

**SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION**

**1.1 Product identifier**

**Product Name:** BBJ Maintain C-1<sup>®</sup>

**Product Codes(s):** 480-12; 481-01

**EPA Registration No.:** 67212-2

**Synonyms:** Microbiocide in an aqueous 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:** 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**

**Classification (REGULATION (EC) No 1272/2008)**

Eye Irritant 2A [H319]

**2.2 Label Elements**

**Labeling (REGULATION (EC) No 1272/2008)**

**Hazard Symbols**



**Signal Word:**

Warning

**Hazard Statement(s):**

H319 - Causes serious 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 advice/attention.

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



Xi - Irritant

**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 mixture

% by Weight	Ingredient	CAS Number	EC Number	Index Number	EC Classification
<50	Dipropylene glycol monomethyl ether	34590-94-8	252-104-2	-----	-----
<5	2-Bromo-2-nitropropane-1,3-diol	52-51-7	200-143-0	603-085-00-8	Xn, R21/22; Xi, R37/38, R41; N,50
<5	Citric Acid	77-92-9	201-069-1	-----	-----

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

### 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 after the first 5 minutes and continue washing. 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. If conscious and alert drink 2 - 4 cupfuls of milk or water. Do not induce vomiting unless directed to do so by medical personnel. 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 moderate eye irritation and possible eye damage. May cause chemical conjunctivitis and corneal damage.

**Skin:** May cause mild skin irritation.

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

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

**Chronic:** No information available.

## SECTION 5 - FIRE FIGHTING MEASURES

### 5.1 Extinguishable media

**Suitable methods of extinction:** Water fog, water spray, dry chemical, alcohol resistant foam and carbon dioxide.

**Unsuitable methods of extinction:** None known

### 5.2 Special hazards arising from the substance or mixture

Solutions containing glycol ethers such as dipropylene glycol monomethyl ether in water can form flammable vapors with air if heated sufficiently. 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. 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 (section 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

Keep away from heat, sparks and flame. Solutions containing glycol ethers in water can form flammable vapors with air if heated sufficiently.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep in cool, dry, ventilated storage areas in closed containers. Transfer only to approved containers having correct labeling. 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 PEL	ACGIH TLV
34590-94-8	Dipropylene glycol monomethyl ether	600 ppm; 100 ppm - SKIN	100 ppm TWA; 150 ppm STEL; SKIN_DES

### 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 assessment 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

<b>Appearance</b>	Clear, colorless liquid
<b>Odor</b>	Mild
<b>Odor Threshold</b>	Not determined
<b>Molecular Weight</b>	Not applicable
<b>Chemical Formula</b>	Not applicable
<b>pH</b>	2.5 - 4.5 @ 20°C (68°F)
<b>Freezing/Melting Point</b>	< -8.3°C (< 17°F)
<b>Initial Boiling Point</b>	65.5°C (150°F)
<b>Evaporation Rate</b>	Not determined
<b>Flammability (solid, gas)</b>	Not applicable
<b>Flash Point</b>	Not determined
<b>Autoignition Temperature</b>	Not determined
<b>Decomposition Temperature</b>	Not determined
<b>Lower Explosive Limit (LEL)</b>	Not determined
<b>Upper Explosive Limit (UEL)</b>	Not determined
<b>Vapor Pressure</b>	Not determined
<b>Vapor Density</b>	Not determined
<b>Specific Gravity</b>	1.00 - 1.10
<b>Viscosity</b>	Not determined
<b>Solubility in Water</b>	Complete
<b>Partition Coefficient: n-octanol/water</b>	<1
<b>Volatiles by Volume @ 70° F</b>	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

Reacts with strong oxidizing agents, amines and alkalis. Product decomposes on burning and may produce irritating fumes.

### 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: >5,000 mg/kg

#### Acute inhalation toxicity

LC50 - Rat: >2.09 mg/l

**Acute dermal toxicity**

LD50 - Rat: &gt;5,000 mg/kg

**Skin irritation**

Rabbit - Slightly irritating to skin

**Eye irritation**

Draize Test - Rabbit: Moderately irritating to eye; conjunctivitis - 1 h; some instances of corneal opacity - 24 h.

**Sensitization**

Buehler Method - Guinea pig: negative

**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**

Further data: Handle in accordance with good industrial hygiene and safety practice.

**Chronic Effects:** The components of this material are not listed as carcinogens by ACGIH, IARC, NTP or OSHA. No data is available regarding the mutagenicity and/or teratogenicity of this material, nor is there any available data that indicates it causes adverse developmental and/or fertility effects.

RTECS #: JM1575000 (Dipropylene glycol monomethyl ether); TY3385000 (2-Bromo-2-nitropropane-1,3-diol); GE7810000 (Citric Acid)

**SECTION 12 - ECOLOGICAL INFORMATION****12.1 Toxicity****Aquatic Ecotoxicity - Dipropylene Glycol Monomethyl Ether****Acute and prolonged toxicity to fish:** LC50 - Pimephales promelas (Fathead minnow), static, 96 h: >10,000 mg/L**Acute toxicity to aquatic invertebrates:** LC50 - Daphnia magna (Water flea), static, 24 h: 1,919 mg/L**Acute toxicity to aquatic plants:** ErC50 - Pseudokirchneriella subcapitata (Green algae), static, growth inhibition, 96 h: >969 mg/L**Chronic toxicity to aquatic invertebrates:** LC50 - Daphnia magna (Water flea), flow-through, 22 d, reproduction NOEC: >0.5 mg/L, LOEC: >0.5 mg/L**Aquatic Ecotoxicity - 2-Bromo-2-nitropropane-1,3-diol****Acute and prolonged toxicity to fish:** LC50 - Oncorhynchus mykiss (Rainbow trout) 96 h: 41.2 mg/L**Acute toxicity to aquatic invertebrates:** EC50 - 48 h: 1.4 mg/L**Acute toxicity to aquatic plants:** EC50 - 72 h: 0.4 - 2.8 mg/L**12.2 Persistence and degradability****Biodegradability**

Material is expected to be biodegradable.

**12.3 Bioaccumulation potential**

Partition coefficient/n-octanol in water is &lt;1; therefore, material is 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 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**

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.

## 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:** GHS07; XiN (EEC)

## 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). IRRITANT

**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

**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) known to the state of California to cause cancer or other reproductive harm.

##### **Other U.S. State Inventories**

2-Bromo-2-nitropropane-1,3-diol (CAS #52-51-7) is listed on the following State Inventories or Right-to-Know lists: DE Air Quality Management.

#### 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):** Citric Acid listed on the IDL.

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

#### European Economic Community

**WGK, Germany (Water danger/protection):** 2 for the concentrate. Classified as non-hazardous when diluted 40:1 for use.

#### 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 (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	1
Physical Hazard	0
Personal Protection	C

#### HMIS and NFPA Hazard Rating Legend

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



Safety Glasses



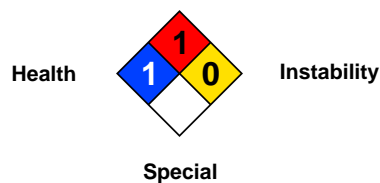
Gloves



Protective Apron

### National Fire Protection Association (NFPA)

#### Flammability



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

R21/22 - Harmful in contact with skin and if swallowed.  
R37/38 - Irritating to respiratory system and skin.  
R41 - Risk of serious damage to the eyes.  
R50 - Very toxic to aquatic organisms.

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.

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