



SAFETY DATA SHEET
BBJ Mold Control Concentrate
 for HVAC Systems and Air Ducts

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

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product Name: BBJ Mold Control Concentrate

Product code(s): 481-01; 491-12

EPA Registration No.: 67212-2

Synonym(s): Microbiocide in an aqueous solution

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

Atlantic Chemical & Equipment

3471 Atlanta Industrial Parkway, Suite 200

Atlanta, GA 30331 USA

Toll free: +1-800-929-2436

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 in accordance with 28 CFR 1910 (OSHA HCS) and Regulation (EC) No 1272/2008

Skin Irritation - Category 2 [H315]

Eye Irritation - Category 2A [H319]

2.2 Label Elements

Hazard symbol(s):



GHS07

Signal word:

Warning

Hazard statement(s):

H315 - Causes skin irritation

H319 - Causes serious eye irritation

Precautionary statements:

[Prevention]

P264 - Wash hands and other skin areas exposed to material thoroughly after handling.

P280 - Wear protective gloves, protective clothing and eye protection.

[Response]

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332 + P337 + P313 - If skin irritation occurs or if eye irritation persists: Get medical attention.

P321 - Specific treatment: Seek medical attention of you feel unwell. Refer to Section 4 of this SDS.

P362 - Take off contaminated clothing and wash before reuse.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

% by Weight	Ingredient	CAS Number	EC Number	Index Number	GHS Classification
<50	Dipropylene glycol monomethyl ether	34590-94-8	252-104-2	-----	H227
<5	2-Bromo-2-nitropropane-1,3-diol	52-51-7	200-143-0	603-085-00-8	H302, H312, H315, H318, H335, H411
<5	Citric Acid	77-92-9	201-069-1	-----	H319

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to 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.

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 2 minutes and continue rinsing. Seek immediate medical attention, preferably from an ophthalmologist.

Skin: Flush skin with large amounts of water while removing contaminated clothing. Wash affected skin areas with soap and water followed by thorough rinsing. Wash contaminated clothing and shoes before reuse. If irritation persists, seek medical attention.

Ingestion: Rinse mouth with water if the victim is conscious. Remove dentures if present. Give 1- 2 glasses of water to drink if victim is conscious, alert and able to swallow. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious or convulsing person. Do not leave the victim unattended. Obtain immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Potential health symptoms and effects

Eyes: Causes serious eye irritation. Symptoms may include redness, swelling, pain and tearing. May cause chemical conjunctivitis and corneal damage. Vapor or mist may cause eye irritation.

Skin: May cause skin irritation with redness, itching, swelling and discomfort. May cause a rash in susceptible individuals.

Inhalation: Inhalation of vapor or mist may cause irritation of the nose and upper respiratory tract. Symptoms may include runny nose, sore throat, cough and difficulty breathing.

Ingestion: Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting, abdominal pain and diarrhea.

Chronic: Prolonged and repeated contact with unprotected skin may cause contact dermatitis.

4.3 Indication of any immediate medical attention and special treatment needed

Advice to doctor and hospital personnel

Treat symptomatically and supportively.

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 rupture due to buildup 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 or may be delayed. Obtain immediate medical attention.

Explosion hazards: Not expected to be an explosion hazard.

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 buildup and possible autoignition or explosion when exposed to extreme heat. If possible, firefighters should control runoff water to prevent environmental contamination.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate non-essential personnel. Wear appropriate protective clothing and equipment designated in Section 8.2. Ventilate the area. Remove all sources of ignition. No smoking. Clean up spills immediately. Spills create a slip hazard.

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

Approach spill from upwind direction. Cover drains and contain spill. Cover with a large quantity of inert absorbent. Do not use combustible materials such as sawdust. Collect material and place in an approved container for disposal. Observe possible restrictions (Sections 7.2 and 10.5). Do not allow material or runoff from contaminated areas to enter floor drains or storm drains and ditches that lead to waterways. Dispose of via a licensed waste disposal contractor. Wash contaminated areas 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

Wear all appropriate personal protective equipment specified in Section 8.2. Do not get in eyes or on skin or clothing. Do not inhale mist or vapor. No smoking. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear appropriate respiratory protection. Wash hands and exposed skin areas thoroughly after handling. Wash contaminated clothing and shoes before reuse.

