1. Product and Company Identification

Product name: NU-BRITE (4291-01, 4291-05, 4291-08, 4891-08)
CAS #: Mixture
Product Use: Coil Cleaner / Degreaser
Manufacturer: Nu-Calgon
2008 Altom Court
St. Louis, MO 63146 US
Phone: 314-469-7000 / 800-554-5499
Emergency Phone: 1-800-424-9300 (CHEMTREC)

2. Hazards Identification

Emergency overview: DANGER
CAUSES EYE BURNS. CAUSES SKIN BURNS.

Potential short term health effects

Routes of exposure: Eye, Skin contact, Inhalation, Ingestion.

- Eyes: Causes chemical burns. May cause blindness.
- Skin: Causes chemical burns. Harmful contact may not cause immediate pain.
- Inhalation: May cause respiratory tract irritation or chemical burns.
- Ingestion: Harmful if swallowed. Causes chemical burns to mouth, throat and stomach.

Target organs: Eyes. Respiratory system. Skin.

Chronic effects: Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.

Signs and symptoms: The product causes burns of eyes, skin and mucous membranes.

Potential environmental effects: Components of this product have been identified as having potential environmental concerns.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>1310-73-2</td>
<td>15 - 40</td>
</tr>
<tr>
<td>Alkyl polyglycoside</td>
<td>110615-47-9</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

4. First Aid Measures

First aid procedures

- **Eye contact**: Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.
- **Skin contact**: Immediately flush with cool water for 15 minutes while removing contaminated clothing and shoes. Discard or wash well before reuse. Obtain medical advice immediately.
- **Inhalation**: If not symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
- **Ingestion**: Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

Notes to physician: Treat patient symptomatically.

General advice: If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Use of an impervious apron is recommended. Keep out of reach of children.

5. Fire Fighting Measures

- **Flammable properties**: Not flammable by WHMIS criteria.
Unsuitable extinguishing media
Not available

Protection of firefighters
Specific hazards arising from the chemical
Not available

Protective equipment for firefighters
Firefighters should wear full protective clothing including self contained breathing apparatus.

Hazardous combustion products
May include and are not limited to: Oxides of carbon.

Explosion data
Sensitivity to mechanical impact
No.
Sensitivity to static discharge
No.

6. Accidental Release Measures

Personal precautions
Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

Environmental precautions
Do not discharge into lakes, streams, ponds or public waters.

Methods for containment
Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up
Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills to original containers for re-use.

7. Handling and Storage

Handling
Ensure adequate ventilation. Do not get in eyes, on skin or on clothing. Use good industrial hygiene practices in handling this material. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling. Avoid breathing vapours or mists of this product.

Storage
Keep out of the reach of children. Store in a closed container away from incompatible materials.

8. Exposure Controls/Personal Protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide (CAS 1310-73-2)</td>
<td>Ceiling</td>
<td>2 mg/m³</td>
</tr>
</tbody>
</table>

Exposure limits
Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH.

Engineering controls
General ventilation normally adequate.

Personal protective equipment

Eye/face protection
Wear chemical goggles.

Hand protection
Rubber gloves. Confirm with a reputable supplier first.

Skin and body protection
As required by employer code. Rubber apron recommended.

Respiratory protection
Avoid breathing mists or vapours. Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

General hygiene considerations
Use good industrial hygiene practices in handling this material. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance
Liquid

Colour
Blue

Form
Liquid

Odour
Characteristic, Mild
10. Stability and Reactivity

Reactivity
Reacts violently with acids.
This product may react with oxidizing agents.

Possibility of hazardous reactions
Hazardous polymerisation does not occur.

Chemical stability
Stable under recommended storage conditions.

Conditions to avoid
Hazardous vapours may be produced when mixed with chlorinated detergents or sanitizers.
Do not mix with other chemicals.

Incompatible materials
Acids. Oxidizing agents.

Hazardous decomposition products
May include and are not limited to: Oxides of carbon.

