SAFETY DATA SHEET

Section 1 - Identification

Product Identifier
CS Foaming Degreaser Cleaner Super Concentrate

Other means of identification
1117

Recommended use
Alkaline cleaner.

Recommended restrictions
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>
<th>Hazard Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Hazards</td>
<td>Not Classified</td>
<td></td>
</tr>
<tr>
<td>Health Hazards</td>
<td>Serious eye damage/eye irritation</td>
<td>Causes severe skin burns and eye damage. May cause respiratory irritation.</td>
</tr>
<tr>
<td></td>
<td>Skin corrosion/iritation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specific target organ toxicity, single exposure</td>
<td></td>
</tr>
<tr>
<td>OSHA defined hazards</td>
<td>Not Classified.</td>
<td></td>
</tr>
</tbody>
</table>

Label Elements

Hazard Symbol

Signal Word
Danger

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

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>Ingredient Name</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Hydroxide</td>
<td></td>
<td>1310-73-2</td>
<td>5 - 10</td>
</tr>
<tr>
<td>2-Amino Ethanol</td>
<td></td>
<td>141-43-5</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Disodium metasilicate</td>
<td></td>
<td>6834-92-0</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

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, apply artificial respiration. CONSULT A PHYSICIAN.

Skin contact
Remove contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes. Get medical
**SAFETY DATA SHEET**

**Eye contact**
Attention if irritation persists. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

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. Get medical attention immediately.

**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 SPILLAGE: 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>Form</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Amino Ethanol (CAS 141-43-5)</td>
<td>TWA</td>
<td>6 mg/m³ , 3 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>Form</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Amino Ethanol (CAS 141-43-5)</td>
<td>STEL</td>
<td>6 ppm</td>
<td></td>
</tr>
<tr>
<td>2-Amino Ethanol (CAS 141-43-5)</td>
<td>TWA</td>
<td>3 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>Form</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Amino Ethanol (CAS 141-43-5)</td>
<td>STEL</td>
<td>15 mg/m³ , 6 ppm</td>
<td></td>
</tr>
<tr>
<td>2-Amino Ethanol (CAS 141-43-5)</td>
<td>TWA</td>
<td>8 mg/m³ , 3 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>

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

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

**Appropriate engineering controls**
Provide adequate ventilation and minimize the risk of inhalation of vapors and mists. Provide easy access to water supply and eye wash facilities.

**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**
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.

Skin protection
If use of product risk exposure to contact, wear suitable protective clothing.

Hand protection
Impervious gloves are recommended for prolonged use.

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

Section 9 - Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Form</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>13.6</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>212 °F (100 °C)</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive limit - upper (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Similar to water</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Similar to water</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.12 ± 0.01</td>
</tr>
<tr>
<td>Relative density temperature</td>
<td>75 °F (23.9 °C)</td>
</tr>
<tr>
<td>Solubilities (water)</td>
<td>Completely soluble in water.</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not available</td>
</tr>
<tr>
<td>n-octanol/water</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not Available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not Available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>&lt; 50 cP</td>
</tr>
<tr>
<td>Viscosity Temperature</td>
<td>75 °F (23.9 °C)</td>
</tr>
</tbody>
</table>

Section 10 - Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity (physical reactivity)</td>
<td>Not available</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable at normal conditions.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Hazardous polymerization does not occur.</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Contact with incompatible materials.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Strong oxidizing agents.</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Carbon monoxide. Carbon dioxide.</td>
</tr>
</tbody>
</table>

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. Symptoms may be delayed.

Information on toxicological effects.

<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-Amino Ethanol (CAS 141-43-5)</td>
<td>Acute</td>
<td>Dermal</td>
<td>LD50</td>
<td>Rabbit</td>
<td>1025 mg/kg</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

Disodium metasilicate (CAS 6834-92-0)

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Route</th>
<th>Species</th>
<th>LD50</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>Oral</td>
<td>Rat</td>
<td>1715 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td>Dermal</td>
<td>Rat</td>
<td>&gt;5000 mg/kg, 24 hours</td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td>Inhalation</td>
<td>LC50</td>
<td>Rat</td>
<td>&gt; 2.06 mg/l, 4 hours</td>
</tr>
<tr>
<td>Acute</td>
<td>Oral</td>
<td>Mouse</td>
<td>661.5 - 896.3 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td>Oral</td>
<td>Rat</td>
<td>500 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

Sodium Hydroxide (CAS 1310-73-2)

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Route</th>
<th>Species</th>
<th>LD50</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>Oral</td>
<td>Rabbit</td>
<td>500 mg/kg</td>
<td></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 available.
Germ cell mutagenicity
Not classified.
Carcinogenicity
Not classified.
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.

Section 12 - Ecological Information

Ecotoxicity
Toxic to aquatic life with long lasting effects. Because of the high pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

Component(s)
Disodium metasilicate, 6834-92-0

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>Fish</td>
<td>LC50</td>
<td>Brachydanio rerio</td>
<td>210 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability
The product is expected to be biodegradable.

Bioaccumulative potential
Not known.

Partition coefficient n-octanol / water log (Kow)
Components
2-Amino Ethanol (CAS 141-43-5)
Results
-1.31

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

DOT

<table>
<thead>
<tr>
<th>UN number</th>
<th>Proper shipping name</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1824</td>
<td>SODIUM HYDROXIDE SOLUTION</td>
</tr>
</tbody>
</table>

Proper shipping name
SODIUM HYDROXIDE SOLUTION

Transport hazard class(es)
8

Packing group
II

Special precautions for user
Read safety instructions, SDS and emergency procedures before handling.

Special provisions
B2, IB2, N34, T7, TP2

Packaging exemption
154

Packaging non bulk
202

Packaging bulk
242

IATA

<table>
<thead>
<tr>
<th>UN number</th>
<th>Proper shipping name</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1824</td>
<td>SODIUM HYDROXIDE SOLUTION</td>
</tr>
</tbody>
</table>

UN number
UN1824

Proper shipping name
SODIUM HYDROXIDE SOLUTION

Transport hazard class(es)
8
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Packaging group II
Environmental hazards No.
ERG Code 8L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Other Information

IMDG
UN number UN1824
UN proper shipping name SODIUM HYDROXIDE SOLUTION
Transport hazard class(es) 8
Packaging group II
Environmental hazards No.
Marine pollutant
EmS F-A, S-B
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Transportation in bulk according to Annex II of MARPOL 73/78 and IBC Code

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 CFR707, Subpt. D) Not regulated.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed
CERCLA Hazardous Substance List (40 CFR 302.4) Result
Components
Sodium Hydroxide (CAS 1310-73-2) LISTED
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 Yes
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.
Safe Drinking Water Act (SDWA) Not regulated.
Food and Drug Administration (FDA) Not regulated.
US state regulations
US.Massachusetts RTK - Substance List Components
2-Amino Ethanol (CAS 141-43-5)
Sodium Hydroxide (CAS 1310-73-2)
US.New Jersey Worker and Community Right-to-Know Act Components
2-Amino Ethanol (CAS 141-43-5)
Sodium Hydroxide (CAS 1310-73-2)
US.Pennsylvania RTK - Hazardous Substances Components
2-Amino Ethanol (CAS 141-43-5)
Sodium Hydroxide (CAS 1310-73-2)
US.Rhode Island RTK Components
2-Amino Ethanol (CAS 141-43-5)
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

Country(s) or region Inventory Name On Inventory (yes/no)*
Australia Australian Inventory of Chemical Substances (AICS) Yes
Canada Domestic Substances List (DSL) Yes
Canada Non-Domestic Substances List (NDSL) No
China Inventory of Existing Chemical Substances in China (IECSC) Yes
Europe European Inventory of Existing Commercial Chemical Substances (EINECS) Yes

CS Foaming Degreaser Cleaner Super Concentrate 1117 Page 5 of 6
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<table>
<thead>
<tr>
<th>Country</th>
<th>Inventory Name</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<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>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</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>United States</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</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).

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**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. |