SAFETY DATA SHEET

Section 1 - Identification

Product Identifier  MICRO-CHEM PLUS Detergent Disinfectant Cleaner
Other means of identification  0255
Recommended use  Disinfectant.
Recommended restrictions  EPA Registered Product. For commercial and industrial use only.

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.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Hazards</td>
<td>Not Classified</td>
</tr>
<tr>
<td>Health Hazards</td>
<td>Serious eye damage/eye irritation: 1; Skin corrosion/irritation: 2</td>
</tr>
<tr>
<td>Environmental Hazards</td>
<td>Hazardous to the aquatic environment, acute hazard: 1; Hazardous to the aquatic environment, long-term hazard: 2</td>
</tr>
</tbody>
</table>

OSHA defined hazards  Not Classified.

Section 3 - Composition/Information on ingredients

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>Ingredient Name</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Carbonate</td>
<td>497-19-8</td>
<td>1 - 5</td>
<td></td>
</tr>
<tr>
<td>4-Nonylphenol, branched, ethoxylated</td>
<td>127087-87-0</td>
<td>1 - 5</td>
<td></td>
</tr>
<tr>
<td>_Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride (Alternate CAS 68956-79-6)</td>
<td>85409-23-0</td>
<td>1 - 3</td>
<td></td>
</tr>
<tr>
<td>_Alkyl Dimethyl Benzyl Ammonium Chloride (C12-C18)</td>
<td>68391-01-5</td>
<td>1 - 3</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  Move to fresh air. Call a physician if symptoms develop or persist.
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**Section 5 - Fire-fighting measures**

**Suitable extinguishing media**
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**
During fire, gases hazardous to health may be formed.

**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 so without risk.

**General fire hazards**
Use standard firefighting procedures and consider the hazards of other involved materials.

**Section 6 - Accidental release measures**

**Personal precautions, protective equipment and emergency procedures.**
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**
Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions**
Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

**Section 7 - Handling and storage**

**Precautions for safe handling**
Do not get this material in contact with eyes. Avoid contact with skin. Avoid contact with clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains.

**Conditions for safe storage, including any incompatibilities**
DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE OR DISPOSAL. PESTICIDE STORAGE: Store in a dry place no lower in temperature than 50°F or higher than 120°F. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

**Section 8 - Exposure control/personal protection**

**Occupational exposure limits**
No exposure limits noted for ingredient(s).

**Biological limit values**
No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**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**
In case of insufficient ventilation, wear suitable respiratory equipment.
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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.

Section 9 - Physical and chemical properties

Appearance
- Physical state: Liquid.
- Form: Thin Liquid.
- Color: Yellow, clear.
- Odor: Citrus.
- Odor threshold: Not available.
- pH: 11.8
- Melting point/freezing point: > 32 °F (> 0 °C)
- Initial boiling point and boiling range: > 212 °F (> 100 °C)
- Flash point: > 201 °F (> 93.9 °C) Pensky-Martens Closed Cup
- Evaporation rate: Not available.
- Flammability (solid, gas): Not available.
- 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: Not available.
- Vapor density: Not available.
- Relative density: 1.04 ± 0.01 g/ml
- Relative density temperature: 75 °F (23.9 °C)
- Solubilities (water): Complete.
- Partition Coefficient: Not available
- n-octanol/water: Not available
- Auto-ignition temperature: Not Available
- Decomposition temperature: Not Available
- Viscosity: <10 cSt
- Viscosity Temperature: 75 °F (23.9 °C)

Section 10 - Stability and reactivity

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
Material is stable under normal conditions.

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

Conditions to Avoid
Avoid temperatures exceeding the flash point. Reacts violently with strong acids. This product may react with oxidizing agents. Do not mix with other chemicals. Contact with incompatible materials.

Incompatible materials
Strong oxidizing agents. Anionic surfactants

Hazardous Decomposition
Products
Upon decomposition, this product may yield oxides of nitrogen and ammonia, carbon dioxide, carbon monoxide and other low molecular weight hydrocarbons.

