Material Safety Data Sheet

SPI Supplies Division
Structure Probe, Inc.
P.O. Box 656 West Chester, PA 19381-0656 USA
Phone: 1-(610)-436-5400 Fax: 1-(610)-436-5755
E-mail: spi3spi@2spi.com
WWW: http://www.2spi.com
Manufacturer's CAGE: 1P573

Section 1: Identification

Date Effective........... January 8, 2009
(most recent revision) Chemical Name/Synonyms...
Sodium salt of 2-
ethylhexyl acid phosphate
Chemical family........... Salt of alkyl acid
phosphate Emergencies Contacting
CHEMTREC: 24 Hour Emergency Use Only #'s......
Worldwide phone: 1-(703)-527-3887 Worldwide FAX:
1-(703)-741-6090 Toll-free phone: 1-(800)-424-
9300 USA only Product or Trade Name.... Victawet
for Electron Microscopy Synonym .................
Phosphoric acid, e-ethylhexyl ester,
sodium salt CAS
#......................... Mixture Chemical
Formula........ Mixture Product
Use................. Surfactant/wetting agent for
applications in the electron microscope laboratory.

<table>
<thead>
<tr>
<th>Hazardous Material Information System USA</th>
<th>Health</th>
<th>Fire Hazard</th>
<th>Reactivity</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA Ratings:</td>
<td>Health: 2</td>
<td>Reactivity: 0</td>
<td>Other: No Data</td>
<td></td>
</tr>
<tr>
<td>Flammability: 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SPI #02469-AB/#02469-MB Victawet® Surface Release Agent
Section 2 Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Substance Description</th>
<th>%</th>
<th>CAS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyphosphoric acids, (2-ethylhexyl) esters, sodium salts</td>
<td>22-27</td>
<td>68334-32-7</td>
</tr>
<tr>
<td>Phosphoric acid, bis(2-ethylhexyl) ester, sodium salt</td>
<td>45-50</td>
<td>141-65-1</td>
</tr>
<tr>
<td>bis(2-ethylhexyl) ester, disodium salt</td>
<td>0.001-1.500</td>
<td></td>
</tr>
<tr>
<td>Diphosphoric acid, bis(2-ethylhexyl) ester, disodium salt</td>
<td>0.001-1.500</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>0.1-2</td>
<td>7732-18-5</td>
</tr>
<tr>
<td>Phosphoric acid, momosodium salt</td>
<td>0.001-1.500</td>
<td></td>
</tr>
<tr>
<td>2-ethylhexanol, sodium salt</td>
<td>Not assigned</td>
<td></td>
</tr>
</tbody>
</table>

Section 3: Hazard Identification

**Appearance and Odor:** Light tan colored fluffy solid material

**Statement of Hazards**

Warning! Causes skin and eye burns. May cause respiratory tract irritation. Avoid Contact with Skin or Clothing. Avoid breathing vapor, mist, aerosol, or fumes. Keep container tightly closed. Use with adequate ventilation. Wash thoroughly.

**Fire and Explosion Hazards**

This product is not defined as flammable or combustible. However, it may decompose under fire conditions to give off toxic materials such as phosphorus oxides and flammable organic substituents. The product is self-extinguishing once the source of ignition is removed. The material is not sensitized to static discharge or physical impact.

**Primary Route of Exposure**

Skin and eye contact are the primary routes of exposure to this product.

**Inhalation Acute Exposure**

Inhalation of fumes or vapors may be irritating to the upper respiratory system. Skin Contact - ACUTE. Skin contact may cause severe irritation. Eye Contact - ACUTE. Eye contact may cause irritation.

**Ingestion - ACUTE**

Irritation to the mouth, throat, esophagus and stomach may be caused by ingestion of this material. It may also cause digestive tract irritation, vomiting, abdominal pain and diarrhea.

**Carcinogenicity:**

IARC: No  NTP: No  OSHA: No  AGCIH: No

Section 4: First Aid Measures

**Inhalation First Aid**

If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing becomes difficult, give oxygen and get medical attention. Skin Contact - First Aid.

**First Aid**

Immediately flush skin with plenty of water while removing contaminated clothing and shoes. Get medical attention immediately. Wash contaminated clothing before reuse. Thoroughly clean or destroy contaminated shoes. Eye Contact - First Aid.