11. Toxicological Information

Toxicological data

Components
Species
Test results

Alkyl polyglycoside (CAS 110615-47-9)

Acute
Dermal
LD50
Rabbit
> 2000 mg/kg

Inhalation
LC50
Not available

Oral
LD50
Rat
> 5000 mg/kg

Sodium hydroxide (CAS 1310-73-2)

Acute
Dermal
LD50
Rabbit
1350 mg/kg
Components | Species | Test results
--- | --- | ---
**Inhalation** | | 
LC50 | Not available | 
**Oral** | | 
LD50 | Not available | 

**Effects of acute exposure**

- **Eye contact**: Causes chemical burns. May cause blindness.
- **Skin contact**: Causes chemical burns. Harmful contact may not cause immediate pain.
- **Inhalation**: May cause respiratory tract irritation or chemical burns.
- **Ingestion**: Harmful if swallowed. Causes chemical burns to mouth, throat and stomach.

**Sensitisation**: Non-hazardous by WHMIS criteria.

**Chronic effects**: Non-hazardous by WHMIS criteria.

**Carcinogenicity**: Non-hazardous by WHMIS criteria.

**Mutagenicity**: Non-hazardous by WHMIS criteria.

**Reproductive effects**: Non-hazardous by WHMIS criteria.

**Teratogenicity**: Non-hazardous by WHMIS criteria.

**Name of Toxicologically Synergistic Products**: Not available.

**12. Ecological Information**

**Ecotoxicity**: Components of this product have been identified as having potential environmental concerns.

**Ecotoxicological data**

**Components**

<table>
<thead>
<tr>
<th>Sodium hydroxide (CAS 1310-73-2)</th>
</tr>
</thead>
</table>

**Aquatic**

<table>
<thead>
<tr>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crustacea</td>
<td>EC50</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
</tr>
</tbody>
</table>

**Persistence and degradability**: Not available.

**Bioaccumulation/accumulation**: Not available.

**Mobility in environmental media**: Not available.

**Environmental effects**: Not available.

**Aquatic toxicity**: Not available.

**Partition coefficient**: Not available.

**Chemical fate information**: Not available.

**13. Disposal Considerations**

**Disposal instructions**: Dispose in accordance with all applicable regulations.

**Waste from residues / unused products**: Not available.

**Contaminated packaging**: Not available.

**14. Transport Information**

**Transportation of Dangerous Goods (TDG - Canada)**

**Basic shipping requirements**:

<table>
<thead>
<tr>
<th>UN number</th>
<th>Proper shipping name</th>
<th>Hazard class</th>
<th>Packing group</th>
<th>Special provisions</th>
<th>Packaging exceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN3266</td>
<td>CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hydroxide)</td>
<td>8</td>
<td>II</td>
<td>16</td>
<td>&lt;1L - Limited Quantity</td>
</tr>
</tbody>
</table>
15. Regulatory Information

Canadian federal regulations
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada WHMIS Ingredient Disclosure: Threshold limits
Sodium hydroxide (CAS 1310-73-2) 1%

WHMIS status
Controlled

WHMIS Classification
Class E - Corrosive Material

Inventory status

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory Name</th>
<th>On Inventory (Yes/No)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND

\[
\begin{array}{c|c|c|c|c}
    & \text{Severe} & \text{Serious} & \text{Moderate} & \text{Slight} & \text{Minimal} \\
\hline
    \text{HEALTH} & / & 3 & & & \\
    \text{FLAMMABILITY} & 0 & & & & \\
    \text{PHYSICAL HAZARD} & & 1 & & & \\
    \text{PERSONAL PROTECTION} & & & X & & \\
\end{array}
\]

Disclaimer
Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date
18-August-2014

Effective date
15-August-2014

Expiry Date
15-August-2017

Prepared by
Nu-Calgon Technical Service Phone: (314) 469-7000

Other information
For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.