Section 11 - Toxicological information

Information on likely routes of exposure
- Ingestion: May be harmful if swallowed.
- Inhalation: Prolonged inhalation may be harmful.
- Skin contact: Causes skin irritation.
- Eye contact: Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics
Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>Level</th>
<th>Type</th>
<th>Code</th>
<th>Species</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>_Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride (Alternate CAS 68956-79-6) (CAS 85409-23-0)</td>
<td>Acute</td>
<td>Dermal</td>
<td>LD50</td>
<td>Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>Inhalation</td>
<td>LC50</td>
<td></td>
<td>&gt; 20 mg/l</td>
</tr>
</tbody>
</table>
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_Alkyl Dimethyl Benzyl Ammonium Chloride (C12-C18) (CAS 68391-01-5)_

<table>
<thead>
<tr>
<th>Component</th>
<th>Acute</th>
<th>Dermal</th>
<th>LD50</th>
<th>Rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute</td>
<td>Dermal</td>
<td>LD50</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>Inhalation</td>
<td>LC50</td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>Oral</td>
<td>LD50</td>
<td>Rat</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sodium Carbonate (CAS 497-19-8)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Acute</th>
<th>Inhalation</th>
<th>LC50</th>
<th>Rat</th>
</tr>
</thead>
</table>

Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/eye irritation: Causes serious eye damage.
Respiratory sensitization: Not available.
Skin sensitization: This product is not expected to cause skin sensitization.
Germ cell mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity: This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure: Not applicable.
Specific target organ toxicity - repeated exposure: Not applicable.
Aspiration hazard: Not likely, due to the form of the product.

Section 12 - Ecological Information

Ecotoxicity: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component(s)

Sodium Carbonate, 497-19-8

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>Water flea (Ceriodaphnia dubia)</td>
<td>156.6 - 298.9 mg/l, 48 hours</td>
</tr>
<tr>
<td></td>
<td>Fish</td>
<td>LC50</td>
<td>Bluegill (Lepomis macrochirus)</td>
<td>300 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability: No data is available on the degradability of this product.
Bioaccumulative potential: No data available.
Partition coefficient n-octanol / water log (Kow)

Components

4-Nonylphenol, branched, ethoxylated (CAS 127087-87-0) Results

<table>
<thead>
<tr>
<th>Components</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.1 - 3.4 (Calculated)</td>
</tr>
</tbody>
</table>

Mobility in soil: No data available.
Other adverse effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Section 13 - Disposal considerations

Disposal instructions

PESTICIDE DISPOSAL - Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
CONTAINER DISPOSAL - Nonrefillable container. Do not reuse or refill container. Clean container promptly after emptying. (For containers 5 gallons or less):
Triple rinse as follows: Fill container 1/4 full with water and recap. Agitate vigorously. Drain for 10 seconds after the flow begins to drip. Follow Pesticide Disposal instructions for rinsate disposal. Repeat procedure two more times. Then offer for recycling or reconditioning. If not available, puncture and dispose in a sanitary landfill. (For containers greater than 5 gallons):
Triple rinse as follows: Fill container 1/4 full with water. Tip container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Follow Pesticide Disposal instructions for rinsate disposal. Repeat procedure two more times. Then offer for recycling or reconditioning. If not available, puncture and dispose in a sanitary landfill.

Hazardous waste code
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14 - Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.
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IMDG
Transportation in bulk according to Annex II of MARPOL 73/78 and IBC Code

This substance/mixture is not intended to be transported in bulk.

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. This product is a U.S. EPA registered pesticide.


Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard Categories
- Immediate Hazard: Yes
- Delayed Hazard: No
- Fire Hazard: No
- Pressure Hazard: No
- Reactivity Hazard: No
- SARA 302 Extremely hazardous substance: No
- SARA 311/312 Hazardous chemical: No

SARA 313 (TRI reporting): Not regulated.

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.
- Food and Drug Administration (FDA): Not regulated.

US state regulations
- US. Massachusetts RTK - Substance List: Not regulated.
- US. New Jersey Worker and Community Right-to-Know Act: Not listed.
- US. Pennsylvania RTK - Hazardous Substances: Not listed.
- US. Rhode Island RTK: Not regulated.
- 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 (NDSSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</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>No</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances</td>
<td>No</td>
</tr>
<tr>
<td>United 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

Further information
Some information may conflict with EPA mandated label information.

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.