



SAFETY DATA SHEET BBJ AMC 5.5™

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

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier

Product Name: BBJ AMC 5.5™
Product Codes(s): 641-06; 643-04; 644-01
EPA Registration No.: 10324-80-67212
Synonyms: Aqueous disinfecting solution
REACH Registration Number: No data available

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

General Use: Microbial inhibitor for HVAC systems and air ducts
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)
Acute Toxicity, Oral - Category 4 [H302]
Skin Corrosive - Category 1B [H314]
Acute Aquatic Toxicity - Category 1 [H400]

2.2 Label Elements

Labeling (Regulation (EC) No 1272/2008)

Hazard Symbol(s):



Signal Word:

Danger

Hazard Statement(s):

H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H400 - Very toxic to aquatic life

Precautionary Statements:

[Prevention]

P260 - Do not breathe mist or spray.
P264 - Wash hands and other skin areas exposed to material thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves, protective clothing and eye/face protection.
P273 - Avoid release to the environment.

[Response]

P301 + P330 + P331 + P312 - IF SWALLOWED: Rinse mouth. Do not induce vomiting. Call a POISON CENTER or doctor if you feel unwell.
P303 + P361 + P353 - IF ON SKIN: Remove immediately all contaminated clothing. Rinse skin with water or shower.
P304 + 340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P321 - Specific treatment: Refer to product label and Section 4 of this SDS. Contact a POISON CENTER.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

[Storage]

P391 - Collect spillage.
P405 - Store locked up.

[Disposal]

P501 - Dispose of contents in accordance with national/local regulations.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Chemical characterization (preparation)

% by Weight	Ingredient	CAS Number	EC Number	Index Number	EC Classification
2.500	Nonylphenol ethoxylate	9016-45-9	500-024-6		

CHM01046

% by Weight	Ingredient	CAS Number	EC Number	Index Number	EC Classification
2.200	Alkyl (C12 - C14) dimethyl benzyl ammonium chloride	68424-85-1	270-325-2	-----	-----
1.900	Tetrasodium ethylenediamine tetraacetate	64-02-8	200-573-9	607-428-00-2	Xn, R22; Xi, R41
1.650	Octyl decyl dimethyl ammonium chloride	32426-11-2	251-035-5	-----	-----
1.000	Ethyl Alcohol	64-17-5	200-578-6	603-002-00-5	F, R11
0.825	Didecyl dimethyl ammonium chloride	7173-51-5	230-525-2	612-131-00-6	Xn, R22; C, R34
0.825	Diocetyl dimethyl ammonium chloride	5538-94-3	226-901-0	-----	-----
0.500	Sodium metasilicate	6834-92-0	201-069-1	014-010-00-8	C, R34; Xi, R37

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

4.1 Description of first aid measures

Inhalation: If product vapor or mist causes 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, occasionally lifting the upper and lower lids. Remove contact lenses, if present and easy to do, after the first 5 minutes and continue rinsing. Seek immediate medical attention, preferably from an ophthalmologist.

Skin: Flush skin with large amounts of water while removing contaminated clothing and continue rinsing for at least 15 minutes. Wash contaminated clothing and shoes thoroughly before reuse. If irritation occurs or persists, seek medical attention.

Ingestion: Rinse mouth with water. Remove dentures if any. If swallowed, give 2 - 3 glasses of water if victim is conscious and alert. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Obtain medical attention immediately if ingested. To prevent aspiration of swallowed product, lay victim on side with head lower than waist.

4.2 Most important symptoms and effects, both acute and delayed

Potential health symptoms and effects

Eyes: Corrosive. Direct contact with liquid may cause severe eye irritation, redness, swelling, pain, burns and possibly severe and permanent eye damage including blindness. Material is extremely destructive to eyes, mucous membranes and surrounding tissues. The degree of injury depends on the product concentration and duration of contact.

Skin: Corrosive. Causes skin irritation and burns with redness, itching, swelling, defatting of skin and possible destruction of tissue.

Inhalation: Vapor or mist causes irritation of the respiratory tract, causing sore throat and cough. Material is extremely destructive to the tissues of the mucous membranes and upper respiratory tract. High vapor or mist concentrations may affect the central nervous system causing headache, dizziness and drowsiness.

Ingestion: Causes severe gastrointestinal tract irritation with sore throat, abdominal pain, nausea, vomiting and diarrhea. May cause burns and irritation of the mucous membranes of the mouth and to tissues of the digestive tract.