Immediately flush eyes with large quantities of running water for a minimum of 15 minutes. If the victim is wearing contact lenses, and if easy to do, remove them. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eye and lids with water. DO NOT let the victim rub eyes(s). Do not attempt to
neutralize with chemical agents. Oils or ointments should not be used at this time. Get medical attention. **Ingestion - First Aid** Get medical attention by calling a physician or a poison control center immediately. Give victim plenty of water to drink. Do not induce vomiting unless directed to do so as directed by medical personnel. Never give anything by mouth to an unconscious or convulsing person. If vomiting occurs, keep head below hips to reduce risk of aspiration. Get medical attention immediately. **Medical Conditions Aggravated** There are no data available that address medical conditions that are generally recognized as being aggravated by exposure to this product. **Note to Physician** Attending physician should treat exposed patients symptomatically. Chemical burns on the skin should be treated as thermal burns. Flush eyes with buffered or plain irrigating solutions. If any ulceration or conjunctival injury is present, have an ophthalmologist examine the patient.

---

**Section 5: Fire Fighting Measures**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flash Point</strong></td>
<td>99°C (199.40°F)</td>
</tr>
<tr>
<td><strong>Cleveland Open Cup (COC)</strong></td>
<td>Auto</td>
</tr>
<tr>
<td><strong>Ignition Temperature:</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Upper Explosion Limit:</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Lower Explosion Limit:</strong></td>
<td>No data available</td>
</tr>
</tbody>
</table>
| **Extinguishing Media:**         | Use water fog or spray, dry chemical, foam or carbon dioxide extinguishing agents. **Fire Fighting Procedures:** As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate non-essential personnel from the fire area. Fire fighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. If possible, remove containers from the fire area. High pressure water may spread product from broken containers increasing contamination or fire hazard. Contaminated buildings, areas and equipment must not be used until they are properly decontaminated. Dike fire water for later disposal. Do not allow contaminated water to enter waterways. **Fire and Explosion Hazards** This product is not defined as flammable or combustible. However, it may decompose under fire conditions to give off toxic materials such as phosphorous oxides and flammable organic substituents. The product is self-extinguishing once the source of ignition is removed. **Other Fire and Explosion Hazards** No other explosion hazards of this product are known. **Hazardous Products/Combustion** Under fire conditions this product may support combustion and decompose to give off flammable alkene and phosphoric oxides as well as carbon oxides. The product is self-extinguishing once the source of ignition is removed. It is not sensitive to static discharge.

---

**Section 6: Accidental Release Measures**

**Clean up:** Stop source of spill. Dike area to prevent spill from spreading. Soak up liquid with suitable absorbent such as clay,
sawdust, or kitty litter. Sweep up absorbed material and place in a chemical waste container for disposal. CAUTION! The spill area may be slippery. Cover spill area with a slurry of powdered Alconox® or if not available, then household detergent and water. Use a still brush to work detergent into cracks and crevices. Allow to stand for two to three minutes, then flush with water. Dike the waste water for later disposal. Do not flush spilled material to the sewer or the environment.

Section 7: Handling and Storage

**Handling:** Keep away from heat, sparks, and open flames. Wear protective equipment including chemical goggles and rubber gloves to avoid contact with eyes and skin. Avoid inhalation of vapors, mists, and fumes. Personnel handling this product should wash thoroughly after contact with this product. **Storage:** Store away from foodstuffs or animal feed. Containers should be stored in a cool, dry, well-ventilated area away from flammable or incompatible materials and sources of heat or flame. Exercise due caution to prevent damage to or leakage from the container. To prevent acid build-up, do not store the product at temperatures above 49°C (120°F). This product is normally shipped in polyethylene-lined fiber cartons in bulk quantities and glass bottles in gram size quantities. **Maximum Storage Temperature:** 49°C (120°F) **General comments:** Containers should not be opened until ready for use.

