



SAFETY DATA SHEET
BBJ POWER Coil Clean®

BBJ Environmental Solutions
 "The standard of care for indoor air"

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product Name: BBJ POWER Coil Clean®
Product Codes(s): 520-04; 525-01; 523-01; 575-01
Synonyms: Aqueous ammonium bifluoride solution

REACH Registration Number: Some materials in this product have been registered according to Regulation (EC) 1907/2006. The remaining substances in this product have been pre-registered according to Article 2 REACH Regulation (EC) No 1907/2006.

1.2 Relevant identified uses of the substance or mixture and uses advised against

General Use: Cleaner for HVAC and refrigeration evaporator and condenser coil cleaner
Uses advised against: No uses advised against

1.3 Details of the supplier and of the safety data sheet

Manufacturer/Distributor
 BBJ Environmental Solutions
 6321 Pelican Creek Circle
 Riverview, FL 33578 USA
 +1-813-622-8550; Toll free: +1-800-889-2251

1.4 Emergency telephone number: Chemtrec (24 hours) +1-800-424-9300

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Product definition: Mixture
Classification (REGULATION (EC) No 1272/2008)
 Eye Irritant 2B [H320]

2.2 Label Elements

Labeling (REGULATION (EC) No 1272/2008)

Hazard Symbols: None allocated
Signal Word: Warning

Hazard Statement(s): H320 - Causes eye irritation.

Precautionary Statements:

[Prevention] P264 - Wash hands thoroughly after handling.
 P280 - Wear protective gloves, eye protection and face protection.
[Response] P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 - If eye irritation persists: Get medical attention.

Labeling (67/548/EEC to 1999/45/EC)

Pictogram - None allocated

Risk Phrases: R36 - Irritating to eyes.

Safety Phrases: S2 - Keep out of the reach of children.
 S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S37/39 - Wear suitable gloves and eye/face protection.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Chemical characterization (preparation)

Aqueous solution

% by Weight	Ingredient	CAS Number	EC Number	Index Number	EC Classification
<5	Ammonium bifluoride	1341-49-7	215-676-4	009-009-00-4	C, R34; Xn, R22
<1	Cocamide diethanolamine	68603-42-9	271-657-0	-----	-----
<1	Hydrofluoric acid	7664-39-3	231-634-8	009-003-00-1	Xi, R36*
<0.2	Diethanolamine	111-42-2	203-868-0	603-071-00-1	Xn, R22, R48/22 Xi, R38, R41

* For Hydrofluoric Acid concentrations of 0.1% - 1%

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to the health or the environment and hence require reporting in this section.

SECTION 4 - FIRST AID MEASURES

This product contains less than 1% free hydrofluoric acid. First aid techniques for treatment to hydrofluoric acid exposures are unique.

Even low levels of exposure to HF require a rapid response and the use of calcium (most commonly calcium gluconate solutions or gels) to scavenge and neutralize the fluoride ion. Effects may be delayed, so treatment should be given even if exposure is suspected.

4.1 Description of first aid measures

Inhalation: If product vapors or mists cause respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. If symptoms persist, seek medical attention immediately.

Eyes: Immediately flush eyes with large amounts of water for 15 minutes. Remove contact lenses if present, after the first 5 minutes and continue rinsing. Obtain immediate medical attention, preferably from an ophthalmologist.

Skin: Flush skin with large amounts of water while removing contaminated clothing. Wash affected area with soap and water. Wash contaminated clothing and shoes thoroughly before reuse. Seek prompt medical attention if rash develops.

Ingestion: Rinse mouth with water. Remove dentures if present. If conscious and alert drink 2 - 3 cupfuls of milk or water. Do not induce vomiting unless directed to do so by medical personnel. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on one side with the head lower than the waist. Vomiting may occur spontaneously. If vomiting occurs and the victim is conscious, give milk or water to further dilute material. Never give anything by mouth to an unconscious person. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

Potential health symptoms and effects

Eyes: May cause eye irritation. Symptoms may include redness, stinging, tearing and swelling.

