1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier
Product Name United 339 CYCLE SMART

Other means of identification
SDS # UNITED-339

Recommended use of the chemical and restrictions on use
Recommended Use Stabilized Bromine Treatment
Uses Advised Against For industrial and institutional use only.

Details of the supplier of the safety data sheet
Supplier Address United Laboratories, Inc.
320 37th Avenue
St. Charles, IL 60174
www.unitedlabsinc.com

Emergency Telephone Number
Company Phone Number 800-323-2594 (to reorder)
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification
Skin Corrosion Category 1A

Label elements
Signal word DANGER

Hazard statements
Causes severe skin burns and eye damage. May be corrosive to metals.

Appearance Light yellow liquid
Physical State Liquid
Odor Slight Chlorine Scent
Emergency Overview

Precautionary Statements
Do not breathe dust, mist, spray. 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 to fresh air and keep at rest in a position comfortable for breathing. 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 VENTER or doctor/physician. Wash contaminated clothing before reuse. Wash all exposed body parts thoroughly after handling exposed body parts. Wear eye protection, face protection, protective clothing, and protective gloves. Specific treatment- See First Aid measures on this label First aid measures. Do not mix with acids or ammonia – may generate dangerous chlorine gas. Do not mix with other products.

Precautionary Statements - Disposal
Dispose of contents/container to proper treatment facilities in accordance with all applicable local, state, and federal regulations.

Precautionary Statements - Storage
Store according to local rules and regulations. Store locked up.

Hazards not otherwise classified (HNOC)
No additional information available.

Other Information
None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight%</th>
<th>GHS-US Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hypochlorite solution, conc active chlorine=12.5%</td>
<td>7681-52-9</td>
<td>40-70</td>
<td>Skin corr. 1A</td>
</tr>
<tr>
<td>Sodium hydroxide, conc=50%, aqueous solution</td>
<td>1310-73-2</td>
<td>1-10</td>
<td>Skin corr. 1A</td>
</tr>
<tr>
<td>Sodium bromide</td>
<td>7647-15-6</td>
<td>1-10</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
4. FIRST-AID MEASURES

First Aid Measures

General Advice

Eye Contact
Rinse immediately with plenty of water for 15 minutes. Remove contact lenses. If present and easy to do. Continue rinsing. Cover eyes aseptically. Take victim to ophthalmologist. Do not apply neutralizing agents. Obtain medical attention if pain, blinking or redness persist.

Skin Contact
Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents). Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

Inhalation
Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

Ingestion

Most important symptoms and effects

Symptoms/injuries
Causes severe skin burns and eye damage.

Symptoms/ injuries after eye contact
Corrosion of the eye tissue. Permanent eye damage.

Symptoms/injuries after skin contact
Caustic burns/corrosion of the skin. Slow-healing wounds.

Symptoms/injuries after inhalation

Symptoms/injuries after ingestion
The gastrointestinal tract. Shock. Disturbances of consciousness. FOLLOWING SYMPTOMS MAY APPEAR LATER: Tumors of the gastrointestinal tract.

Chronic Symptoms
ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Skin rash/inflammation. Possible inflammation. Possible inflammation of the respiratory tract.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.
5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Adapt extinguishing media to the environment.

Unsuitable Extinguishing Media  No unsuitable extinguishing media known.

Specific Hazards Arising from the Chemical
DIRECT FIRE HAZARD. Noncombustible. INDIRECT FIRE HAZARD. Reactions involving a fire hazard: see "Reactivity Hazard".

Hazardous Combustion Products  INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see “Reactivity Hazards”.

Reactivity
On burning: release of toxic and corrosive gases/vapors (chlorine, hydrogen chloride). Decomposes slowly on exposure to air: oxidation which increases fire hazard and release of toxic and corrosive gases/vapors (chlorine). This reaction is accelerated on exposure to light, on exposure to temperature rise and on exposure to (some) metals. Reacts violently with (some) acids/bases: release of toxic and corrosive gases/vapors (chlorine).

Protective equipment and precautions for firefighters
Cool tanks/drum with water spray/remove them into safety. Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible, collect or contain it. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Heat/fire exposure: compressed air/oxygen apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures


Environmental Precautions  Prevent soil and water pollution. Prevent spreading in sewers. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Methods and material for containment and cleaning up

Methods for Clean-Up  Take up liquid spill into absorbent material. E.g.: dry sand, earth or powdered limestone. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Spill must not return in its original container. Damaged/ cooled tanks must be emptied. Carefully collect the spill/leftovers. Small quantities of liquid spill: wash down with an excess of water. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling. Soak up spills with inert solids such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

Method of containment  Contain released substance, pump into suitable containers. Consult “Material-handling” to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. If reacting: dilute toxic gas/vapor with water spray. Take account of toxic/corrosive precipitation water. Heat exposure: dilute toxic gas/vapor with water spray.

General Measures  Insolate from fire, if possible, without unnecessary risk.
7. HANDLING AND STORAGE

Precautions for safe handling

Additional hazards when processed
May be corrosive to metals.

Advice on Safe Handling
Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle and open the container with care. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep away from naked flames/heat. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not breathe dust, mist, spray. Provide good ventilation in process area to prevent formation of vapor. Avoid contact during pregnancy/while nursing.

Hygiene measures
Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Technical Measures
Comply with applicable regulations.

Storage Conditions
Keep only in original container in a cool, well-ventilated place away from: keep container closed when not in use.

Incompatible Products
Strong bases. Strong acids.

Incompatible Materials
Sources of ignition. Direct sunlight.

Heat and Ignition Sources
KEEP SUBSTANCE AWAY FROM: heat sources.

Prohibitions on Mixed Storage

Storage Area
Store in a cool area. Keep out of direct sunlight. Store in a dry area. Store in a dark area. Keep locked up. Provide for a tub to collect spills. Keep only in the original container. Meet all legal requirements. Maximum storage period: 1 year.

Special Rules on Packaging
SPECIAL REQUIREMENTS: Hermetical. Dry, clean, correctly labeled. Meet the legal requirements. Secure fragile packaging’s in solid containers.

Packaging Materials

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, conc=50%, aqueous solution 1310-73-2</td>
<td>2mg/m³/ceiling</td>
<td>2mg/m³ (TWA)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2mg/m³ (Ceiling)</td>
<td>-</td>
</tr>
<tr>
<td>Sodium hypochlorite, solution, conc active chlorine=12.5% 7681-52-9</td>
<td>2mg/m³ (Sodium hydroxide: USA; Momentary value; TLV – adopted value)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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Individual protection measures, such as personal protective equipment

**Personal Protective equipment**
Avoid all unnecessary exposure.

**Material for Protective clothing**
GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: Neoprene, PVC. GIVE LESS RESISTANCE: no data available. GIVE POOR RESISTANCE: No data available.

**Hand Protection**
Gloves. Wear eye protection, face protection, protective clothing, protective gloves.

**Eye/Face Protection**
Chemical goggles or face shield. Face shield.

**Skin and Body Protection**
Corrosive-proof clothing. Wear suitable protective clothing.

**Respiratory Protection**
Wear gas mask with filter type B if conc. In air> exposure limit. Wear appropriate mask.

**General Hygiene Considerations**
When using, do not eat, drink or smoke.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Light yellow liquid</td>
<td>Odor</td>
<td>Slight Chlorine Scent</td>
</tr>
<tr>
<td>Color</td>
<td>Light yellow</td>
<td>Odor Threshold</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH</td>
<td>12-13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH solution</td>
<td>11-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not determined /&lt;0°C</td>
<td>Literary Reference</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>&gt;100°C(210°F)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Soluble in water 100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>1.24g/ml</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto ignition Temperature</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Reactivity**
On burning: release of toxic and corrosive gases/vapors (chlorine, hydrogen chloride). Decomposes slowly on exposure to air: oxidation which increases fire hazard and release of toxic and corrosive gases/vapors (chlorine). This reaction is accelerated on exposure to light, on exposure to temperature rise and on exposure to (some) metals. Reacts violently with (some) acids/bases: release of toxic and corrosive gases/vapors (chlorine).
Chemical Stability
Unstable on exposure to light.

Possibility of Hazardous Reactions
Not established.

Conditions to Avoid
Direct sunlight. Extremely high or low temperatures.

Incompatible Materials
Strong acids. Strong bases. Do not mix with acids or ammonia – may generate dangerous chlorine gas. May be corrosive to metal.

Hazardous Decomposition Products

11. TOXICOLOGICAL INFORMATION

Product Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral rat</th>
<th>LD50 Dermal rabbit</th>
<th>ATE US (Oral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hypochlorite, solution, conc. Active chlorine=12.5% 7681-52-9 (Literature study)</td>
<td>&gt;5000mg/kg</td>
<td>&gt;10000mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Sodium bromide 7647-15-6</td>
<td>2500 mg/kg</td>
<td>&gt;2000 mg/kg</td>
<td>2500.000 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

Information on likely routes of exposure

Product Information

Eye Contact
Not classified.

Skin Contact
Causes severe skin burns and eye damage.

Inhalation
Not classified.

Ingestion
Not classified.

Symptoms/injuries
Causes severe skin burns and eye damage.