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 dry, cool, well ventilated areas away from incompatible materials (see Section 10.5), food and drink. Transfer only to approved containers having correct labeling. Keep containers tightly closed when not in use. Protect containers against physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Containers of this material are hazardous when empty as they contain product residues. Use appropriate containment to avoid environmental contamination. Ventilate closed areas. 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

Occupational exposure limit values

CAS Number	Ingredient	OSHA PEL	ACGIH TLV
34590-94-8	Dipropylene glycol monomethyl ether	600 ppm; 100 ppm; Skin	100 ppm TWA; 150 ppm STEL; Skin

A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material, including eyes and mucous membranes, either by direct contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposure should be considered.

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, smoking or using the lavatory.

Eye/face protection: Wear protective splash 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: Wear protective clothing. Wear protective boots if the situation requires.

Respiratory Protection: Always use an approved respirator when vapor/aerosols are generated. Where risk assessment shows air-purifying respirators are appropriate use a half-mask 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.

PPE must not be considered a long-term solution to exposure control. PPE usage must be accompanied by employer programs to properly select, maintain, clean fit and use. Consult a competent industrial hygiene resource to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.



Splash Goggles



Gloves



Protective Apron

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Clear, colorless liquid
Odor	Characteristic
Odor Threshold	No data available
Molecular Weight	Not applicable
Chemical Formula	Not applicable
pH	2.5 - 4.5 @ 20 °C
Freezing/Melting Point	0 °C (32 °F) [estimated]
Initial Boiling Point	100 °C (>212 °F)
Evaporation Rate	No data available
Flammability (solid, gas)	Not applicable
Flash Point	Not applicable
Autoignition Temperature	Not applicable
Decomposition Temperature	No data available
Lower Explosive Limit (LEL)	Not applicable
Upper Explosive Limit (UEL)	Not applicable
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	1.000 - 1.050
Viscosity	No data available
Solubility in Water	Dispersible
Partition Coefficient: n-octanol/water	No data available
Oxidizing Properties	Not applicable
Explosive Properties	Not applicable
Volatiles by Weight @ 21 °C	>97%

9.2 Other data

No data available

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

No special reactivity has been reported during normal handling and use.

10.2 Chemical stability

This product is stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4 Conditions to avoid

Extreme temperatures, contact with incompatible materials

10.5 Incompatible materials

Strong oxidizing agents, amines and alkalis

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

LD₅₀, rat: >4,739 mg/kg [calculated]

Acute inhalation toxicity

Product is expected to have low inhalation toxicity.

Acute dermal toxicity

LD₅₀, rat: >5,000 mg/kg [calculated]

Skin irritation

Causes skin irritation.

Eye irritation

Causes serious eye irritation.

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

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

No data is available regarding the mutagenicity or teratogenicity of this product, nor is there any available data that indicates it causes adverse developmental or fertility effects.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity

Large spills or discharges of this material are harmful to aquatic life, soil micro-organisms and the environment.

12.2 Persistence and degradability

Organic substances in this product are expected to biodegrade.

12.3 Bioaccumulation potential

Chemicals in this product are not expected to bioaccumulate.

12.4 Mobility

Potential for mobility of this product in natural bodies of water or moist soil is not expected to be an important fate process. The EPA does not have specific data for mobility of Bronopol in soil; however it does not anticipate ground water contamination from the use of this material. Based on the fact that dipropylene glycol monomethyl ether is completely miscible with water, it is assumed that there will be no tendency for accumulation to soil and sediment in a soil-water matrix.

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.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

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.

RCRA P-Series: No listings above the reportable threshold (de minimis)

RCRA U-Series: No listings above the reportable threshold (de minimis)

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.

NOT REGULATED FOR TRANSPORT

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.

Toxic Substance Control Act (TSCA) Inventory: All components of this product are listed on the TSCA Inventory. This product is not subject to TSCA 12(b) Export Notification.

Drug Enforcement Administration (DEA) List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.4(f)(2)) and Chemical Code Number Not listed

Drug Enforcement Administration (DEA) Lists 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c)) and Code Number: Not listed

Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) Chemicals: Not listed

Superfund Amendments and Reauthorization Act (SARA)

SARA Section 311/312 Hazard Categories: Acute Health Hazard

SARA 313 Information: Glycol Ethers (SARA code N230) are subject to reporting requirements of 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 substance(s): Glycol Ethers - There is no RQ assigned to this broad class, although the class is a CERCLA hazardous substances. Refer to 50 Federal Register 13456 (April 4, 1985).

Clean Air Act (CAA)

Glycol Ethers (EDF-109) are 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)

Glycol Ethers (EDF-109) are Hazardous Substances under the CWA.

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

None of the chemicals in this product are 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%) reporting level that are known to the state of California to cause cancer, birth defects or other reproductive harm.

Other U.S. State Inventories

Dipropylene Glycol Monomethyl Ether is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollution lists: CA, NJ, NY, PA, RI.

2-Bromo-2-nitropropane-1,3-diol (CAS #52-51-7) are listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollution lists: DE

Canada

WHMIS Hazard Classification

Causes skin irritation and serious eye irritation

Canadian National Pollutant Release Inventory (NPRI): None of the components of this product are listed on the NPRI.

European Economic Community

WGK, Germany (Water danger/protection): Concentrated material: 2 (hazardous to waters); diluted 40:1 for use: nwg (non-hazardous to waters)

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)	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)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (KECI)	Yes
Philippines	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*Yes - All components of this product are in compliance with the inventory requirements administered by the governing country.

No - 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	1
Flammability	1
Physical Hazard	0
Personal Protection	C

C = safety glasses/splash goggles, gloves and an apron

HMIS Hazard Rating Legend

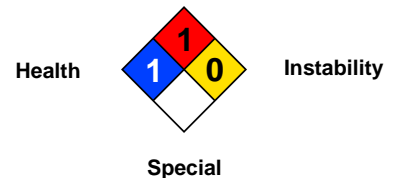
0 = Minimal 1 = Slight 2 = Moderate 3 = Serious
4 = Severe * = Chronic Health Hazard

NFPA Hazard Rating Legend

0 = Insignificant 1 = Slight 2 = Moderate
3 = High 4 = Extreme

National Fire Protection Association (NFPA)

Flammability



Full text of GHS Hazard Phrases referenced in Section 3 (not covered in Section 2)

H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H318 - Causes serious eye damage
H335 - May cause respiratory irritation
H411 - Toxic to aquatic life with long lasting effects

Abbreviation Key

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	Accord Dangereux Routier (European regulations concerning the international transport of dangerous goods by road)
CAS	Chemical Abstract Services
CFR	Code of Federal Regulations
DOT	Department of Transportation
EMS Guide	Emergency Response Procedures for Ships Carrying Dangerous Goods
EPA	Environmental Protection Agency
ERG	Emergency Response Guide Book
FDA	Food and Drug Administration
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
HCS	Hazard Communication Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association half maximal
ICAO	International Civil Aviation Organization
IDLH	Immediately Dangerous to Life and Health
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
mppcf	Millions of Particles Per Cubic Foot
NA	North America
NAERG	North American Emergency Response Guide Book
NIOSH	National Institute for Occupational Safety
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PBT	Persistent, Bioaccumulating and Toxic
PEL	Permissible exposure limit

PEL	Permissible exposure limit
PMCC	Pensky-Martens Closed Cup
ppm	Parts Per Million
RCRA	Resource Conservation and Recovery Act
RID	Dangerous Goods by Rail
RQ	Reportable Quantity
TCC/Tag	Tagliabue Closed Cup
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time-weighted Average
UN	United Nations
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulating
WHMIS	Workplace Hazardous Materials Information System

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