Skin: May cause skin irritation. Symptoms may include redness and/or itching.

Inhalation: Inhalation of mists, vapors or spray may cause irritation of the respiratory system.

Ingestion: May be harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting, abdominal cramps and diarrhea.

Chronic: No information available.

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishable media

Suitable methods of extinction: Use extinguishing media appropriate for surrounding fire.

Unsuitable methods of extinction: None known

5.2 Special hazards arising from the substance or mixture

Solution may release hydrogen fluoride when heated. Releases ammonia when solution is mixed with alkalis.

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

5.3 Advice for firefighters

Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If possible, firefighters should control run-off water to prevent environmental contamination.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing designated in Section 8. Ventilate the area.

6.2 Environmental precautions

Avoid dispersal of spilled material or run-off and prevent contact with soil and entry into drains, sewers or waterways.

6.3 Methods and materials for containment and cleaning up

Cover drains and contain spill. Cover with a large quantity of inert absorbent. Collect product using a shovel or broom and into place into an approved container for proper disposal. Observe possible material restrictions (Sections 7.2 and 10.5). Clean contaminated area with soap and water.

6.4 Reference to other sections

For indications about waste treatment, see Section 13.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling

Observe label precautions. Wear all appropriate protective equipment specified in Section 8. Keep containers closed when not in use.

Advice on protection against fire and explosion

Material does not burn. Solution may generate hydrogen fluoride when heated. Releases ammonia when mixed with alkalis.

7.2 Conditions for safe storage, including any incompatibilities

Store in original container in a dry, cool, well ventilated storage areas in closed containers. DO NOT transfer or store in glass containers.

Solution becomes cloudy at <math><4.4^{\circ}\text{C}</math> (<math><40^{\circ}\text{F}</math>). Containers that have been opened should be carefully resealed and kept upright to prevent leakage. Do not take internally. Keep out of reach of children.

7.3 Specific end uses

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

CAS Number	Ingredient	OSHA	ACGIH	NIOSH
7664-39-3	Hydrofluoric Acid	3 ppm TWA	0.5 ppm TWA; 2 ppm Ceiling	3 ppm; 2.5 mg/m ³ TWA; 6 ppm; 5 mg/m ³ Ceiling; 30 ppm IDLH
111-42-2	Diethanolamine	-----	1 mg/m ³ TWA	3 ppm; 15 mg/m ³ TWA

8.2 Exposure controls

Engineering Measures: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable. Refer to See Section 7.1.

Individual protection measures: Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

Hygiene measures: Facilities storing or using this material should be equipped with an eyewash station and safety shower. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking or using the lavatory.

Eye/face protection: Wear protective goggles or safety glasses with unperforated side shields during use. Refer to 29 CFR 1910.133, ANSI Z87.1 or European Standard EN 166.

Hand Protection: Wear rubber gloves or gloves recommended by glove supplier for protection against materials in section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of selected gloves must be greater than the intended use period.

Other protective equipment: Protective clothing. Protective boots, if the situation requires.

Respiratory Protection: Always use an approved respirator when vapor/aerosols are generated. Where risk assesment shows air-purifying respirators are appropriate use a full-faced respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental exposure controls: Do not empty into drains.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Clear, colorless to pale yellow liquid
Odor	Mild
Odor Threshold	Not determined
Molecular Weight	Not applicable
Chemical Formula	Not applicable
pH	4.75 - 5.25 @ 20°C (68°F)
Freezing/Melting Point	0°C (32°F)
Initial Boiling Point	100°C (212°F)
Evaporation Rate	Not determined
Flammability (solid, gas)	Not applicable
Flash Point	Not determined
Autoignition Temperature	Not determined
Decomposition Temperature	Not determined
Lower Explosive Limit (LEL)	Not determined
Upper Explosive Limit (UEL)	Not determined
Vapor Pressure	17 mm Hg
Vapor Density	Not determined
Specific Gravity	1.00 - 1.05
Viscosity	Not determined
Solubility in Water	Complete
Partition Coefficient: n-octanol/water	Not determined
Volatiles by Volume @ 70° F	95%

9.2 Other data

No data available

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

No special reactivity has been reported.
Hazardous polymerization will not occur.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

May generate hydrogen fluoride when heated. Releases ammonia when in contact with alkalis.

