1. PRODUCT AND COMPANY IDENTIFICATION

EVERON (TM) SMT REPLENISHER II

Revision date: 09/24/2004

Supplier
Rohm and Haas Electronic Materials LLC
455 Forest Street
Marlborough, MA 01752 United States of America

For non-emergency information contact: 508-481-7950
Emergency telephone number
Chemtrec 800-424-9300
Rohm and Haas Emergency 215-592-3000

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>80.0 - 90.0%</td>
</tr>
<tr>
<td>Ammonia</td>
<td>7664-41-7</td>
<td>&lt;10.0%</td>
</tr>
<tr>
<td>Lead acetate</td>
<td>301-04-2</td>
<td>&lt;0.01%</td>
</tr>
<tr>
<td>EDTA disodium salt</td>
<td>139-33-3</td>
<td>&lt;0.1%</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance
Form: liquid
Colour: clear
Odour: ammoniacal

Hazard Summary: Alkaline liquid and vapor. Causes skin, eye, and respiratory tract irritation. Onset of symptoms may be delayed.

Potential Health Effects

Primary Routes of Entry: Inhalation, ingestion, eye and skin contact.

Eyes: Will cause severe conjunctival irritation, corneal damage, and may result in loss of vision.

Skin: Material will cause severe irritation and may cause chemical burns.

Ingestion: Swallowing may have the following effects: severe irritation of mouth, throat and digestive tract.

Inhalation: Inhalation may have the following effects: severe irritation to nose, throat and respiratory tract and possibly lung damage.

Target Organs: Eye
4. FIRST AID MEASURES

**Inhalation:** Remove from exposure. If there is difficulty in breathing, give oxygen. Seek medical attention if symptoms persist.

**Skin contact:** Wash skin with water. Continue washing for at least 15 minutes. Obtain medical attention if blistering occurs or redness persists.

**Eye contact:** Immediately flush the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

**Ingestion:** Wash out mouth with water. Have victim drink 1-3 glasses of water to dilute stomach contents. Immediate medical attention is required. Never administer anything by mouth if a victim is losing consciousness, is unconscious or is convulsing.

**Notes to physician**

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

**Flash point**
Nonflammable

**Suitable extinguishing media:**
Not readily combustible. Select extinguishing agent appropriate to other materials involved.

**Specific hazards during fire fighting:**
No specific measures necessary.

**Special protective equipment for fire-fighters:**
Wear full protective clothing and self-contained breathing apparatus.

**Further information:**
This product may give rise to hazardous vapors in a fire.

6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**
Wear suitable protective clothing.

**Environmental precautions**
Prevent the material from entering drains or water courses. Do not discharge directly to a water source. Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation.

**Methods for cleaning up**
Cover with absorbent or contain. Collect and dispose.

7. HANDLING AND STORAGE

**Handling**
Use only in well-ventilated areas. Avoid breathing vapor. Avoid contact with eyes, skin and clothing. Keep container tightly closed.

**Further information on storage conditions:**
No special precautions necessary.

**Storage**
**Storage conditions:** Store in original container. Storage area should be: cool dry well ventilated out of direct
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limit(s)

Exposure limits are listed below, if they exist.

<table>
<thead>
<tr>
<th>Component</th>
<th>Regulation</th>
<th>Type of listing</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia</td>
<td>Rohm and Haas</td>
<td>TWA</td>
<td>25 ppm</td>
</tr>
<tr>
<td></td>
<td>Rohm and Haas</td>
<td>STEL</td>
<td>35 ppm</td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>TWA</td>
<td>17 mg/m3 25 ppm</td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>STEL</td>
<td>24 mg/m3 35 ppm</td>
</tr>
<tr>
<td></td>
<td>OSHA_TRANS</td>
<td>PEL</td>
<td>35 mg/m3 50 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Regulation</th>
<th>Type of listing</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead acetate</td>
<td>ACGIH</td>
<td>TWA</td>
<td>0.05 mg/m3</td>
</tr>
<tr>
<td></td>
<td>OSHASP</td>
<td>TWA</td>
<td>0.05 mg/m3</td>
</tr>
<tr>
<td></td>
<td>OSHASP</td>
<td>OSHA_ACT</td>
<td>0.03 mg/m3</td>
</tr>
<tr>
<td></td>
<td>OSHASP</td>
<td>TWA</td>
<td>0.05 mg/m3</td>
</tr>
<tr>
<td></td>
<td>OSHASP</td>
<td>OSHA_ACT</td>
<td>0.03 mg/m3</td>
</tr>
<tr>
<td></td>
<td>OSHASP</td>
<td>REF</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Z1A</td>
<td>TWA</td>
<td>0.05 mg/m3</td>
</tr>
</tbody>
</table>

