SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

NAME: CHLORINATED CIP SPECIAL
TYPE: Chlorinated Alkaline Cleaner
PRODUCT #: 235802

FOR INDUSTRIAL USE ONLY – KEEP OUT OF THE REACH OF CHILDREN

EMERGENCY RESPONSE INFORMATION:
CHEMTREC: 800-424-9300 24-Hour Service
Company Offices: 812-273-6000 Weekdays

PREPARED DATE: 04-01-15
PREPARED BY: David Craft

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification
- Corrosive to Metals Category 1 H290
- Acute Toxicity, Oral Category 4 H302
- Skin Corrosion/Irritation Category 1A H314
- Serious Eye Damage/Eye Irritation Category 1 H318
- Aquatic Toxicity (Acute) Category 1 H400

Signal Word
DANGER

Symbol

Hazard Statements
- H290 May be corrosive to metals.
- H314 Causes severe skin burns and eye damage.
- H302 Harmful if swallowed.
- H400 Very toxic to aquatic life.

Precautionary Statements
- P260 Do not breathe mist, spray, vapors.
- P264 Wash hands, forearms, and exposed areas thoroughly after handling.
- P273 Avoid release to the environment.
- P280 Wear eye protection, face protection, protective clothing, protective gloves.
- P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.
- P304 + P340 IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER or doctor / physician.
- P321 Specific treatment (see Section 4).
- P363 Wash contaminated clothing before reuse.
- P405 Store locked up.
- P501 Dispose of contents / container according to local, regional, national and international regulations.
SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>SYNONYM</th>
<th>CAS NO.</th>
<th>% BY WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>Caustic soda</td>
<td>1310-73-2</td>
<td>15 - 25</td>
</tr>
<tr>
<td>Sodium metasilicate</td>
<td>None</td>
<td>6834-92-0</td>
<td>15 – 25</td>
</tr>
<tr>
<td>Sodium dichloroisocyanurate</td>
<td>None</td>
<td>51580-85-0</td>
<td>1 - 10</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES:

EYES: Immediately flush with large quantities of cool water continuously for at least 15 minutes. Call a physician.

SKIN: Immediately flush with large quantities of cool water continuously for at least 15 minutes. Call a physician. Remove contaminated clothing and shoes. Do not put contaminated clothing and shoes back on. Wash clothing and shoes thoroughly in soap and water; rinse repeatedly in clean water and dry before reuse.

INGESTION: If conscious, immediately give large quantities of water. DO NOT INDUCE VOMITING. Call a physician at once. DO NOT give anything by mouth if the person is unconscious or if having convulsions.

INHALATION: Remove subject to fresh air. Give artificial respiration if necessary. Get medical attention immediately.

SIGNS AND SYMPTOMS OF EXPOSURE: Contacted areas will exhibit irritation or burns. Burns may not be immediately apparent. Eye contact may cause permanent injury, including blindness. If ingested, may cause nausea and vomiting. May act as a sensitizer.

PRIMARY ROUTE(S) OF ENTRY: Eyes, skin, inhalation.

MOST IMPORTANT SYMPTOMS / EFFECTS, ACUTE AND DELAYED:

EYE CONTACT: Causes serious eye damage.

SKIN CONTACT: Corrosive. Causes burns.

INGESTION: Harmful if swallowed.

INHALATION: Causes burns to alimentary canal and mucous membranes.

CHRONIC SYMPTOMS: None expected under normal conditions of use.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY:

If you experience any of the symptoms / effects listed above seek medical advice.

SECTION 5: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:
Use extinguishing media as appropriate for surrounding fire.

SPECIFIC HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:
Not considered flammable or explosive. Hazardous reactions will not occur under normal conditions.

ADVICE FOR FIRE FIGHTERS:
Wear self-contained breathing apparatus and full protective clothing. Use water spray to keep containers cool.

Hazardous Combustion Products: Phosphorus, phosphorus oxides, carbon dioxide, chlorine, nitrogen trichloride (explosive), cyanogen chloride.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES:
Avoid all contact with skin, eyes and clothing. Avoid breathing. Wear nitrile, neoprene, or natural rubber gloves. Goggles and faceshield necessary. Wear suitable protective clothing. Use NIOSH / MSHA approved positive pressure self-contained breathing apparatus when any material is involved in a fire.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:
Shovel up solid spills. Dispose with solid waste. Flush remainder to drain with water. Cleanup in a manner to minimize contact with incompatible materials listed in Section 10.
SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:
Wear proper safety equipment when handling this product. Handle in accordance with good industrial hygiene and safety procedures. DO NOT MIX WITH ACIDS! THIS WILL FORM TOXIC CHLORINE GAS!