10.4 Conditions to avoid

Extreme temperatures. Contact with incompatible materials. DO NOT mix with other cleaning agents or household chemicals, including ammonia, acids, alkalis, bleaches or chlorine containing cleaners. DO NOT transfer product to or store product in glass containers.

10.5 Incompatible materials

Strong oxidizing agents, amines and alkalis

10.6 Hazardous decomposition products

Thermal decomposition products include carbon oxides, nitrogen oxides, ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Oral Toxicity

LD50 - Rat: >1,900 mg/kg

Acute inhalation toxicity

LC50 - Rat: >201.3 mg/l

Acute dermal toxicity

LD50 - Rat: >2,000 mg/kg

Skin irritation

May cause skin irritation.

Eye irritation

May cause eye irritation.

Sensitization

No data available

Genotoxicity in vitro

No data available

Mutagenicity

No data available

Specific organ toxicity - single exposure

May cause respiratory irritation

Specific organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Further information

Chronic Effects

This product contains <0.2% residual diethanolamine (CAS #111-42-2) which is listed as a Group 2B Carcinogen by IARC - Possibly carcinogenic to humans. Diethanolamine is not identified as a probable, possible, potential or confirmed carcinogen by ACGIH, NTP or OSHA.

RTECS: KL2975000

This product contains <1% Cocoamide DEA (CAS #68603-42-9) which is listed as a Group 2B Carcinogen by IARC - Possibly carcinogenic to humans. Cocamide DEA is not identified as a probable, possible, potential or confirmed carcinogen by ACGIH, NTP or OSHA.

RTECS: GG6200000

No other components of this product present at levels greater than or equal to the 0.1% threshold (de minimis) are identified as a probable, possible, potential or confirmed carcinogens by ACGIH, IARC, NTP or OSHA.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity

The aquatic toxicity of this product has not been evaluated.

12.2 Persistence and degradability

Material is expected to be biodegradable.

12.3 Bioaccumulation potential

Material is not expected to bioaccumulate.

12.4 Mobility

The components in this product are water soluble and highly mobile in soil.

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

Additional ecological information

No data available

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Methods of disposal: The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Hazardous waste: The classification of this product may meet the criteria for a hazardous waste.

RCRA U-Series: Hydrofluoric Acid (CAS #7664-39-3); waste number U134 (Corrosive waste, Toxic waste)

SECTION 14 - TRANSPORT INFORMATION

Note: Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

This material is not regulated for transport.

Marine Pollutant: This product is not a marine pollutant.

Signal Word: Warning

Hazard Symbols: None allocated

SECTION 15 - REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture

U. S. Federal Regulations

OSHA Hazard Communication Standard: This material contains "Hazardous Chemicals" as defined by the OSHA Hazard Communication Standard (28 CFR 1910.1200).

OSHA Process Safety Management Standard: Hydrofluoric Acid (CAS # 7664-39-3) is regulated under OSHA PSM Standard 29 CFR 1910.119.

EPA Risk Management Planning Standard: Hydrofluoric Acid (CAS #7664-39-3) is regulated under EPA RMP Standard (RMP) 40 CFR Part 68.

TSCA Status: All components of this product are listed on the Toxic Substance Control Act (TSCA) Inventory.

Superfund Amendments and Reauthorization Act (SARA)

SARA Section 311/312 Hazard Categories: Acute Health Hazard

SARA 313 Information: None of the chemicals in this product exceed the threshold (de minimis) reporting levels established by Section 313 of the Emergency Planning and Community Right-to Know Act of 1986.