Chronic: Prolonged or repeated contact with mist or vapor may result in chronic eye irritation, severe skin irritation and dermatitis, and respiratory tract irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Advice to Doctor/Physician and Hospital Personnel

Possible mucosal damage may contraindicate the use of gastric lavage.

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishable media

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

Unsuitable methods of extinction: None known

5.2 Special hazards arising from the substance or mixture

Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Closed containers may explode due to 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 immediate medical attention.

Explosion hazards: None known

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. Firefighters should control run-off water to prevent environmental contamination.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing mist or vapor. Avoid contact with skin and eyes. Wear appropriate protective clothing designated in Section 8. Ventilate the area. Remove all sources of ignition. Evacuate non-essential personnel. Spill presents a slip hazard.

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 non-combustible, inert absorbent (e.g. sand, vermiculite, diatomaceous earth). Do not use combustible materials such as saw dust. Sweep or shovel up product and place material into an approved container for disposal as hazardous waste. Observe possible material restrictions (Sections 7.2 and 10.5). Clean contaminated area with water.

240101MHD

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

Wear all appropriate personal protective equipment specified in Section 8. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator.

Advice on protection against fire and explosion

Keep away from heat and incompatible materials.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10.5), food and drink. Transfer only to approved containers having correct labeling. Protect container against physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Containers of this material may be hazardous when empty as they contain product residues. Use appropriate containment to avoid environmental contamination. Ventilate closed areas. 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 PEL - TWA	ACGIH TLV	NIOSH
64-17-5	Ethanol	1,000 ppm; 1,900 mg/m ³	1,000 ppm TWA	1,000 ppm; 1,900 mg/m ³ TWA; 3,300 ppm IDLH

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 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	Dark green liquid
Odor	Pine
Odor Threshold	Not determined
Molecular Weight	Not applicable
Chemical Formula	Not applicable
pH	>12 @ 20 °C (68 °F)
Freezing/Melting Point	-12.2 °C (10 °F)
Initial Boiling Point	88 - 99 °C (190 - 210 °F)
Evaporation Rate	~0.3 (n-BuAc = 1)
Flammability (solid, gas)	Not applicable
Flash Point	94 °C (201 °F)
Autoignition Temperature	Not determined
Decomposition Temperature	Not determined
Lower Explosive Limit (LEL)	Not determined
Upper Explosive Limit (UEL)	Not determined
Vapor Pressure	0.3 - 1.2 mm Hg
Vapor Density	Not determined
Specific Gravity	1.00 - 1.02
Viscosity	Not determined
Solubility in Water	Complete
Partition Coefficient: n-octanol/water	Not determined
Volatiles by Volume @ 70 °F	>86%

9.2 Other data
No data available

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

No special reactivity has been reported.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Reacts with strong oxidizing agents (potential fire hazard).
Hazardous polymerization will not occur.

10.4 Conditions to avoid

Extreme temperatures. Contact with incompatible materials.

10.5 Incompatible materials

Strong oxidizing agents, strong reducing agents

10.6 Hazardous decomposition products

Thermal decomposition products include carbon oxides, nitrogen oxides, aldehydes, ketones, organic acids, formaldehyde.

SECTION 11 - TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Oral Toxicity

Product is expected to have low oral toxicity.

Acute inhalation toxicity

Product is expected to have low inhalation toxicity.

Acute dermal toxicity

Product is expected to have low dermal toxicity.

Skin irritation

Causes severe skin irritation and burns.

Eye irritation

Causes severe eye irritation and burns.

Sensitization

No data available

Genotoxicity in vitro

No data available

Mutagenicity

No data available

Specific organ toxicity - single exposure

No data available

Specific organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Further information

Chronic Effects

None of the components of this product are listed as carcinogens by ACGIH, IARC, NTP or OSHA. No data is available regarding the mutagenicity and/or teratogenicity of this product in humans, nor is there any available data that indicates it causes adverse developmental and/or fertility effects in humans.

This product contains trace amounts (<0.1%) of Nitroacetic Acid (NTA). NTA and its salts were classified as carcinogens by IARC (Group 2 - possibly carcinogenic to humans), by NTP (may be reasonably anticipated to be a carcinogen) and by OSHA (select carcinogen).

Reproductive effects have been reported for EDTA and its sodium salts. In some studies birth defects in laboratory animals were reported only at exaggerated doses that were toxic to the mother. These effects are likely associated with zinc deficiency due to chelation. Exposures having no effect on the mother should have no effect on the fetus.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity

Very toxic to aquatic organisms and may cause long term effects in the aquatic environment. Contains Nonylphenol, Ethoxylate, a water polluting material. Quaternary ammonium salts are highly toxic to fish and aquatic organisms. May be harmful to the environment if released in large quantities.

12.2 Persistence and degradability

Product is expected to biodegrade over time.

12.3 Bioaccumulation potential

Nonylphenol, Ethoxylate has the potential to bioaccumulate. n-Octanol/water partition coefficient (log Pow) is ~4.48.

12.4 Mobility

Nonylphenol, Ethoxylate absorbs to soil and has low mobility. The remaining components 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

Do not allow material to run into surface waters, wastewater or soil.

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 spill 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.

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.

U.S. DOT (Domestic Ground Transportation)

Proper Shipping Name:	Disinfectants, Liquid, Corrosive N.O.S. (quaternary ammonium compounds)
Hazard Class:	8
UN/NA:	UN1903
Packing Group:	III
NAERG:	Guide #153
Packaging Authorization:	Non-Bulk: 49 CFR 173.203; Bulk: 173.241
Packaging Exceptions:	49 CFR 173.154

IMO/IMDG (Water Transportation)

Proper Shipping Name:	Disinfectants, Liquid, Corrosive N.O.S. (quaternary ammonium compounds)
Hazard Class:	8
UN/NA:	UN1903
Packing Group:	III
Marine Pollutant:	YES
EMS Number:	F-A, S-B

ICAO/IATA (Air Transportation)

Proper Shipping Name:	Disinfectants, Liquid, Corrosive N.O.S. (quaternary ammonium compounds)
Hazard Class:	8
UN/NA:	UN1903
Packing Group:	III
Quantity Limitations:	49 CFR 175.27 and 175.75 - Cargo Aircraft Only: 30 L; Passenger Aircraft: 1 L

RID/ADR (Rail Transportation)

Proper Shipping Name:	Disinfectants, Liquid, Corrosive N.O.S. (quaternary ammonium compounds)
Hazard Class:	8
UN/NA:	UN1903
Packing Group:	III



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 is classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

OSHA Process Safety Management Standard: Components of this product are not regulated under OSHA PSM Standard 29 CFR 1910.119.

EPA Risk Management Planning Standard: Components of this product are not 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, Chronic 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

No 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:

No 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): Contains no chemicals regulated under CERCLA.

Clean Air Act (CAA)

This product does not contain any chemicals that are listed as Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).

This product does not contain any Class 1 Ozone depleters.

This product does not contain any Class 2 Ozone depleters.

Clean Water Act (CWA)

None of the chemicals in this product are listed 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:

This product contains no chemical(s) exceeding the de minimis (0.1%) that are known to the State of California to cause cancer or other reproductive harm. Contains trace amounts of Ethanol.

Other U.S. State Inventories

Ethanol (CAS #64-17-5) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, ID, MA, MN, NJ, PA, WA.

Canada

WHMIS Hazard Symbol and Classification:



E - Corrosive material - Corrosive to eyes and skin

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): Nonylphenol, Ethoxylate and Ethanol are listed on the IDL.

Canadian National Pollutant Release Inventory (NPRI): Ethanol is listed on the NPRI.

European Economic Community

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



C - Corrosive



Xi - Irritant



N - Dangerous for the environment

Risk Phrases: R22 - Harmful if swallowed.
R34 - Causes burns.
R50 - Very toxic to aquatic organisms.

Safety Phrases: S1/2 - Keep locked up and out of the reach of children.
S24/25 - Avoid contact with skin and eyes.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S27 - Take off immediately all contaminated clothing.
S28 - After contact with skin, wash immediately with plenty of water.
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

WGK, Germany (Water danger/protection): 2

Global 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)	No
United States:	Toxic Substance Control Act (TSCA)	Yes
Australia:	Australian Inventory of Chemical Substances (AICS)	No
New Zealand:	New Zealand Inventory of Chemicals (NZIoC)	Yes
China:	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Japan:	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea:	Existing Chemicals List (ECL)	No
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.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16 - OTHER INFORMATION

Hazardous Material Information System (HMIS)

Health	3
Flammability	0
Personal Protection	C

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



Health

Instability

Special



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

R11 - Highly flammable.

R37 - Irritating to respiratory system.

R41 - Risk of serious damage to the eyes.

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. Product may turn yellow, orange or brown if pH becomes alkaline; however, this should not affect the product's effectiveness. If frozen, crystals may remain in the container after thawing. Shake until dissolved before using. Cleaning Contractors shall comply with all applicable OSHA regulations.

Revision:

Preparation Date: 6 November 2013

