1. PRODUCT AND COMPANY IDENTIFICATION

Product Identity: Cloroben PT-4
Intended Use: Flow improver for drainage and plumbing systems

Manufacturer: Hercules Chemical Company, Inc.
111 South Street
Passaic, New Jersey 07055-7398

Information Telephone: (800) 221-9330
Internet: http://www.herchem.com

Emergency Phone: CHEMTREC: (800) 424-9300

MSDS Date of Preparation: 04/16/08

2. HAZARDS IDENTIFICATION

Appearance and Odor: This product is a clear amber liquid with a distinct pine scent.

Emergency Overview
WARNING!
Combustible liquid and vapor.
Causes eye irritation.
May cause skin irritation.
Inhalation of vapors may cause mucous membrane and respiratory tract irritation.
May cause allergic skin reaction.

Primary route of Exposure: Inhalation, skin, ingestion

Ingestion: Swallowing may cause nausea, vomiting and diarrhea. May be harmful if several ounces are swallowed.

Inhalation: Inhalation of vapors or mists may cause irritation of the nose, throat and upper respiratory tract. High concentrations may cause headache and nausea.

Eye: May cause moderate to severe irritation. Eye injury is possible.

Skin: May cause irritation with redness and swelling. May cause sensitization.
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terpene Hydrocarbons</td>
<td>68956-56-9</td>
<td>50-60%</td>
</tr>
<tr>
<td>Non-ionic Surfactant</td>
<td>Proprietary</td>
<td>1-5%</td>
</tr>
<tr>
<td>Triethanolamine-dodecylbenzenesulfonate</td>
<td>27323-41-7</td>
<td>10-20%</td>
</tr>
<tr>
<td>Alkanolamide</td>
<td>Proprietary</td>
<td>1-5%</td>
</tr>
<tr>
<td>Potassium Carbonate</td>
<td>584-08-7</td>
<td>1-5%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Eye: Flush victim's eyes with large quantities of water, for at least 15 minutes, holding the eyelids apart. Get immediate medical attention.

Skin: Wash with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. If irritation develops, get medical attention.

Ingestion: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, have qualified person administer oxygen. Get medical attention.

Inhalation: Rinse mouth with water. DO NOT INDUCE VOMITING. Give 1-2 glasses of water to dilute. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Get immediate medical attention.

Other: Note to Physician: Use caution in removing from stomach with gastric lavage. Aspiration may cause chemical pneumonia.

5. FIRE FIGHTING MEASURES

Flash Point: 130°F (54°C) TCC

Autoignition Temperature: Not determined

Flammable Limits:  

LEL Not determined  
UEL Not determined

Extinguishing Media: Use water fog or spray, carbon dioxide, dry chemical or foam. Do not use direct water stream – will spread fire. Cool fire exposed containers and structures with water.

Unusual Fire or Explosion Hazards: Combustible liquid and vapors. Avoid heat, sparks and flames. Guard against spontaneous combustion of improperly discarded rags contaminated with this materials.

Special Fire-Fighting Instructions: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing.

Hazardous Combustion Products: Burning may produce carbon monoxide, carbon dioxide and oxides of nitrogen and sulfur.

Explosion Data (sensitivity to mechanical impact or static discharge): High concentrations of vapors may form explosive mixtures with air.

6. ACCIDENTAL RELEASE MEASURES

Eliminate all sources of ignition. Ventilate area. Wear appropriate protective clothing as described in Section 8. Collect using an inert absorbent material and place in appropriate containers for disposal. Caution: Do not use combustible or flammable absorbents. Wash spill area with water. Prevent spill from entering sewers and water courses. Report releases as required by local, provincial and federal authorities.
7. HANDLING AND STORAGE

**Handling:** Do not get in eyes, on skin or clothing. Avoid contact with any other chemicals. Keep product away from heat, sparks and open flames. Use with adequate ventilation. Avoid breathing vapors and mists. Do not take internally. Wash thoroughly with soap and water after handling. Keep containers closed when not in use.

Do not reuse containers. Empty containers retain product residues can be hazardous. Follow all MSDS precautions when handling empty containers.

**Storage:** Store in a cool, dry, well ventilated area away from incompatible materials. Store only in original container. Keep away from heat, sparks and open flames. Do not store below –12°C (10°F). If frozen, thaw and shake well before using.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Exposure Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terpene Hydrocarbons</td>
<td>30 ppm AIHA WEEL (as d-Limonene)</td>
</tr>
<tr>
<td>Non-ionic Surfactant</td>
<td>None Established</td>
</tr>
<tr>
<td>Triethanolamine-dodecylbenzenesulfonate</td>
<td>None Established</td>
</tr>
<tr>
<td>Alkanolamide</td>
<td>None Established</td>
</tr>
<tr>
<td>Potassium Carbonate</td>
<td>None Established</td>
</tr>
</tbody>
</table>

**Engineering Controls:** Use with general or local exhaust ventilation to maintain exposures below the occupational exposure limits.

**Respiratory Protection:** None normally needed. In operations where the occupational exposure limits are exceeded, a NIOSH approved respirator with organic vapor cartridges or supplied air respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with local authority and good industrial hygiene practice.

**Skin Protection:** Avoid skin contact. Wear impervious gloves such as nitrile or viton.

**Eye Protection:** Chemical safety goggles recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance And Odor:** This product is a clear amber liquid with a distinct pine scent.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>104°C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Heavier than air</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not determined</td>
</tr>
<tr>
<td>Solubility In Water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable (Buac=1)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.95</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Less than -18°C</td>
</tr>
<tr>
<td>Octanol/Water Coefficient</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC Content</td>
<td>620-650 g/L</td>
</tr>
<tr>
<td>Viscosity</td>
<td>20 cSt/mm2/s @ 40°C</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

**Stability:** Stable under normal storage and handling conditions.

**Incompatibility:** Strong oxidizing agents, strong acids. Avoid heat, sparks and all other sources of ignition.

**Hazardous Decomposition Products:** Burning may produce carbon monoxide, carbon dioxide and oxides of nitrogen and sulfur.
Hazardous Polymerization: May occur when mixed with strong acids and aluminum chloride.

11. TOXICOLOGICAL INFORMATION

HEALTH HAZARDS:
Ingestion: Swallowing may cause nausea, vomiting and diarrhea. May be harmful if several ounces are swallowed.
Inhalation: Inhalation of vapors or mists may cause irritation of the nose, throat and upper respiratory tract. High concentrations may cause headache and nausea.
Eye: May cause moderate to severe irritation. Eye injury is possible.
Skin: May cause irritation with redness and swelling. May cause sensitization.
Sensitization: Possible skin sensitizer.
Chronic: None known.
Carcinogenicity: None of the components is listed as a carcinogen or suspected carcinogen by IARC, NTP or OSHA.
Mutagenicity: None known.
Medical Conditions aggravated by Exposure: Pre-existing skin and respiratory conditions.

Acute Toxicity Values:
- Terpene Hydrocarbons: Oral Rat LD50 >3,000 mg/kg
- Non-Ionic Surfactant: Oral Rat LD50 >500 mg/kg, Skin Rat LD50 >2000 mg/kg, Inhalation Rat LC50 >20 mg/L/1 hour
- Triethanolamine-dodecylbenzenesulfonate: Oral Rat LD50 >10,800 mg/kg, Skin Rabbit LD50 >23,200 mg/kg
- Alkanolamide: No toxicity data is available
- Potassium Carbonate: Oral Rat LD50 4090 mg/kg, Inhalation Rat LC50 2.3 mg/L/2 h

12. ECOLOGICAL INFORMATION

No data available for product.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state and federal environmental regulations.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>Proper Shipping Name</th>
<th>DOT</th>
<th>TDG</th>
<th>MEX</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not regulated for transport</td>
<td>Not regulated for transport</td>
<td>Not regulated for transport</td>
</tr>
<tr>
<td>UN Number:</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Labels Required:</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Hazard Class / Packing Group:</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

(Excepted from Dangerous Goods in small means of containments when shipped ground - Section 1.33 of the TDG)
15. REGULATORY INFORMATION

Inventory Status.
TSCA: Complies
DSL: Complies

U.S. Federal Regulations
SARA 313.
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Acute Health Hazard: yes
Chronic Health Hazard: No
Fire Hazard: yes
Sudden Release of Pressure Hazard No
Reactive Hazard No

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triethanolamine dodecylbenzene sulfonate</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

California Proposition 65
This product contains no chemicals requiring reporting under Proposition 65.

This product has been classified under the CPR and this MSDS discloses information elements required by the CPR.

Canadian WHMIS Classification: Class B-3 (Combustible Liquid) Class D-2-B (Eye and Skin Irritant, Skin TDG)

Canadian CEPA: This product complies with TSCA and DSL/NDSL.

WHMIS: Class B-3 (Combustible Liquid) Class D-2-B (Eye and Skin Irritant, Skin Sensitizer)

16. OTHER INFORMATION

NFPA Rating: Health = 1 Fire = 2 Reactivity = 0
HMIS Rating: Health = 2 Fire = 2 Reactivity = 0

Disclaimer
The information provided on this MSDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.