SAFETY DATA SHEET

Section 1 - Identification

Product Identifier
CYCLONE Intensive Tile / Grout Cleaner RTU (1-5)

Other means of identification
2516 (1-5)

Recommended use
Alkaline cleaner.

Recommended restrictions
For commercial and industrial use only. User prepared Ready-To-Use solution. 1:5 in water.

Manufacturer / Importer / Supplier / Distributor Information
Company Name
National Chemical Laboratories of PA, Inc.
Address
401 N. 10th Street - Philadelphia, PA 19123
Telephone
1 (215) 922-1200
Supplier Email
info@nclonline.com
Contact
CHEM-TEL
Emergency Phone
1 (800) 255-3924

Section 2 - Hazard(s) Identification

SDS Hazards and Warnings are based on the undiluted product. Refer to diluted SDS for Ready-To-Use Hazards and Warnings.

Classification

<table>
<thead>
<tr>
<th>Category</th>
<th>Physical Hazards</th>
<th>Health Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Classified</td>
<td>Serious eye damage/eye irritation</td>
<td>Skin corrosion/irritation</td>
</tr>
</tbody>
</table>

OSHA defined hazards: Not Classified.

Label Elements

Hazard Symbol

Signal Word
Danger

Hazard Statement
Causes severe skin burns and eye damage. May cause respiratory irritation.

Precautionary statement

Prevention
Do not breathe mist or vapor. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.

Response
If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If inhaled: Remove person to fresh air and keep 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 center/doctor.

Storage
Store locked up.

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)
None known.

Section 3 - Composition/Information on ingredients

Mixture

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>Ingredient Name</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol</td>
<td>111-76-2</td>
<td>0.5 - 2</td>
<td></td>
</tr>
<tr>
<td>Sodium dimethylbenzenesulfonate</td>
<td>1300-72-7</td>
<td>0.1 - 1</td>
<td></td>
</tr>
<tr>
<td>Nonylphenol, ethoxylated</td>
<td>9016-45-9</td>
<td>0.1 - 1</td>
<td></td>
</tr>
<tr>
<td>Sodium Hydroxide</td>
<td>1310-73-2</td>
<td>0.1 - 1</td>
<td></td>
</tr>
</tbody>
</table>

Composition Comments
Components not listed are either non-hazardous or are below reportable limits.

Section 4 - First-aid Measures

Inhalation
If respiratory irritation or distress occurs, remove victim to fresh air. If breathing is difficult, give oxygen. If breathing stops,
**SAFETY DATA SHEET**

**Skin contact**
Remove contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation persists. Wash contaminated clothing before reuse.

**Eye contact**
Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Check and remove contact lenses. Continue to rinse for at least 10 minutes.

**Ingestion**
Rinse mouth thoroughly with water. DO NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than the hips to help prevent aspiration. Call a physician or poison control center immediately.

**Most Important symptoms /effects, acute and delayed**
Causes skin and eye burns.

**Indication of immediate medical attention and special treatment**
Treat symptomatically.

**General information**
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### Section 5 - Fire-fighting measures

**Suitable extinguishing media**
Carbon dioxide, alcohol-resistant foam, dry chemical, water spray, or water fog.

**Unsuitable extinguishing media**
Not available.

**Specific hazards arising from the chemical**
None known.

**Special protective equipment and precautions for firefighters**
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire-fighting equipment/instructions**
Move containers from fire area if you can do it without risk. Use water spray to keep fire-exposed containers cool.

**General fire hazards**
This product is not flammable or combustible.

### Section 6 - Accidental release measures

**Personal precautions, protective equipment and emergency procedures.**
Isolate area. Keep unnecessary personnel away. Use personal protection as recommended in Section 8 of the SDS.

**Methods and materials for containment and cleaning up**
Small Spills: Absorb spillage with suitable absorbent material.
Large Spills: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. After removal flush contaminated area thoroughly with water.

**Environmental precautions**
Avoid discharge into drains, water courses or onto the ground.

### Section 7 - Handling and storage

**Precautions for safe handling**
Do not get in eyes, on skin, or on clothing. Do not breathe mist or vapor. Do not taste or swallow. Use with adequate ventilation. Wash thoroughly after handling. Use Personal Protective Equipment recommended in section 8 of the SDS.

**Conditions for safe storage, including any incompatibilities**
Store away from incompatible materials. Keep container closed.

