONCENTRATE PCN: 107
Use: Ultrasonic Cleaning Solution, diluted as per instructions
Manufacturer: L&R Manufacturing Company, 577 Elm Street, P.O. Box 607 Kearny, NJ 07032-0607 USA.
Publication Date: 3/20/2014  REV: L
Product information call 201-991-5330 www.lrultrasonics.com
For emergencies involving a spill, leak fire or accident contact CHEMTREC 800-424-9300 with the United States. Or (01) 703-527-3887 (USA) for International collect calls.

2. HAZARDS IDENTIFICATION

WARNING! CORROSIVE. IRRITANT. MAY BE HARMFUL IF SWALLOWED.
A: WARNING STATEMENT: Good industrial hygiene practices should be used when handling this material.
Acute Eyes: Direct contact will cause moderate to severe eye irritation.
Acute Skin: Skin irritation and rash can occur.
Acute Inhalation: Vapors may cause irritation to mucous membranes.
Acute Ingestion: Ingestion of significant quantities of this product can be toxic.
B: POTENTIAL HEALTH EFFECTS:
Chronic Effects: This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogen.
DO NOT USE DIRECTLY IN AN ULTRASONIC TANK

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>60-70</td>
</tr>
<tr>
<td>ORTHO PHOSPHORIC ACID 75%</td>
<td>7664-38-2</td>
<td>20-30</td>
</tr>
<tr>
<td>SODIUM BUTOXYETHOXY ACETATE</td>
<td>67990-17-4</td>
<td>1-5</td>
</tr>
<tr>
<td>ISOPROPYL ALCOHOL</td>
<td>67-63-0</td>
<td>2-6</td>
</tr>
<tr>
<td>FRAGRANCE (MINT) BLEND</td>
<td>N/A</td>
<td>0.01 - 1.0</td>
</tr>
</tbody>
</table>

The exact concentration of composition has been withheld as a trade secret.

4. FIRST AID MEASURES
Eye Exposure: Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention.
Skin Exposure: Wash thoroughly with water. If irritation or redness develops, seek medical attention.
Inhalation: If respiratory irritation or distress occurs, move victim to fresh air. Seek medical attention if respiratory irritation or distress continues.
Ingestion: Seek immediate medical attention. If conscious give water to dilute stomach contents. DO NOT INDUCE VOMITING.
MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE: Skin contact may aggravate existing skin disease.

5. FIRE FIGHTING MEASURES
FIRE HAZARD DATA: NOT COMBUSTIBLE
Suitable Extinguishing Media: Extinguish surrounding fire with dry chemical, CO2 or a BC/ABC extinguisher.
Special Fire Fighting Procedures: None known
Unusual Fire and Explosion Hazards: Closed containers may burst due to build up of pressure when exposed to extreme heat.
Hazardous Decomposition Materials: (under fire conditions) Emits fumes of phosphorous and carbon oxides.

6. ACCIDENTAL RELEASE MEASURES
Cleanup and Disposal of Spill: Mop up spill and dispose of by dilution to a sanitary sewer system as permitted by local, state and federal regulations.
Regulatory Reporting: Not required

7. HANDLING AND STORAGE
Minimum/Maximum Storage Temperatures: 39 to 100 o F. Protect from freezing. Freezing will NOT damage the product. Product may be thawed in warm water and then mixed to assure homogeneity.
HANDLING: AVOID CONTACT WITH SKIN, EYES OR CLOTHING

8. EXPOSURE CONTROL/PERSONAL PROTECTION
General: These recommendations provide general guidance for handling of this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. When developing safe handling procedures, do not overlook the need to clean and dispose of the material. Waste resulting from the use of this product should be handled in accordance with Section 13: Disposal Considerations.
Exposure Guidelines: Exposure limits are recommended worker breathing limits. The following limits apply to this material:
### INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Limits</th>
<th>Ingredients</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>None established</td>
<td>Fragrance</td>
<td>None established</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>400 ppm OSHA/ACGIH TWA</td>
<td>Sodium Butoxyethoxy Acetate</td>
<td>20 ppm ACGIH</td>
</tr>
<tr>
<td>Ortho Phosphoric acid 75%</td>
<td>NIOSH REL TWQ 1mg/m3 ST 3 mg/m3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Engineering Controls:** Normal room ventilation.

**Respiratory Controls:** For reasonable uses of this material, respiratory protection should not be necessary.

**Eye/Face Protection:** Safety glasses to protect from splashing.

**Skin Protection:** Rubber or plastic gloves to avoid drying and irritation to the skin.

**Work Practice Control:** Normal hygiene in the work area should be taken when working with or handling this product.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>pH</td>
<td>Concentrate: 1.5 Recommended dilution 2.0</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Soluble</td>
</tr>
<tr>
<td>Freezing Point Range</td>
<td>≤ 32°F</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not established</td>
</tr>
<tr>
<td>Flash Point</td>
<td>None to boiling</td>
</tr>
<tr>
<td>Flammability limits (vol/vol %):</td>
<td>Lower: No Data  Upper: No Data</td>
</tr>
<tr>
<td>Percent volatile by volume</td>
<td>Approx. 75% as water</td>
</tr>
<tr>
<td>V.O.C. (calculated):</td>
<td>For Concentrate: 0.51 lbs./gal or 60.9 grams / l, For Dilution (1:31) 0.016</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable

**Conditions to be avoided:** Heat, open flame.

**Materials/Chemicals to be avoided:** Reactive metals (stainless steel) and bases.

**Decomposition Type:** Thermal: Oxides of Carbon and Phosphorous.

**Possibility of Hazardous Reactions:** WILL NOT OCCUR

**Do not use with:** amalgam separator.

### 11. TOXICOLOGICAL INFORMATION

**Acute Eye Irritation:** Irritating to eyes.

**Acute Skin Irritation:** May cause irritation to the skin.

**Acute Dermal Toxicity:** No test data found for product.

**Acute Respiratory Irritation:** No test data found for product.

**Acute Inhalation Toxicity:** May cause nose and throat irritation.

**Acute Oral Toxicity:** LD50 (rat) = 4400 mg/kg for Phosphoric acid  
LD50 (rat) = 5045 mg/kg for isopropyl alcohol  
LD50 (rat) = 14800 mg/kg for Sodium Butoxyethoxy Acetate

**Chronic Toxicity:** This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be a probable or suspected human carcinogen. No additional test data was found for this product.

### 12. ECOLOGICAL INFORMATION

**Ecotoxicological Information:** No data found.

### 13. DISPOSAL CONSIDERATIONS

This product can be disposed in sanitary sewer system, with dilution, where permitted by local, federal and state regulations. Product can be neutralized with baking soda (sodium bicarbonate) to a neutral pH.

### 14. TRANSPORTATION INFORMATION

For approved domestic ground shippers, product is classified as ORM-D, for containers of one (1) gallon or smaller shipped by domestic ground transportation. For all other shippers, containers Corrosive liquid, n.o.s. For air or export shipments the classification is Corrosive Liquid, Acidic, inorganic n.o.s. (Contains Phosphoric Acid), class 8. UN 3264, PG III. Do not stack cartons more than five high.

### 15. REGULATORY INFORMATION

Inventory Issues: All components of this product are listed on the U.S. TSCA, Canadian DSL, European EINECS/ELINS chemical listings.

### 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>National Fire Protection Association</th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Special</th>
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</thead>
<tbody>
<tr>
<td>Hazard Rating, NFPA</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>--</td>
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</table>

**MSDS CHANGES**

<table>
<thead>
<tr>
<th>REV</th>
<th>DATE</th>
<th>DESCRIPTION OF CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>8/2/2013</td>
<td>Update</td>
</tr>
<tr>
<td>L</td>
<td>3/20/2014</td>
<td>SDS Format</td>
</tr>
</tbody>
</table>

**Disclaimer:** The information herein is given in good faith but no warranty expressed or implied is made. This E-Vac Evacuation System Cleaner Concentrate SDS was prepared by L&R Manufacturing Company.