**Eye protection:** Chemical goggles or safety glasses

**Hand protection:** Neoprene gloves. Other chemical resistant gloves may be recommended by your safety professional.

**Skin and body protection:** Normal work wear.

**Respiratory protection:** No personal respiratory protective equipment normally required. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

**Engineering measures:** Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (local exhaust), and control of process conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**

- **Form:** liquid
- **Colour:** clear
- **Odour:** ammoniacal
- **pH:** 10.0 - 12.0
- **Boiling point/range:** No data available
- **Flash point:** Nonflammable
- **Vapour pressure:** Similar to water
- **Relative vapour density:** Heavier than air.
- **Water solubility:** completely soluble
- **Relative density:** 0.98 - 1.02
- **Evaporation rate:** Slower than ether
- **VOC's:** 0 g/l

**NOTE:** The physical data presented above are typical values and should not be construed as a specification.
10. STABILITY AND REACTIVITY

Hazardous reactions  Stable under normal conditions.

Conditions to avoid  contact with incompatible materials  Exposure to sunlight.  Extreme heat

Materials to avoid  Strong oxidizing agents  Reducing agents  acids

Hazardous decomposition  phosphine, oxides of phosphorus, nitrogen oxides (NOx), oxides of carbon, Ammonia, polymerization  Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Component: **Ammonia, anhydrous**
- **Acute oral toxicity**  
  LD50rat  350 mg/kg

Component: **Ammonia, anhydrous**
- **Acute oral toxicity**  
  LD50human  43 mg/kg

Component: **Lead di(acetate)**
- **Acute oral toxicity**  
  LD50rat  4,665 mg/kg

Component: **EDTA disodium salt**
- **Acute oral toxicity**  
  LD50rat  140 - 340 mg/kg

Component: **EDTA disodium salt**
- **Acute dermal toxicity**  
  LD50rabbit  5,000 mg/kg

Component: **Lead di(acetate)**
- **Subchronic toxicity**  
  IARC assessment: this product is possibly carcinogenic to humans (Group 2B).
  NTP assessment: this product is reasonably anticipated to be a human carcinogen.
  In laboratory animals, prolonged oral exposure produced carcinogenesis in the following tissues or systems:
  kidney  thyroid  testicles  pituitary gland  adrenal gland  prostate gland  mammary glands
  Prolonged or repeated exposure to low levels of lead may result in an accumulation in body tissues and exert adverse effects on blood, nervous system, heart, endocrine and immune systems, kidneys and reproductive system.

Component: **Lead di(acetate)**
- **Toxicity to reproduction**  
  Experimental studies in animals have provided evidence of embryo/fetotoxicity and birth defects.

12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

Component: **EDTA disodium salt**
- **Ecotoxicity effects**  
  **Toxicity to fish**  
  LC50Bluegill sunfish (Lepomis macrochirus)96 h  >486 mg/l

13. DISPOSAL CONSIDERATIONS
Environmental precautions: Prevent the material from entering drains or water courses. Do not discharge directly to a water source. Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation.

Disposal
Dispose in accordance with all local, state (provincial), and federal regulations. Under RCRA, it is the responsibility of the product's user to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because the product uses, transformations, mixtures, processes, etc. may render the resulting materials hazardous. Do not remove label until container is thoroughly cleaned. Empty containers may contain hazardous residues. This material and its container must be disposed of in a safe way.

14. TRANSPORT INFORMATION

DOT
Not regulated for transport

IMO/IMDG
Not regulated (Not dangerous for transport)

Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations

15. REGULATORY INFORMATION

SARA TITLE III: Section 311/312 Categorizations (40CFR370): Immediate (acute) Health Hazard

SARA TITLE III: Section 313 Information (40CFR372)
This product contains a chemical which is listed in Section 313 at or above de minimis concentrations.
SARA Title III Components: Ammonia 7664-41-7

U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D):
U.S. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
This product does not contain any substances subject to Section 12(b) export notification.

US. Toxic Substances Control Act (TSCA) All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

California (Proposition 65)
This product contains a component or components known to the state of California to cause cancer and/or reproductive harm.
Components: Lead di(acetate) 301-04-2
Thiourea 62-56-6

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>Hazard Rating</th>
<th>Health</th>
<th>Fire</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Legend
ACGIH American Conference of Governmental Industrial Hygienists
BAc Butyl acetate
PEL  Permissible Exposure Limit
STEL  Short Term Exposure Limit (STEL):
TLV  Threshold Limit Value
TWA  Time Weighted Average (TWA):

Bar denotes a revision from prior MSDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Print Date: 09/25/2004
Layout 304233