### Section 8 - Exposure control/personal protection

#### Occupational exposure limits

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

<table>
<thead>
<tr>
<th>Component</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
<td>TWA</td>
<td>240 mg/m³, 50 ppm</td>
<td></td>
</tr>
<tr>
<td>Sodium Hydroxide (CAS 1310-73-2)</td>
<td>TWA</td>
<td>2 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

**US. ACGIH Threshold Limit Values**

<table>
<thead>
<tr>
<th>Component</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
<td>TWA</td>
<td>20 ppm</td>
<td></td>
</tr>
<tr>
<td>Sodium Hydroxide (CAS 1310-73-2)</td>
<td>Ceiling</td>
<td>2 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

**US. NIOSH: Pocket Guide to Chemical Hazards**

<table>
<thead>
<tr>
<th>Component</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
<td>TWA</td>
<td>24 mg/m³, 5 ppm</td>
<td></td>
</tr>
<tr>
<td>Sodium Hydroxide (CAS 1310-73-2)</td>
<td>Ceiling</td>
<td>2 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

**US. ACGIH. BEIs. Biological Exposure Indices**

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
<th>Determinate</th>
<th>Specimen</th>
<th>Sampling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
<td>200 mg/g</td>
<td>Butoxyacetic acid (BAA), with hydrolysis</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.

**Exposure guidelines**
Use personal protective equipment as required. Keep working clothes separately.

**US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants**

<table>
<thead>
<tr>
<th>Component</th>
<th>Exposure</th>
</tr>
</thead>
</table>

---

**CYCLONE Intensive Tile / Grout Cleaner RTU (1-5)**

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**General hygiene considerations**
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**Respiratory protection**
Use a respirator when local exhaust or ventilation is not adequate to keep exposures below the OEL. In a confined space a supplied respirator may be required.

**Thermal hazards**
Wear appropriate thermal protective clothing, when necessary.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**
If use of product risks exposure to contact, wear safety glasses with side shields.

**Skin protection**

**Hand protection**
Impervious gloves are recommended for prolonged use.

**Other**
If use of product risk exposure to contact, wear suitable protective clothing.

**Respiratory protection**
Use a respirator when local exhaust or ventilation is not adequate to keep exposures below the OEL. In a confined space a supplied respirator may be required.

**Thermal hazards**
Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

### Section 9 - Physical and chemical properties

| Appearance |  |
|------------|  |
| Physical state | Liquid. |
| Form | Clear Liquid. |
| Color | Light Green. |
| Odor | Citrus. |
| Odor threshold | Not available. |
| pH | 12.6 - 13.2 |
| Melting point/freezing point | Not available. |
| Initial boiling point and boiling range | 212 °F (100 °C) |
| Flash point | > 212.0 °F (> 100.0 °C) |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not applicable. |

**Upper/lower flammability or explosive limits**

| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |

**Vapor pressure**
Similar to water.

**Vapor density**
Similar to water.

**Relative density**
1.01 ± 0.01

**Relative density temperature**
75 °F (23.9 °C)

**Solubilities (water)**
100 % Soluble.

**Partition Coefficient n-octanol/water**
Not available.

**Auto-ignition temperature**
Not available.

**Decomposition temperature**
Not available.

**Viscosity**
< 10 cP

**Viscosity Temperature**
75 °F (23.9 °C)
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Section 10 - Stability and reactivity

Reactivity
Not available.

Chemical stability
Stable at normal conditions.

Possibility of hazardous reactions
Hazardous polymerization does not occur.

Conditions to Avoid
Contact with incompatible materials.

Incompatible materials
Strong oxidizing agents.

Hazardous Decomposition Products
Carbon monoxide. Carbon dioxide.

Section 11 - Toxicological information

Information on likely routes of exposure

Ingestion
May cause burns of the gastrointestinal tract if swallowed.

Inhalation
Irritating to respiratory system.

Skin contact
Causes skin burns.

Eye contact
Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics
Causes skin and eye burns. Causes respiratory tract irritation. Symptoms may be delayed.

Information on toxicological effects

Acute toxicity
May cause burns.

<table>
<thead>
<tr>
<th>Component</th>
<th>Level</th>
<th>Type</th>
<th>Code</th>
<th>Species</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
<td>Acute</td>
<td>Dermal</td>
<td>LD50</td>
<td>Rabbit</td>
<td>400 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>Inhalation</td>
<td>LC50</td>
<td>Mouse</td>
<td>700 ppm, 7 hours</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>Inhalation</td>
<td>LC50</td>
<td>Rat</td>
<td>450 mg/l, 4 hrs</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>Oral</td>
<td>LD50</td>
<td>Guinea pig</td>
<td>1.2 g/kg</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>Oral</td>
<td>LD50</td>
<td>Mouse</td>
<td>1519 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>Oral</td>
<td>LD50</td>
<td>Rabbit</td>
<td>0.32 g/kg</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>Oral</td>
<td>LD50</td>
<td>Rat</td>
<td>560 mg/kg</td>
</tr>
<tr>
<td>Nonylphenol, ethoxylated (CAS 9016-45-9)</td>
<td>Acute</td>
<td>Oral</td>
<td>LD50</td>
<td>Mouse</td>
<td>4290 mg/kg, bw</td>
</tr>
<tr>
<td>Sodium dimethylbenzenesulfonate (CAS 1300-72-7)</td>
<td>Acute</td>
<td>Dermal</td>
<td>LD50</td>
<td>Rabbit</td>
<td>&gt;2000 mg/kg</td>
</tr>
<tr>
<td>Sodium Hydroxide (CAS 1310-73-2)</td>
<td>Acute</td>
<td>Oral</td>
<td>LD50</td>
<td>Rabbit</td>
<td>7200 mg/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
Causes skin burns.