Section 8: Exposure Controls and Personal Protection

**Respiratory Protection:** Use a NIOSH-approved organic vapor acid gas respirator (OVAG) with dust, mist, and fume filters to reduce potential for inhalation exposure if use conditions generate vapor, mist, or aerosol and adequate ventilation (e.g., outdoor or well ventilated area) is not available. Where exposure potential necessitates a higher level of protection use a NIOSH-approved, positive-pressure, pressure demand, air-supplied respirator. When using respirator cartridges or canisters, they must be changed frequently (following each use or at the end of the work shift) to assure breakthrough exposure does not occur. **Skin Protection:** Skin contact with this product should be prevented through the use of suitable protective clothing, gloves, and footwear selected with regard for the use condition exposure potential. **Eye Protection:** Eye contact with the liquid or its aerosol should be prevented through the use of chemical safety goggles or a face shield selected with regard for use condition exposure potential. **Ventilation Protection:** At elevated processing temperatures, or in the event that use conditions generate airborne vapor, aerosol or mist, the material should be handled in a well-ventilated area. Where adequate ventilation is not available, use a NIOSH-approved organic vapor/acid gas (OVAG)
respirator with dust, mist, and fume filter to reduce exposure. Where exposure potential under use conditions is greater, use a NIOSH-approved, positive-pressure air-supplied respirator. **Other Protection:** During the development of safe handling procedures, consideration should be given to the need for cleaning of equipment and piping systems to render them nonhazardous before maintenance and repair activities are performed. Waste resulting from these procedures should be handled in an environmentally safe manner. **Applicable Exposure Limits:** Other than any exposure limits which may be displayed in Section 8, there are no exposure limits applicable for this product or its components. **Exposure Limits/Regulatory Information (in mg/m³)**

<table>
<thead>
<tr>
<th>Substance Description</th>
<th>Agency</th>
<th>Regulatory</th>
<th>PEL</th>
<th>TLV</th>
<th>TWA</th>
<th>STEL</th>
<th>CEIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid, mono(2-ethylhexyl ester) sodium salt</td>
<td>OSHA N/D</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
<td>ACGIH N/D</td>
<td>N/D</td>
</tr>
<tr>
<td>Supplier</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
<td>Exposure Limit Descriptions:</td>
<td>Ceiling Exposure Limit PEL Permissible Exposure Limit STEL Short Term Exposure Limit TLV Threshold Limit Value TWA Time Weighted Average</td>
</tr>
</tbody>
</table>

**Section 9: Physical and Chemical Properties**

- **Vapor pressure (mm Hg):** No data available
- **Vapor density (air=1):** No data available
- **Evaporation rate:** No data available
- **Boiling point:** No data available
- **Odor threshold (ppm):** No data available
- **Specific gravity:** No data available
- **Bulk density:** 9.7 pounds/gallon @ 25°C (77°F)
- **Solubility in water:** < 1% @ 25°C (77°F)
- **Solubility in other solvents:** Not determined
- **Coefficient of oil/water:** No data available
- **Pour point:** No data available
- **Melting point:** 7.2 (0.5% solution)
- **Cloud point:** No data available
- **Flash point:** 93°C (199°F)
- **Flash method:** Cleveland Open Cup (COC)
- **Upper explosion limit:** No data available
- **Lower explosion limit:** No data available
- **Auto ignition temperature:** No data available
- **Viscosity:** >100,000 cps @ 38°C(100°F)

**Section 10: Stability and Reactivity**

**Chemical Stability:** The product is stable at ambient temperatures and atmospheric pressures. It is not self-reactive and has an almost infinite shelf life under sealed conditions. It is not sensitive to physical impact or static discharge. Loss of residual moisture will occur at temperatures above 100°C (212°F). The residue will emit a flammable alkene if heated to temperatures above 160°C (320°F). **Incompatibilities** This product is incompatible with strong oxidizers, strong acids, and strong
alkalis. It hydrolyses slowly at ambient temperatures in acidic or alkaline aqueous solutions. **Polymerization** Hazardous polymerization is not expected to occur. **Decomposition:** Under fire conditions the product supports combustion and decomposes to give off toxic materials such as phosphorous oxides and oxides of carbon. **Conditions to avoid:** Under wet alkaline or acidic condition, prolonged storage at elevated temperatures should be avoided. See Section 8, "Storage".

**Section 11: Toxicological Information**

**Toxicological - Inhalation** Inhalation toxicity data are not available for this product. However, inhalation may be expected to cause irritation to the upper respiratory system. **Inhalation Chronic Exposure** There is no specific information available for this product. However, over-exposure may cause irritation of the nose, throat and upper respiratory tract. **Toxicological - Dermal** Dermal toxicity data is not available for this product. However, skin contact, especially if prolonged or repeated, may cause moderate to severe irritation. **Skin Contact - Chronic** Skin contact may cause severe irritation. Prolonged or repeated contact may cause defatting of the skin with drying and cracking. **Toxicological - Eye** The acute eye effects of this product have not been determined. However, eye contact is expected to cause severe irritation or possibly burns. **Toxicological - Ingestion** The acute oral LD50 (rats) is > 4640 mg/Kg **Ingestion - Chronic** Chronic ingestion effects of this product are not known. However, ingestion can result in severe irritation or burns of the mouth, throat, esophagus and stomach. **Carcinogenicity/Mutagenicity** The carcinogenic/mutagenic properties of this product are not known. **Reproductive Effects:** The reproductive toxicity of this product is not known. **Neurotoxicity** The neurotoxic effects of this product are not known. **Other Toxicological Effects** The primary routes of exposure to ETHYLENE OXIDE are inhalation and skin contact. This material is an irritant to mucous membranes and corrosive to skin and eyes. It is a skin sensitizer. Ethylene oxide is toxic by ingestion, moderately toxic by inhalation. Poisoning may affect the liver, kidneys, blood, respiratory system and reproductive system. It is a central nervous system depressant. Poisoning may produce vomiting, recurring periodically for hours, accompanied by nausea and headache. Delayed central nervous system symptoms may occur with dyspnea, cyanosis, drowsiness, weakness, incoordination, disorientation and unconsciousness. Ethylene oxide has been classified as a carcinogen by the Occupational Safety and Health Administration (OSHA). **Target Organs:** Over-exposure to this product may effect the skin, eyes, and respiratory system.

**Section 12: Ecological Information**
Ecotoxicological Information: The ecological toxicity of this product is not known. Distribution: Other ecological information on this product is not known. Chemical Fate: Chemical fate information on this product is not known.

Section 13: Disposal Considerations

Material that can not be used or chemically reprocessed should be disposed of in accordance with all applicable regulations. Product containers and/or bottles should be thorough emptied before disposal. NOTE: State and local regulations as well as those in other countries might be more stringent than USA federal regulations. Container Disposal: Containers and bottles should be drained of all residual product before disposal. Empty containers should be disposed of in accordance with all applicable laws and regulations.

Section 14: Transport Information

Shipping Description: This product is not regulated for shipping. Required Labels: Not regulated for shipping; no transport labels required. Environmental Hazardous Substance: This product does not contain an environmentally hazardous substance per 49 CFR 172.101, Appendix.

Section 15: Regulatory Information

Component phosphoric acid, mono (2-ethyl hexyl) ester, sodium salt, is subject to the following: Environmental List: DSL Domestic Substance List - Canada TSCA Toxic Substance Control Act - listed. Other Regulatory Information: No other regulatory information is available on this product. WHMIS Hazard Class: D-2B, E Hazard Rating Source: HMIS Health 2 Reactivity: 0 Flammability: 1 California Prop. 65: Proposition 65 requires manufacturers or distributors of consumer products into the State of California to provide a warning statement if the product contains ingredients for which the State has found to cause cancer, birth defects or other reproductive harm. If this product contains an ingredient listed by the State of California to cause cancer or reproductive toxicity, it will be listed below: No such components exist in this product.

Section 16: Other Information
Disclaimer of Liability:
Caution! Do not use SPI Supplies products or materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid, or blood; or prolonged contact with mucous membranes. Products offered by SPI Supplies are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. SPI Supplies will not provide to customers making devices for such applications any notice, certification, or information necessary for such medical device use required by US FDA (Food and Drug Administration) regulation or any other statute. SPI Supplies and Structure Probe, Inc. make no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues of fluids.

**********************************************************************

The information and recommendations set forth above are taken from sources believed to be accurate as of the date hereof, however SPI Supplies and Structure Probe, Inc. make no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assume no liability to any user thereof. The information contained in this sheet does not constitute a hazard assessment and should not be used in place of the user's own assessment of work place risks as required by other health and safety legislation. Be aware of the Structure Probe, Inc. Copyright Policy. Structure Probe, Inc. grants a nonexclusive license to make unlimited copies of this safety sheet for internal use only. Quite obviously, this information would pertain only to this material when purchased from SPI Supplies as product from other sources, with other ingredients and impurity levels could have substantially different properties.

ON-LINE

To Ask a Question or Make a Comment

ON-LINE

To Place an Order or Request a Quote

Return to:

- Victawet® Surface Release Compound
- SPI Supplies MSDS Safety Sheets Table of Contents
- SPI Supplies Catalog Table of Contents
- SPI Supplies Home Page

© Copyright 1999 - . By Structure Probe, Inc.

Contacting SPI Supplies and Structure Probe, Inc.

All rights reserved.

All trademarks and trade names are the property of their respective owners.

Privacy Policy

Worldwide Distributors, Representatives, and Agents