SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : "CALCIUM, LIME & RUST CLR"
Material number : CACAL32

Manufacturer or supplier's details
Company : Zep Inc.
Address : 1310 Seaboard Industrial Blvd., NW
Atlanta, GA 30318
Telephone : 404-352-1680

Emergency telephone numbers
For SDS Information : Compliance Services 1-877-428-9937
For a Medical Emergency : 877-541-2016 Toll Free - All Calls Recorded.
For a Transportation Emergency : CHEMTREC: 800-424-9300 - All Calls Recorded.
In the District of Columbia 202-483-7616

Note: This product is labeled as a consumer product in accordance with the United States Consumer Product Safety Commission regulations. The warnings presented below in this Safety Data Sheet (SDS) comply with the 2012 OSHA Hazard Communication Standard (GHS - Globally Harmonized System of Classification and Labeling). The requirements for the labeling and warnings of consumer products may differ from those required for GHS based hazard communication.

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

| Appearance | liquid |
| Colour | light yellow |
| Odour | pungent |

GHS Classification
Skin corrosion : Category 1A
Serious eye damage : Category 1

GHS Label element
Hazard pictograms :

Signal word : Danger
Hazard statements : H314 Causes severe skin burns and eye damage.
Precautionary statements :
Prevention:
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P363 Wash contaminated clothing before reuse.

Storage:
P405 Store locked up.

Disposal:
Dispose of contents/container in accordance with local regulation.

Potential Health Effects

Carcinogenicity:

IARC
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>urea hydrochloride</td>
<td>506-89-8</td>
<td>$\geq 5 - &lt; 10$</td>
</tr>
<tr>
<td>sulphamidic acid</td>
<td>5329-14-6</td>
<td>$\geq 1 - &lt; 5$</td>
</tr>
<tr>
<td>Alcohols, C10-14, ethoxylated</td>
<td>66455-15-0</td>
<td>$\geq 1 - &lt; 5$</td>
</tr>
<tr>
<td>2-HYDROXYETHANOIC ACID</td>
<td>79-14-1</td>
<td>$\geq 1 - &lt; 5$</td>
</tr>
<tr>
<td>citric acid</td>
<td>77-92-9</td>
<td>$\geq 1 - &lt; 5$</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.

2 / 10
If inhaled: If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician. Move to fresh air. Oxygen or artificial respiration if needed.

In case of skin contact: Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. If skin irritation persists, call a physician. Wash off immediately with plenty of water for at least 15 minutes. Thoroughly clean shoes before reuse.

In case of eye contact: Small amounts splashed into eyes can cause irreversible tissue damage and blindness. Continue rinsing eyes during transport to hospital. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist. If in eyes, rinse with water for 15 minutes.

If swallowed: Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. DO NOT induce vomiting unless directed to do so by a physician or poison control center. If conscious, drink plenty of water. Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media: High volume water jet

Specific hazards during firefighting: Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products: Chlorine compounds Carbon dioxide (CO2) Carbon monoxide Sulphur oxides Smoke Nitrogen oxides (NOx)

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information: Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment.

Environmental precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling: Do not breathe vapours/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid: Oxidizing agents. Keep away from metals. Store and keep away from bases and alkalies.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters: Contains no substances with occupational exposure limit values.

Personal protective equipment:

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.
Hand protection  
Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection: Safety goggles
Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection: Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures: When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: liquid

Colour: light yellow

Odour: pungent

Odour Threshold: No data available

pH: < 1

Melting point/freezing point: Not applicable

Boiling point: 100 °C

Flash point: does not flash

Evaporation rate: No data available

Upper explosion limit: No data available

Lower explosion limit: No data available

Vapour pressure: No data available

Relative vapour density: No data available

Density: 1.067 g/cm³

Solubility(ies)

Water solubility: soluble

Solubility in other solvents: not determined

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: not determined

Thermal decomposition: No data available

Viscosity

Viscosity, kinematic: No data available
SECTION 10. STABILITY AND REACTIVITY

Reactivity : Stable
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No decomposition if stored and applied as directed.
Conditions to avoid : Extremes of temperature and direct sunlight.
Incompatible materials : Oxidizing agents
Organic materials
Metals
bases
Hazardous decomposition products : Carbon oxides
Chlorine
Nitrogen oxides (NOx)
Sulphur oxides
Ammonia gas may be liberated at high temperatures.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:
Acute oral toxicity : Acute toxicity estimate: 4,624 mg/kg
Method: Calculation method

Skin corrosion/irritation

Product:
Remarks: Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation

Product:
Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

- **urea hydrochloride**
- **sulphamidic acid**
- **Alcohols, C10-14, ethoxylated**
- **2-HYDROXYETHANOIC ACID**
- **citric acid**

**STOT - single exposure**
No data available

**STOT - repeated exposure**
No data available

**Aspiration toxicity**
No data available

**Further information**

**Product:**
Remarks: No data available

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**
No data available

**Persistence and degradability**
No data available

**Bioaccumulative potential**

<table>
<thead>
<tr>
<th><strong>Product:</strong></th>
<th>Remarks: No data available</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Components:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2-HYDROXYETHANOIC ACID</strong></td>
<td>log Pow: <strong>-1.11</strong></td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Mobility in soil**
No data available

**Other adverse effects**
No data available

<table>
<thead>
<tr>
<th><strong>Product:</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regulation</strong></td>
<td>40 CFR Protection of Environment: Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances</td>
</tr>
<tr>
<td><strong>Remarks</strong></td>
<td>This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).</td>
</tr>
</tbody>
</table>
SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues: Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Dispose of in accordance with local regulations.

Contaminated packaging: Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):
ORM-D, CONSUMER COMMODITY

Transportation Regulation: IMDG (Vessel):
UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., (SULFAMIC ACID), 8, II - Limited quantity

Transportation Regulation: IATA (Cargo Air):
UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (SULFAMIC ACID), 8, II - Limited quantity

Transportation Regulation: IATA (Passenger Air):
UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (SULFAMIC ACID), 8, II - Limited quantity

Transportation Regulation: TDG (Canada):
UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., (SULFAMIC ACID), 8, II - Limited quantity

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROCHLORIC ACID</td>
<td>7647-01-0</td>
<td>5000</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards**: Acute Health Hazard

**SARA 302**: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313**: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**California Prop 65**: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

**TSCA**: On TSCA Inventory

**DSL**: This product contains one or several components that are not on the Canadian DSL nor NDSL.

**AICS**: Not in compliance with the inventory

**NZIoC**: Not in compliance with the inventory

**PICCS**: Not in compliance with the inventory

**IECSC**: Not in compliance with the inventory

**Inventory Acronym and Validity Area Legend:**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

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**SECTION 16. OTHER INFORMATION**

**Further information**

**NFPA**: Special hazard.

**HMIS III**

- **HEALTH**: 3
- **FLAMMABILITY**: 0
- **PHYSICAL HAZARD**: 0

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

**OSHA GHS Label Information:**
Hazard pictograms

Signal word: Danger

Hazard statements:
Causes severe skin burns and eye damage.

Precautionary statements:

Prevention: Wash skin thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse.

Storage: Store locked up.
Disposal: Dispose of contents/container in accordance with local regulation.

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