1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Cloroben CloroClean
Recommended Use: Use in drains
Supplier Address: Hercules Chemical Company, Inc.
111 South St.
Passaic, NJ 07055
TEL: 973-778-5000

Company Emergency Phone Number: 1-800-221-9330
Emergency Telephone Number: Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview
POISON
MAY BE FATAL IF SWALLOWED
Corrosive
Harmful by inhalation
The product causes burns of eyes, skin and mucous membranes
Reacts violently with water

Appearance: Off-white granular solid w/gray granules.
Odor: Odorless.

Potential Health Effects
Principle Routes of Exposure: Skin contact, Eye contact, Ingestion, Inhalation.

Acute Effects:
- Eyes: Causes burns. Corrosive to the eyes and may cause severe damage including blindness.
- Skin: Causes burns.
- Inhalation: Harmful by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Aspiration into lungs can produce severe lung damage.
- Ingestion: Harmful if swallowed. Ingestion causes burns of the upper digestive and respiratory tract. Can burn mouth, throat, and stomach.
Chronic Effects

Possible risks of irreversible effects.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions

Preexisting eye disorders. Skin disorders. Respiratory disorders.

Potential Environmental Effects

See Section 12 for additional Ecological information

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide (granular)</td>
<td>1310-73-2</td>
<td>60-100</td>
</tr>
<tr>
<td>Aluminum (granular)</td>
<td>7429-90-5</td>
<td>1-5</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**General Advice**

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Eye Contact**

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.

**Skin Contact**

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Consult a physician.

**Inhalation**

Call a physician or Poison Control Center immediately. Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Ingestion**

Call a physician immediately. Clean mouth with water and afterwards drink plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

**Notes to Physician**

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

**Protection of First-aiders**

Use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 5. FIRE-FIGHTING MEASURES

**Flammable Properties**

Not flammable

**Flash Point**

No data available

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

**Explosion Data**

- Sensitivity to mechanical impact: Not sensitive
- Sensitivity to static discharge: Not sensitive

**Specific Hazards Arising from the Chemical**

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. Substance will react with water (some violently), releasing corrosive and/or toxic gases.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>
6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid dust formation.

Methods for Containment
Prevent further leakage or spillage if safe to do so. Prevent dust cloud.

Methods for Clean-up
Use personal protective equipment. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically and collect in suitable container for disposal. Avoid dust formation. Clean contaminated surface thoroughly.

Other Information
Do not get water inside containers. Refer to protective measures listed in sections 7 and 8.

7. HANDLING AND STORAGE

Handling
Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapors/dust. Remove and wash contaminated clothing before re-use.

Storage
Keep container tightly closed in a dry and well-ventilated place. Keep in properly labeled containers. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>Ceiling: 2 mg/m$^3$</td>
<td>Ceiling: 2 mg/m$^3$</td>
<td>10 mg/m$^3$</td>
</tr>
<tr>
<td>Aluminum (dust)</td>
<td>5mg/m$^3$</td>
<td>5mg/m$^3$</td>
<td>n/a</td>
</tr>
</tbody>
</table>

NIOSH IDLH: Immediately Dangerous to Life or Health

Engineering Controls
Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment

<table>
<thead>
<tr>
<th>Protection</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye/face Protection</td>
<td>Tightly fitting safety goggles. Face-shield.</td>
</tr>
<tr>
<td>Skin Protection</td>
<td>Impervious clothing. Impervious gloves.</td>
</tr>
<tr>
<td>Respiratory Protection</td>
<td>If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.</td>
</tr>
</tbody>
</table>

General Hygiene Considerations
Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes and clothing. Keep away from food, drink and animal feeding stuffs. Remove and wash contaminated clothing before re-use. Regular cleaning of equipment, work area and clothing.
## 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Off-white granular solid w/gray granules</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid granular</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>604°C / 1119°F</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.20</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Appreciable (42g/100cc of water)</td>
</tr>
<tr>
<td>pH</td>
<td>13-14 (0.5% aq. solution)</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>N/A</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Not applicable</td>
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<tr>
<td>Melting Point/Range</td>
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</tr>
<tr>
<td>Boiling Point/Range</td>
<td>N/A</td>
</tr>
</tbody>
</table>

## 10. STABILITY AND REACTIVITY

### Chemical Stability
Stable under recommended storage conditions

### Conditions to Avoid
Can react violently with acids and many organic compounds

### Incompatible Materials

### Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating gases and vapors.

### Hazardous Polymerization
Caustic Soda & trichloroethylene are especially hazardous since they react to form spontaneously flammable dichloroacetylene.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral Value (mg/kg)</th>
<th>LD50 Dermal Value (mg/kg)</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>140 mg/kg (rat)</td>
<td>1350 mg/kg (rabbit)</td>
<td>N/E</td>
</tr>
</tbody>
</table>

### Chronic Toxicity
Possible risks of irreversible effects.

### Carcinogenicity
There are no known carcinogenic chemicals in this product

### Reproductive Effects
This product does not contain any known or suspected reproductive hazards

### Target Organ Effects
Eyes, Skin, Respiratory system, Mucous Membrane.

### Endocrine Disruptor Information
This product does not contain any known or suspected endocrine disruptors

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity
Ecotoxicity effects.

### Mobility in Environmental Media
Will likely be mobile in the environment due to its water solubility
13. DISPOSAL CONSIDERATIONS

Waste Disposal Method
Should not be released into the environment.

Contaminated Packaging
Do not re-use empty containers.

US EPA Waste Number
D002

This product contains one or more substances that are listed with the State of California as a hazardous waste.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>Toxic; Corrosive</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name: Sodium hydroxide, solid
Hazard Class: 8
UN-No: UN1823
Packing Group: II
Description: Sodium hydroxide, solid, 8, UN1823, PG II

TDG

Proper Shipping Name: Sodium hydroxide, solid
Hazard Class: 8
UN-No: UN1823
Packing Group: II
Description: SODIUM HYDROXIDE, SOLID, 8, UN1823, PG II

MEX

Proper Shipping Name: Sodium hydroxide, solid
Hazard Class: 8
UN-No: UN1823
Packing Group: II
Description: UN1823 Sodium hydroxide, solid, 8, II

Note: Containers of 1Kg (2.2 pounds) or less can be shipped as a Consumer Commodity (Limited Quantity) in packages with a gross mass of 30 kg (66 pounds) or less.
15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Complies</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSL/NDSL</td>
<td>Yes</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Yes</td>
</tr>
<tr>
<td>ENCS</td>
<td>Yes</td>
</tr>
<tr>
<td>CHINA</td>
<td>Yes</td>
</tr>
<tr>
<td>KECL</td>
<td>Yes</td>
</tr>
<tr>
<td>PICCS</td>
<td>Yes</td>
</tr>
<tr>
<td>AICS</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>1000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>1000 lb</td>
<td></td>
</tr>
</tbody>
</table>

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

International Regulations

Mexico - Grade
Severe risk, Grade 4

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td></td>
<td>Ceiling: 2 mg/m³</td>
</tr>
</tbody>
</table>

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
D1A Very toxic materials
E Corrosive material
16. OTHER INFORMATION

Preparation Date  5/20/11

Revision Date

Revision Summary  No information available

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.

End of MSDS

End of MSDS