CONDITIONS FOR SAFE STORAGE, INCLUDING INCOMPATIBILITIES:
Store in a cool, dry area away from heat and direct sunlight to avoid deterioration. Store away from acids and reducing agents. Keep container closed when not in use. Keep from freezing.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

<table>
<thead>
<tr>
<th>CHEMICAL IDENTITY</th>
<th>CAS NO.</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>1310-73-2</td>
<td>2 mg / M³</td>
<td>2 mg / M³*</td>
</tr>
<tr>
<td>Sodium metasilicate</td>
<td>6834-92-0</td>
<td>N.E.**</td>
<td>N.E.**</td>
</tr>
<tr>
<td>Sodium dichloroisocyanurate</td>
<td>51580-86-0</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

*Denotes ceiling limit. **Manufacturer recommends a ceiling limit of 2 mg/M³.

ENGINEERING CONTROLS: Use good ventilation. Local exhaust is recommended if TLVs are exceeded.

INDIVIDUAL PROTECTION MEASURES:
Selection of personal protective equipment should be based upon the anticipated exposure and made in accordance with OSHA's Personal Protective Equipment Standard found in 29 CFR 1910 Subpart I. The following information may be used to assist in PPE selection.

RESPIRATORY PROTECTION: In absence of proper environmental control, use NIOSH / MSHA approved positive pressure supplied air respirator for mists where airborne exposure is excessive.

SKIN PROTECTION: Impermeable type rubber gloves. Other equipment as required to avoid contact.

EYE PROTECTION: Goggles and faceshield necessary.

GENERAL HYGIENE CONSIDERATIONS: Eyewash facility and emergency shower should be in close proximity. Always wash hands after handling any chemical.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPEARANCE</td>
<td>White powder.</td>
</tr>
<tr>
<td>ODOR</td>
<td>Mild chlorine</td>
</tr>
<tr>
<td>ODOR THRESHOLD</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH (10%)</td>
<td>13.0-13.5</td>
</tr>
<tr>
<td>MELTING POINT/FREEZING POINT</td>
<td>Not determined</td>
</tr>
<tr>
<td>INITIAL BOILING POINT AND BOILING RANGE</td>
<td>Not relevant</td>
</tr>
<tr>
<td>FLASH POINT (METHOD USED)</td>
<td>Not available.</td>
</tr>
<tr>
<td>EVAPORATION RATE</td>
<td>Not available.</td>
</tr>
<tr>
<td>FLAMMABILITY (SOLID, GAS)</td>
<td>Not available.</td>
</tr>
<tr>
<td>UPPER/LOWER FLAMMABLE OR EXPLOSIVE LIMIT</td>
<td>Not available.</td>
</tr>
<tr>
<td>VAPOR PRESSURE</td>
<td>Not available.</td>
</tr>
<tr>
<td>VAPOR DENSITY</td>
<td>Not available.</td>
</tr>
<tr>
<td>SPECIFIC GRAVITY</td>
<td>Not determined</td>
</tr>
<tr>
<td>SOLUBILITY IN WATER</td>
<td>Complete.</td>
</tr>
<tr>
<td>PARTITION COEFFICIENT: N-OCTANOL/WATER</td>
<td>Not available.</td>
</tr>
<tr>
<td>AUTO-IGNITION TEMPERATURE</td>
<td>Not available.</td>
</tr>
<tr>
<td>VISCOSITY, DYNAMIC</td>
<td>Not available.</td>
</tr>
<tr>
<td>DECOMPOSITION TEMPERATURE</td>
<td>Not available.</td>
</tr>
<tr>
<td>VISCOSITY</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
SECTION 10: STABILITY AND REACTIVITY

**REACTIVITY:**
Will react with acids and ammonia to release toxic chlorine gas.

**CHEMICAL STABILITY:**
Stable under recommended handling and storage conditions (see Section 7).

**POSSIBILITY OF HAZARDOUS REACTIONS:**
Hazardous polymerization will not occur.

**CONDITIONS TO AVOID:**
Contamination with small amounts of water.

**INCOMPATIBLE MATERIALS:**
Acids, organic materials, easily chlorinated or oxidized materials, ammonia, ammonium salts, urea. DO NOT MIX WITH ACIDS! THIS WILL FORM TOXIC CHLORINE GAS!

**HAZARDOUS DECOMPOSITION PRODUCTS:**
Phosphorus, phosphorus oxides, carbon dioxide, chlorine, nitrogen trichloride (explosive), cyanogen chloride.

