



SAFETY DATA SHEET

Issue Date 31-Dec-2014

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Version 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Name Cal-Brite Coil Cleaner

Other means of identification

Product Code 4133-01, 4133-08

Synonyms None

Details of the supplier of the safety data sheet

Company Name Nu-Calgon
2008 Altom Court
St. Louis, MO 63146
(800) 554-5449
<http://www.nucalgon.com/>

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 2
Acute toxicity - Inhalation (Gases)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Skin corrosion/irritation	Category 1 Sub-category B

Label elements

Emergency Overview

Danger

Hazard statements

Toxic if swallowed
Fatal in contact with skin
Toxic if inhaled
Causes severe skin burns and eye damage
Harmful to aquatic life with long lasting effects

**Appearance** Clear Pink**Physical state** Liquid**Odor** Mild**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not get in eyes, on skin, or on clothing
 Wear protective gloves/protective clothing/eye protection/face protection
 Use only outdoors or in a well-ventilated area
 Do not breathe dust/fume/gas/mist/vapors/spray
 Avoid release to the environment

Precautionary Statements - Response

Specific Treatment (See Section 4 on the SDS)
 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 or doctor/physician
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Immediately call a POISON CENTER or doctor/physician
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CENTER or doctor/physician if you feel unwell
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth
 Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)**Other Information**

Unknown Acute Toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Water	7732-18-5	60-100	*
Ammonium Fluoride	12125-01-8	5-10	*
Hydrofluoric Acid	7664-39-3	1-5	*
Glycolic Acid	79-14-1	1-5	*
Cocamidopropyl Betaine	61789-40-0	.1-1	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

General advice	Immediate medical attention is required.
Skin Contact	Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Eye contact	Keep eye wide open while rinsing. Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Do not rub affected area.
Inhalation	Remove to fresh air. Call a physician or poison control center immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water. Immediate medical attention is required. Remove from exposure, lie down. Clean mouth with water and drink afterwards plenty of water. Call a physician or poison control center immediately.
Self-protection of the first aider	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms	Any additional important symptoms and effects are described in Section 11: Toxicology Information.
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Indication of any immediate medical attention and special treatment needed

Note to physicians	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.
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Environmental precautions

Environmental precautions Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Prevent product from entering drains. Dam up. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible materials Incompatible with strong acids and bases. Incompatible with oxidizing agents. Metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ammonium Fluoride 12125-01-8	TWA: 2.5 mg/m ³ F	TWA: 2.5 mg/m ³ F TWA: 2.5 mg/m ³ dust (vacated) TWA: 2.5 mg/m ³	TWA: 2.5 mg/m ³ F
Hydrofluoric Acid 7664-39-3	TWA: 0.5 ppm F TWA: 2.5 mg/m ³ F S* Ceiling: 2 ppm F	TWA: 3 ppm F TWA: 2.5 mg/m ³ F TWA: 2.5 mg/m ³ dust (vacated) TWA: 3 ppm F (vacated) TWA: 2.5 mg/m ³ (vacated) STEL: 6 ppm F	IDLH: 30 ppm Ceiling: 6 ppm 15 min Ceiling: 5 mg/m ³ 15 min TWA: 3 ppm TWA: 2.5 mg/m ³

NIOSH IDLH *Immediately Dangerous to Life or Health*

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers, Eyewash stations & Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles. Face protection shield.

Skin and body protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Wear protective gloves and protective clothing.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene

When using do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear Pink
Color	Pink
Odor	Mild
Odor threshold	No Information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	4.0 - 5.0	
Specific Gravity	1.07	
Viscosity	< 25 cP @ 25°C	
Melting point/freezing point	No Information available	
Flash point	None	
Boiling point / boiling range	210 °C / 410 Degrees	
Evaporation rate	No Information available	
Flammability (solid, gas)		
Flammability Limits in Air		
Upper flammability limit:	No Information available	
Lower flammability limit:	No Information available	
Vapor pressure	No Information available	
Vapor density	No Information available	
Water solubility	Complete	
Partition coefficient	No Information available	
Autoignition temperature	No Information available	
Decomposition temperature	No Information available	

Other Information

Density Lbs/Gal	8.92
VOC Content (%)	0%

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Exposure to air or moisture over prolonged periods. Extremes of temperature and direct sunlight.

Incompatible materials

Incompatible with strong acids and bases. Incompatible with oxidizing agents. Metals.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Harmful by inhalation, ingestion, in contact with eyes and skin.
Inhalation	Breathing of vapor can cause respiratory irritation and inflammation. Breathing of mist or liquid can cause burns to the respiratory tract.
Eye contact	Direct contact can cause corrosive ocular burns.
Skin Contact	Contact is irritating and may cause an unusual, skin rash that appears similar to ballooning of the skin. If skin is moist, formation of hydrofluoric acid can cause serious burns. These burns do not appear serious at first, but may cause severe damage if not treated immediately.
Ingestion	Harmful if swallowed. Ingestion may cause digestive tract irritation or corrosion, nausea and possibly bloody vomiting, bloody diarrhea and abdominal pain.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	Yes	Yes
Hydrofluoric Acid 7664-39-3	Yes	Yes	= 0.79 mg/L (Rat) 1 h
Glycolic Acid 79-14-1	= 1950 mg/kg (Rat)	Yes	= 3.6 mg/L (Rat) 4 h
Cocamidopropyl Betaine 61789-40-0	= 4900 mg/kg (Rat)	Yes	Yes

Information on toxicological effects

Symptoms No Information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No Information available.
Germ cell mutagenicity No Information available.
Carcinogenicity This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B). The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ammonium Fluoride 12125-01-8	Yes	Group 3	Yes	Yes

IARC (International Agency for Research on Cancer)

Not classifiable as a human carcinogen

Reproductive toxicity No Information available.
STOT - single exposure No Information available.
STOT - repeated exposure No Information available.
Chronic toxicity Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects.

Target organ effects EYES, Respiratory system, Skin.
Aspiration hazard No Information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document .

12. ECOLOGICAL INFORMATION

Ecotoxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Ammonium Fluoride 12125-01-8	Yes	364.0: 96 h Pimephales promelas mg/L LC50 static	Yes
Hydrofluoric Acid 7664-39-3	Yes	660: 48 h Leuciscus idus mg/L LC50	270: 48 h Daphnia species mg/L EC50
Glycolic Acid 79-14-1	Yes	5000: 96 h Brachydanio rerio mg/L LC50 static	Yes
Cocamidopropyl Betaine 61789-40-0	1.0 - 10.0: 72 h Desmodemus subspicatus mg/L EC50 0.55: 96 h Desmodemus subspicatus mg/L EC50	1.0 - 10.0: 96 h Brachydanio rerio mg/L LC50 2: 96 h Brachydanio rerio mg/L LC50 semi-static	6.5: 48 h Daphnia magna mg/L EC50

Persistence and degradability

No Information available.

Bioaccumulation

Bioaccumulative potential.

Chemical Name	Partition coefficient
Hydrofluoric Acid 7664-39-3	-1.4
Glycolic Acid 79-14-1	-1.11

Other adverse effects

No Information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Hydrofluoric Acid 7664-39-3	U134	Yes	Yes	U134

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Ammonium Fluoride 12125-01-8	Toxic Corrosive

14. TRANSPORT INFORMATION

This corrosive material, as per 49 CFR §173.154 and when the product meets the packaging requirements of 49 CFR §173.154 (b)(2) [inner packagings not over 5.0 L (1.3 gallons) net capacity each for liquid] is excepted from labeling and placarding requirements so long as the material is not offered for transport by aircraft

DOT

UN/ID No. UN2922
Proper shipping name Corrosive liquids, toxic, n.o.s.
Hazard Class 8
Subsidiary class 6.1
Packing Group III
Special Provisions IB3, T7, TP1, TP28
Description UN2922, Corrosive liquids, toxic, n.o.s. (contains Ammonium Bifluoride), 8, 6.1, III
Emergency Response Guide Number 154

TDG

UN/ID No. UN2922
Proper shipping name Corrosive liquid, toxic, n.o.s.
Hazard Class 8
Subsidiary class 6.1
Packing Group III
Description UN2922, Corrosive liquids, toxic, n.o.s. (contains Ammonium Bifluoride), 8, 6.1, III

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL/NDSL Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Ammonium Fluoride - 12125-01-8	1.0
Hydrofluoric Acid - 7664-39-3	1.0

SARA 311/312 Hazard Categories

Acute health hazard Yes
Chronic Health Hazard Yes
Fire hazard No
Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonium Fluoride 12125-01-8	100 lb	Yes	Yes	X
Hydrofluoric Acid 7664-39-3	100 lb	Yes	Yes	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ammonium Fluoride 12125-01-8	100 lb	Yes	RQ 100 lb final RQ RQ 45.4 kg final RQ
Hydrofluoric Acid 7664-39-3	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ammonium Fluoride 12125-01-8	X	X	X
Hydrofluoric Acid 7664-39-3	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

<u>NFPA</u>	Health hazards 3	Flammability 0	Instability 0	Physical and Chemical Properties Yes
<u>HMIS</u>	Health hazards 3	Flammability 0	Physical hazards 0	Personal protection D

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Revision Note

No Information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet