



MATERIAL SAFETY DATA SHEET

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

Components	CAS #	Percent
Sodium hydroxide	1310-73-2	15 - 40
Alkyl polyglycoside	110615-47-9	1 - 5

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 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.

Extinguishing media

Suitable extinguishing media Dry chemical. Water spray. Carbon dioxide. Foam.

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

US. ACGIH Threshold Limit Values Components

	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m ³

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

Odour threshold	Not available.
Physical state	Liquid.
pH	14 (Concentrate)
Freezing point	0 °C (32 °F)
Boiling point	100 °C (212 °F)
Pour point	Not available.
Evaporation rate	Not available
Flash point	None to boiling
Auto-ignition temperature	Not available
Flammability Limits in Air, Upper, % by Volume	Not available
Flammability Limits in Air, Lower, % by Volume	Not available
Heat of combustion	Not available.
Vapour pressure	Not available
Vapour density	Not available
Specific gravity	1.242 ± 0.005
Partition coefficient (n-octanol/water)	Not available
Solubility (Water)	Complete
Relative density	Not available.
Viscosity	Not available.
VOC	Not available
Percent volatile	Not available

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		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
Sodium hydroxide (CAS 1310-73-2)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	1350 mg/kg

Components	Species	Test results
<i>Inhalation</i> LC50	Not available	
<i>Oral</i> 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	Species	Test results
Sodium hydroxide (CAS 1310-73-2)		
Aquatic		
Crustacea	EC50	Water flea (<i>Ceriodaphnia dubia</i>) 34.59 - 47.13 mg/l, 48 hours
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>) 125 mg/l, 96 hours

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:

UN number	UN3266
Proper shipping name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hydroxide)
Hazard class	8
Packing group	II
Special provisions	16
Packaging exceptions	<1L - Limited Quantity



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

WHMIS labeling



Inventory status

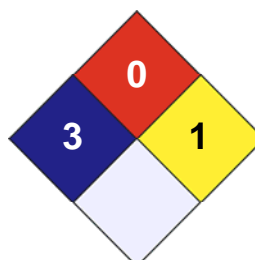
Country(s) or region	Inventory Name	On Inventory (Yes/No)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No

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

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 3
FLAMMABILITY	0
PHYSICAL HAZARD	1
PERSONAL PROTECTION	X



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.