MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Name	Phone Number			CHEMTREC
Nu-Calgon Wholesaler, Inc.	(314) 469-7000 / (800) 554-5499			(800) 424-9300
Street Address	**City**	**State**	**Postal Code**	**Last Update**
2008 Altom Court	St. Louis	MO	63146-4151	01/01/15
Product Name	**Product Number**	**Product Use**		**EPA Registration #**
Cal-Brite	4133	Coil Cleaner		N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	% By Wt.	CAS Number	TLV	PEL
Ammonium bifluoride	<25	1341-49-7	3 ppm	3 ppm
Glycolic Acid	4-8	79-14-1	N/A	N/A

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: Note to physician: Treat as per an accident involving hydrofluoric acid.

Potential Health Effects

Eyes: Corrosive. Causes eye damage. Wear splash proof goggles or side shield safety glasses. Provide convenient eyewash stations.

Skin: Corrosive. Ammonium bifluoride causes severe necrosis to tissues (like hydrofluoric acid.) The calcium and magnesium ions of the tissues will be captured.

Ingestion: Corrosive. Causes burning in mouth and throat. Do not induce vomiting. Immediately give two glasses of water or activated charcoal slurry. An alternate is magnesia (one tablespoon in a glass of water) or, preferably, a solution of calcium gluconate. Get medical attention immediately.

Inhalation: Corrosive! Breathing of vapor can cause respiratory irritation and inflammation. Take immediately to a physician.

Chronic Exposure: SKIN: May cause skin irritation with discomfort or rash or skin burns or ulceration. EYES: May cause eye irritation with discomfort, tearing, or blurring of vision; or eye corrosion with cornea or conjunctival ulceration. INHALATION: May cause irritation of the upper respiratory passages with coughing and discomfort; or temporary nervous system depression with anaesthetic effects such as dizziness, headache, confusion, incoordination, and loss of consciousness. Inhalation of ammonium bifluoride may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Symptoms exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Chronic exposure to fluoride may cause fluorosis with weight loss, anemia, weakness, general ill health, stiffness of joints. INGESTION: May cause upper gastrointestinal irritation or corrosion of mucous membranes with stomach discomfort, nausea and prostration or abnormal liver function as detected by laboratory tests. Fatality may occur from gross overexposure.

Carcinogenicity: N/A

Medical Conditions Aggravated be Exposure: No Data.

SECTION 4 – FIRST AID MEASURES

Eyes: Flush immediately with plenty of water and then with an isotonic solution of calcium gluconate (3.5% of calcium gluconate in an isotonic saline.) Seek medical advice immediately.

Skin: Remove immediately all contaminated clothing. Rinse with plenty of water and then bathe with a solution of calcium gluconate or apply a compress. In all cases seek medical advise immediately. With the contaminated clothing, launder before re-use. Discard contaminated shoes.

Ingestion: Do not induce vomiting. Immediately give two glasses of water or activated charcoal slurry. An alternate is magnesia (one tablespoon in a glass of water) or, preferably, a solution of calcium gluconate. Get medical attention immediately.

Inhalation: Take immediately to a physician.

SECTION 5 – FIREFIGHTING MEASURES

Flash Point: None°F
Autoignition Temp: No Data.°C/No Data.°F
Hazardous Products of Combustion: N/A
Flammable Limits in Air: N/A
Extinguishing Media: Use media appropriate for surrounding material
Fire and Explosion Hazards: None
Special Firefighting Procedures: Avoid skin and eye contact, and breathing of acid vapors. Wear head and body protection and acid respirator when handling liquid. Toxic fumes can be produced in fire conditions.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill or Leak: Neutralize with slaked lime to insoluble calcium fluoride. Dike spill and prevent material from entering sewers, waterways or low areas. Absorb spill with inert material then place in suitable container. Deposit the spilled material in accordance with local, state or national legislation. When neutralized the product will give off ammonia fumes. Wash spillage area clean.

SECTION 7 – HANDLING AND STORAGE

Handling Procedures and Equipment: Keep containers closed. Store in cool place. Do not store with alkalis or acids.
Storage Requirements: Areas of use and storage should be ventilated adequately to reduce vapors below odor level. Rubber or plastic gloves and tight fitting goggles should be worn when handling product.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: NIOSH/MSHA approved protection, as appropriate.
Eye Protection: Wear splash proof goggles or side shield safety glasses. Provide convenient eyewash stations.
Protective Clothing: Gloves, Protective Apron or other clothing.
Exposure Guidelines: No Data.
Specific Engineering Controls (such as ventilation, enclosed process): Do not breathe vapor or mist. Do not get in eyes, on skin or clothing. Wash thoroughly after handling. Wash clothing after use.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid	**Freezing Point:** No Data.°C/No Data.°F	**% Volatile by Weight:** No Data.%
Color: Pink	**Vapor Density [air =1]:** No Data.	**Evaporation Rate:** No Data.
Odor: Mild	**Vapor Pressure:** No Data.	**Specific Gravity:** 1.07
Boiling Point: No Data.°C/210°F	**Solubility in Water:** Complete	**pH (concentrate):** 4-5

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable at normal temperatures and storage conditions
Hazardous Polymerization: Does Not Occur
Incompatibilities: Quartz or silicate materials (e.g. glass), metals, alkalies, acids
Reactive Conditions to avoid: Alkaline Materials
Decomposition Products: Ammonia and hydrofluoric acid

SECTION 11 – TOXICOLOGICAL INFORMATION

Hazardous Ingredients	CAS #	EINECS #	LD 50 of Ingredient (Specify Species)	LC50 of Ingredient (Specify Species)
Ammonium bifluoride	1341-49-7	N/A	N/A	No Data.
Glycolic Acid	79-14-1	N/A	LD50 (ORAL, RAT): 1950 MG/KG	No Data.

SECTION 12 – ECOLOGICAL INFORMATION

Hazardous Ingredients	Aquatic Toxicity Data
Ammonium bifluoride	This material is not expected to be toxic to aquatic life. The LC50/96-hour values for fish are over 100 mg/l.
Glycolic Acid	79-14-1

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: Neutralize with slaked lime to insoluble calcium fluoride. Deposit the spilled material in accordance with local, state or national legislation. When neutralized the product will give off ammonia fumes. Wash spillage area clean. Empty Containers: Rinse well before handling and disposal.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: No Data.

Purview	Proper Shipping Name	UN Number	Packing Group	Hazard Class
DOT (Land)	Corrosive liquid, toxic, n.o.s. (contains ammonium bifluoride)	UN2922	III	8 (6.1)
IMO (Water)	No Data.	No Data.	No Data.	No Data.
ICAO (Air)	No Data.	No Data.	No Data.	No Data.

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	Class E - Corrosive Material.
SARA Title III: (Superfund Amendments & Reauthorization Act)	No Data.
OSHA: (Occupational Safety & Health Administration)	No Data.
TSCA: (Toxic Substance Control Act)	No Data.
VOC: (volatile Organic Compounds)	No VOCs.
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data.
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
CERCLA: (Comprehensive Response Compensation & Liability Act)	No Data.
IDL: (Canadian Ingredient Disclosure List)	No Data.
NFPA (HMIS) Rating: (Hazardous Materials Identification System)	Health Hazard.....: 1 Fire Hazard.....: 0 Reactivity.....: 0 Personal Protection...: X

SECTION 16 – OTHER INFORMATION

No Data.

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herin.