Serious eye damage/eye irritation
Causes serious eye damage.

Respiratory sensitization
Not classified.

Skin sensitization
Not classified.

Germ cell mutagenicity
Not classified.

IARC Monographs. Overall Evaluation of Carcinogenicity

Component | Result | Comment |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
<td>3</td>
<td>Not classifiable as to carcinogenicity to humans.</td>
</tr>
</tbody>
</table>

Reproductive toxicity
Not classified.

Specific target organ toxicity - single exposure
Irritating to respiratory system.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not classified.

Chronic effects
2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans. Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.

Section 12 - Ecological Information

Ecotoxicity
The product contains a substance which is toxic to aquatic organisms.

Component(s)
Nonylphenol, ethoxylated, 9016-45-9

Aquatic

<table>
<thead>
<tr>
<th>Level</th>
<th>Type</th>
<th>Code</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia magna</td>
<td>65 mg/l, 48 hours</td>
</tr>
<tr>
<td></td>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia magna)</td>
<td>12.2 mg/l, 48 hours</td>
</tr>
<tr>
<td></td>
<td>Fish</td>
<td>LC50</td>
<td>Bluegill (lepisimis macrochirus)</td>
<td>1 - 1.8 mg/l 96 hours</td>
</tr>
</tbody>
</table>
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Persistence and degradability
The product is expected to be biodegradable.

Bioaccumulative potential
Not known.

Partition coefficient n-octanol / water log (Kow)

<table>
<thead>
<tr>
<th>Components</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
<td>0.83</td>
</tr>
</tbody>
</table>

Mobility in soil
Not available.

Mobility in general
The product is water soluble and may spread in water systems.

Other adverse effects
None known.

Section 13 - Disposal considerations

Disposal instructions
Dispose in accordance with applicable federal, state, and local regulations.

Local disposal regulations
Dispose of in accordance with local regulations.

Hazardous waste code
Waste codes should be assigned by the user based on the application for which the product was used.

Waste from residues / unused products
Dispose in accordance with all applicable regulations.

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14 - Transport information

General Information
This product is customer diluted for on site use only. No transportation information is anticipated or provided. The regulatory transport classification of the product without consideration to dilution strength, packaging, quantity, or modal restrictions and exceptions can not be anticipated. It is the user's responsibility to determine the appropriate packaging and modal requirements and/or limitations for the product quantity being shipped.

Section 15 - Regulatory Information

US federal regulations
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR70, Subpt. D)  Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)

<table>
<thead>
<tr>
<th>Components</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Hydroxide (CAS 1310-73-2)</td>
<td>LISTED</td>
</tr>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
<td>LISTED</td>
</tr>
</tbody>
</table>

Superfund Amendments and Reauthorization Act of 1986 (SARA)

<table>
<thead>
<tr>
<th>Hazard Categories</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Delayed Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactivity Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
Yes

SARA 313 (TRI reporting)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS #</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol</td>
<td>111-76-2</td>
<td>0.5 - 2</td>
</tr>
</tbody>
</table>

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HSPs) List  Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated.
Safe Drinking Water Act (SDWA)  Not regulated.
Food and Drug Administration (FDA)  Not regulated.

US state regulations

US.Massachusetts RTK - Substance List

<table>
<thead>
<tr>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
</tr>
<tr>
<td>Sodium Hydroxide (CAS 1310-73-2)</td>
</tr>
</tbody>
</table>

US.New Jersey Worker and Community Right-to-Know Act

<table>
<thead>
<tr>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
</tr>
<tr>
<td>Sodium Hydroxide (CAS 1310-73-2)</td>
</tr>
</tbody>
</table>

US.Pennsylvania RTK - Hazardous Substances

<table>
<thead>
<tr>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
</tr>
<tr>
<td>Sodium Hydroxide (CAS 1310-73-2)</td>
</tr>
</tbody>
</table>

US.Rhode Island RTK

<table>
<thead>
<tr>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
</tr>
</tbody>
</table>
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Sodium Hydroxide (CAS 1310-73-2)

US - California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory Name</th>
<th>On Inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDLS)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances</td>
<td>Yes</td>
</tr>
<tr>
<td>Unites States Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
*A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Section 16 - Other information, including date of preparation or last version

| Revision date | 1/17/2018 |
| Version #     | 02        |

Disclaimer

The information contained herein was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond the manufacturer's control, it is the user's responsibility both to determine safe conditions for use of this product and to assume liability for loss, injury, damage or expense arising from the product's improper use. No warranty, expressed or implied, regarding the product described herein shall be created by or inferred from any statement or omission in this SDS. Various government agencies may have specific regulations concerning the transportation, handling, storage, use or disposal of this product which may not be reflected in this SDS. The user should review these regulations to ensure full compliance.