SECTION 11: TOXICOLOGICAL INFORMATION

**ACUTE TOXICITY:**
Not classified.

**LD50 AND LC50 DATA:**
Not available.

**ROUTES OF EXPOSURE / SYMPTOMS**

**EYES:**
DANGER! Causes burns.

**SKIN:**
DANGER! Causes burns.

**INGESTION:**
WARNING! Harmful if swallowed.

**INHALATION:**
DANGER! Causes burns to alimentary canal and mucous membranes.

**GERM CELL MUTAGENICITY:**
Not classified.

**TERATOGENICITY:**
Not available.

**CHRONIC EFFECTS / CARCINOGENICITY:**
This material contains no ingredient above de minimus concentrations known or suspected to cause cancer.

**SPECIFIC TARGET ORGAN TOXICITY (Repeated exposure):**
Not classified.

**REPRODUCTIVE TOXICITY:**
Not classified.

**SPECIFIC TARGET ORGAN TOXICITY (Single exposure):**
Not classified.

**ASPIRATION HAZARD:**
Not classified.

**COMPONENT INFORMATION**

<table>
<thead>
<tr>
<th>Component</th>
<th>Acute Oral LD50 (mg/kg)</th>
<th>Acute Dermal LD50 (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>No Data</td>
<td>1350 mg/kg</td>
</tr>
<tr>
<td>Sodium metasilicate</td>
<td>1280 mg/kg</td>
<td>2400 mg/kg</td>
</tr>
<tr>
<td>Sodium dichloroisocyanurate</td>
<td>1420 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION

**ECOTOXICITY COMPONENT INFORMATION**

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Fish Data</th>
<th>Invertebrate Toxicity Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50 brook trout: 25 ppm/24 hr; LC50 king salmon: 48 ppm; LC50 Gambusia affinis: 125 mg/L/96 hr; LC50 Bluegill: 99 mg/L/48 hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invertebrate Toxicity Data:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC50 daphnia magna: 100 ppm; EC50 shrimp: 33-100 ppm/48 hr; EC50 cockle: 330-1000 ppm/48 hr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium metasilicate</td>
<td>Freshwater Fish Data:</td>
<td>Invertebrate Toxicity Data:</td>
</tr>
<tr>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Sodium dichloroisocyanurate</td>
<td>Freshwater Fish Data:</td>
<td>Invertebrate Toxicity Data:</td>
</tr>
<tr>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

**PERSISTENCE AND DEGRADABILITY:**
Material is inorganic and not subject to biodegradation.

**BIOACCUMULATIVE POTENTIAL:**
Not available.

**MOBILITY IN SOIL:**
Not available.

**OTHER ADVERSE EFFECTS:**
This material contains no hazardous air pollutants (HAPS).
SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Normal for alkaline, chlorine and phosphate containing wastes. Sodium metabisulfite may be used to neutralize chlorine. May require pH adjustment for neutralization. Dispose in accordance with local, state and federal regulations.

SECTION 14: TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Corrosive solid, basic, inorganic, n.o.s. (contains sodium hydroxide)
HAZARD CLASS: 8
IDENTIFICATION NUMBER: UN3262
PACKING GROUP: III
EMERGENCY RESPONSE GUIDE: ERG #154

SECTION 15: REGULATORY INFORMATION

VOC: 0.0 pounds per gallon (0 grams per liter).
TSCA STATUS All ingredients are listed on the TSCA inventory.
CERCLA REPORTABLE QUANTITY 1,000 pounds for sodium hydroxide (approximately 5,000 pounds).

<table>
<thead>
<tr>
<th>SARA 311 / 312 HAZARD CLASSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACUTE HEALTH</td>
</tr>
</tbody>
</table>

SARA 312 INFORMATION Storage of 10,000 pounds or more requires filing a Tier 2 form. This material is not an extremely hazardous substance (EHS). Threshold planning quantity is 10,000 pounds.

SARA 313 INFORMATION This material contains the following substances subject to the reporting requirements of Section 313 of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>CATEGORY CODE</th>
<th>CAS NUMBER</th>
<th>% BY WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

STATE REGULATORY INFORMATION
CALIFORNIA PROPOSITION 65 California has not identified the ingredients listed in Section 3 as known to cause cancer or reproductive toxicity.

SECTION 16: OTHER INFORMATION

SDS STATUS: Revised to GHS Standards on 04-01-15.

| HEALTH | 3 |
| FLAMMABILITY | 0 |
| PHYSICAL HAZARD | 1 |

FOR INDUSTRIAL USE ONLY – KEEP OUT OF THE REACH OF CHILDREN