Symptoms/ injuries after eye contact
Corrosion of the eye tissue. Permanent eye damage.

Symptoms/injuries after skin contact
Caustic burns/corrosion of the skin.

Symptoms/injuries after inhalation

Symptoms/injuries after ingestion

Chronic Symptoms
On continuous/repeated exposure/contact: Dry skin. Skin rash/inflammation. Possible inflammation of the respiratory tract.
### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ Cell Mutation</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

### Numerical measures of toxicity

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity (repeated exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration Hazard</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

*IARC Group – 3 – not classifiable – Sodium hypochlorite, solution, conc active chlorine=12.5% (7681-52-9).*

### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Toxic to aquatic life with long lasting effects. Avoid releasing to the environment.

#### Persistence/Degradability

- Sodium Hypochlorite, solution, conc active chlorine-12.5%. Biodegradability: not applicable. Low potential for absorption into soil.
- Sodium hydroxide, conc=50% aqueous solution. Biodegradability: not applicable.

#### Bioaccumulation

- Sodium Hypochlorite, solution, conc active chlorine-12.5%: Bioaccumulation: not applicable. Sodium hydroxide, conc=50% aqueous solution: Not bioaccumulative.

#### Mobility

May be harmful to plant growth, blooming and fruit formation. Sodium hypochlorite, solution, conc active chlorine=12.5% (7681-52-9)

#### Other adverse effects

Avoid release into the environment.

#### Effect on the global warming

No known ecological damage caused by this product.

### 13. DISPOSAL CONSIDERATIONS

#### Waste Treatment Methods

- **Disposal of Wastes**
  
  Remove waste in accordance with local, state and/or national regulations. Remove for physicochemical/ biological treatment. Do not discharge into surface water. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to proper treatment facilities in accordance with all applicable local, state & federal regulations.

### 14. TRANSPORT INFORMATION
DOT
Proper Shipping Name: Hypochlorite solution
UN Number: UN1791
Packaging Group: II = Medium Danger
Transport hazard class(es): 8 – Class 8 – Corrosive material 49 CFR 173.136
Hazard labels: 8 - Corrosive
DOT Packaging Non-Bulk (49 CFR 173.xxx): 202
DOT Bulk (49 CFR 173.xxx): 242
DOT Special Provisions (49CFR172.102):
DOT Special Provisions (49 CFR 172.102) : A7 - Steel packagings must be corrosion-resistant or have protection against corrosion. B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized. B15 - Packagings must be protected with non-metallic linings impervious to the lading or have a suitable corrosion allowance.
IB2 - Authorized IBCs: Metal (31A, 31B and 31Ni); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
IP5 - IBCs must have a device to allow venting. The inlet to the venting device must be located in the vapor space of the IBC under maximum filling conditions.
N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material.
T7 - 4 178.274(d)(2) Normal................. 178.275(d)(3)
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees Celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees Celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
TP24 - The portable tank may be fitted with a device to prevent the build-up of excess pressure due to the slow decomposition of the hazardous material being transported. The device must be in the vapor space when the tank is filled under maximum filling conditions. This device must also prevent an unacceptable amount of leakage of liquid in the case of overturning.

DOT Packaging Exceptions (49 CFR 173.xxx):
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27):
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75):
DOT Vessel Stowage Location:

B - (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

Other Information:
26 – Stow “away from” acids

IATA
No additional information available.

IMDG
No additional information available.
15. REGULATORY INFORMATION

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substance Control Act (TSCA) Inventory.

**US Federal Regulations**

**TSCA**

Not listed.

**SARA 302**

Not determined.

**SARA 311/312**

Not determined.

**SARA 313**

Not subject to reporting requirements of the United States SARA Section 313 – Sodium hydroxide (1310-73-2) RQ=1000lbs, and Sodium Hypochlorite solution (7681-52-9) RQ=100 lbs. RQ = Reportable Quantity, Section 304 of EPA’s list of lists.

**California Prop 65**

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm.

**US State Regulations**

**Right to Know Act**

Sodium hypochlorite, solution, conc. Active chlorine=12.5%- 7681-52-9 – MA/NJ/PA

Sodium hydroxide, conc=50%, aqueous solution-1310-73-2 – MA/NJ/PA

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>1</td>
<td>OX</td>
<td></td>
</tr>
</tbody>
</table>

| HMIS   | Health Hazards | Flammability | Physical Hazards | Personal Protection | Personal Protection |
|--------|----------------|--------------|------------------|---------------------|
| 3      | 0              | 1            |                  |                     |

**Issue Date**

22-Jun-2015

**Revision Date:**

30-Mar-2020

**Revision Note**

Regulatory Update

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet