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

[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.
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

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

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
distant 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.

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**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 direction.** 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.
8.1 Control parameters

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Ingredient</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>34590-94-8</td>
<td>Dipropylene glycol monomethyl ether</td>
<td>600 ppm; 100 ppm; Skin</td>
<td>100 ppm TWA; 150 ppm STEL; Skin</td>
</tr>
</tbody>
</table>

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 See Section 7.1.

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.

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
LD$_{50}$, rat: >4,739 mg/kg [calculated]

Acute inhalation toxicity
Product is expected to have low inhalation toxicity.

Acute dermal toxicity
LD$_{50}$, 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 split 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.
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 depleters.
This product does not contain any Class 2 Ozone depleters.
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

<table>
<thead>
<tr>
<th>Country</th>
<th>Inventory Name</th>
<th>Inventory Listing*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Domestic Substance List (DSL).</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substance List (NDSL).</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>Inventory of New and Existing Chemicals (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States</td>
<td>Toxic Substance Control Act (TSGA)</td>
<td>Yes</td>
</tr>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
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<tr>
<td>New Zealand</td>
<td>New Zealand Inventory of Chemicals (NZIoC)</td>
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<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
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</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
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<td>Korea</td>
<td>Existing Chemicals List (KECI)</td>
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<tr>
<td>Philippines</td>
<td>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*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)**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**HMIS Hazard Rating Legend**

<table>
<thead>
<tr>
<th>0</th>
<th>Minimal 1</th>
<th>Slight 2</th>
<th>Moderate 3</th>
<th>Serious 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Severe</td>
<td>* Chronic Health Hazard</td>
<td></td>
<td></td>
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</tbody>
</table>

**NFPA Hazard Rating Legend**

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<th>0</th>
<th>Insignificant 1</th>
<th>Slight 2</th>
<th>Moderate 3</th>
<th>High 4</th>
<th>Extreme 5</th>
</tr>
</thead>
</table>

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

**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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Preparation Date: 11 June 201, Version 1