SARA 302/304 Extremely Hazardous Substance

None of the components of the product exceed the threshold (de minimis) reporting levels established by of these sections of Title III of SARA.

SARA 302/304 Emergency Planning & Notification:

None of the components of the product exceed the threshold (de minimis) reporting levels established by of these sections of Title III of SARA.

Comprehensive Response Compensation and Liability Act (CERCLA): This product contains the following CERCLA reportable substances:
Ammonium Bifluoride (CAS #1341-49-7), RQ - 45.36 kg (100 lbs) Hydrofluoric Acid (CAS #7664-39-3), RQ - 45.36 kg (100 lbs)

Clean Air Act (CAA)

None of the chemicals in this product exceed the threshold (de minimis) reporting level for Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).

This product does not contain any Class 1 Ozone depletors.

This product does not contain any Class 2 Ozone depletors.

Clean Water Act (CWA)

None of the chemicals in this product exceed the threshold (de minimis) reporting level as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

U.S. State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986:

Cocamide DEA (CAS #68603-42-9) and Diethanolamine (CAS # 111-42-2) are known to the state of California to cause cancer.

Other U.S. State Inventories

Diethanolamine (CAS #111-42-2) is found on the following State Inventories or Right-to-Know lists: CA, MA, MN, NJ, PA

Hydrofluoric Acid (CAS #7664-39-3) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants List(s): CA, DE, ID, IL, ME, MA, MN, NC, NJ, NY, PA, WA, WI.

Canada

WHMIS Hazard Symbol and Classification: None allocated

Canadian Controlled Products Regulations (CPR): 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.

Canadian Ingredient Disclosure List (IDL): Hydrofluoric Acid and Diethanolamine are listed on the IDL.

Canadian National Pollutant Release Inventory (NPRI): Hydrofluoric Acid and Diethanolamine are listed on the NPRI.

European Economic Community

WGK, Germany (Water danger/protection): 1

Chemical Inventory Lists

Country	Inventory Name	Inventory Listing*
Canada:	Domestic Substance List (DSL).	Yes
Canada:	Non-Domestic Substance List (NDSL).	No
Europe:	Inventory of New and Existing Chemicals (EINECS)	Yes
United States:	Toxic Substance Control Act (TSCA)	Yes
Australia:	Australian Inventory of Chemical Substances (AICS)	Yes
New Zealand:	New Zealand Inventory of Chemicals (NZIoC)	Yes
China:	Inventory of Existing Chemical Substances in China (IECSC)	No
Japan:	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea:	Existing Chemicals List (ECL)	Yes
Philippines:	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*"Yes" indicates that all components of this product are in compliance with the inventory requirements administered by the governing country.

*"No" indicates that one or more components of this product are not on the inventory and are not exempt from listing.

SECTION 16 - OTHER INFORMATION

Hazardous Material Information System (HMIS)

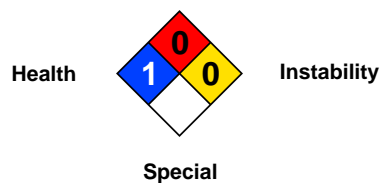
Health	1
Flammability	0
Physical Hazard	0
Personal Protection	B

HMIS and NFPA Hazard Rating Legend

* = Chronic Health Hazard 2 = MODERATE
0 = INSIGNIFICANT 3 = HIGH
1 = SLIGHT 4 = EXTREME

National Fire Protection Association (NFPA)

Flammability



Full Text of Risk (R) – Phrases Referenced in Section 3.

- R22 - Harmful in contact if swallowed.
- R34 - Causes burns.
- R38 - Irritating to skin.
- R41 - Risk of serious damage to the eyes.
- R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed.

BBJ Environmental Solutions assumes no legal responsibility or liability from the described product's use. All chemicals possess unknown potential hazards. The information herein should be used only to supplement the end user's existing knowledge. Read directions for proper use. This SDS was written for the product as packaged. Cleaning Contractors shall comply with all applicable OSHA regulations.

Revision Date: 18 October 2012