67212-1 **BBJ MICROBIOCIDE** 4-15-2003 1/23

(Note to Reviewer: The following bulleted statements are optional marketing language.)

- Controls and inhibits odor causing bacteria, fungi and other odor causing organisms in air ducts.
- Eliminates odors associated with bacteria, mold, mildew, smoke, animals, cooking, spoilage, musty and other odors.
- For use in unlined ductwork only.
- Bacteriostat.
- Fungistat (mold and mildew).
- Mildewstat.
- Deodorizer.
- Residential.
- Commercial.
- Industrial.
- Will not damage HVAC system components and most other surfaces.

ACCEPTED

APR 15 2003

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 67212-1

KEEP OUT OF REACH OF CHILDREN

DANGER

ACTIVE INGREDIENTS:	
2-Bromo-2-nitropropane-1,3-diol	95.0%
INERT INGREDIENTS:	5.0%
TOTAL	100.0%

SEE ATTACHED BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS

BBJ Environmental Solutions, Inc.
6802 Citicorp Blvd., Suite 500
Tampa, Florida 33619

EPA REG NUMBER 67212-1
EPA EST NUMBER 67212-FL-001
NET CONTENTS _____ oz (_____ g)

Questions? Call toll fee (day or night) 800/889-2251.

DILUTE CONTENTS OF THIS PACKAGE BEFORE USE

DIRECTIONS FOR USE ARE CONTAINED IN THE ATTACHED BOOKLET AND MUST BE READ COMPLETELY PRIOR TO USING THIS PRODUCT. IF THE BOOKLET IS MISSING, RETURN THIS PRODUCT TO THE PLACE OF PURCHASE AND OBTAIN A REPLACEMENT PACKAGE.

BBJ MICROBIOCIDE DILUENT

For use with BBJ MICROBIOCIDE

Follow directions for mixing, use, storage, and disposal on the BBJ MICROBIOCIDE LABEL
Use only according to label directions

PRECAUTIONARY STATEMENTS:
Hazards to Humans and Domestic Animals:

Eye Contact: May cause irritation.

Seller makes no warranty, expressed or Implied, concerning the use of this product than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use is contrary to directions.

In the event of an emergency, call toll fee (day or night) 800/889-2251.

Contains: Solvent 100%

Patent Pending

Contents: _____ Fluid ounces

BBJ Environmental Solutions, Inc., Tampa, Florida
813-622-8550

ACCEPTED

APR 15 2003

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide, registered under EPA Reg. No 67212-1

FIRST AID	
If swallowed:	-Call a poison control center or doctor immediately for treatment advice. -Have person sip a glass of water if able to swallow. -Do not induce vomiting unless told to do so by a poison control center or doctor. -Do not give anything by mouth to an unconscious person.
If non-diluted product inhaled:	-Move person to fresh air. -If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. -Call a poison control center or doctor for further treatment advice.
If on skin or clothing:	-Take off contaminated clothing. -Rinse skin immediately with plenty of water for 15-20 minutes. -Call a poison control center or doctor for treatment advice.
If in eyes:	-Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. -Call a poison control center or doctor for treatment advice.
NOTE TO PHYSICIAN Probable mucosal damage may contraindicate the use of gastric lavage.	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER. Corrosive. Causes irreversible eye damage and skin damage. Harmful if swallowed. Do not get in eyes, on skin or on clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before re-use.

PERSONAL PROTECTION EQUIPMENT REQUIREMENTS FOR HANDLERS:
All handlers must wear protective eyewear, long pants, long-sleeved shirts and chemical resistant gloves.

SPECIAL INSTRUCTIONS FOR APPLICATORS:
Applicators treating the inside of an air duct system with this product must wear chemical resistant coveralls, chemical resistant gloves, and chemical resistant goggles. In addition, the ductwork must be ventilated with an airflow of approximately 50 CFM per square foot of duct cross section. If this is not possible, OSHA confined space regulations must be followed and the requirements for a permit required space apply. These requirements include testing the atmosphere and use of adequate respirator protection. If the level of contamination cannot be determined, then maximum respiratory protection (SCBA or airline with an escape bottle) must be used. If needed, the full-face respirator should also be equipped with a spray mist pre-filter in addition to the charcoal filters.

ENGINEERING CONTROLS:
During ULV, mist or spray application, the duct system interior must be maintained under slight negative pressure (0.015 to 0.025 In. WG) with an outdoor exhaust or using a negative air machine equipped with HEPA filter. Avoid higher pressure differentials that would be likely to disrupt the coverage pattern.

ENVIRONMENTAL HAZARDS: This product is toxic to fish. Do not contaminate water by cleaning of equipment or disposal of wastes. [Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) Permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.][1]

[1] As per PR Notice 95-1, the bracketed effluent discharge language will only appear on containers when the net contents value is greater than or equal to 5 gallons.

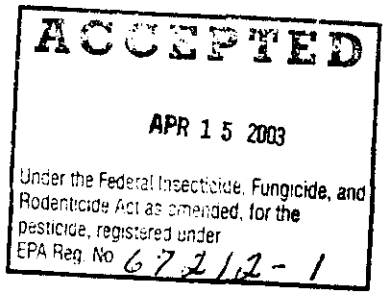
STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Keep away from heat.

PESTICIDE STORAGE: Store in areas inaccessible to children or persons unfamiliar with its use.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous, improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Completely empty package by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture. Dispose of package in a sanitary landfill, or by incineration, if allowed by State and local authorities. If burned, stay out of smoke.



AIR DUCTS

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING

THE PERSON APPLYING THIS PRODUCT IS RESPONSIBLE FOR FOLLOWING THESE DIRECTIONS UNDER BOTH STATE AND FEDERAL LAWS.

1.0 General

BBJ MICROBIOCIDE FOR AIR DUCTS is designed to be used as one component of a comprehensive HVAC and duct maintenance program. The purpose of such a program is to assure that the HVAC system and ducts function in the manner they were designed to, remain free from mold and other microbial growth and other contamination, and continue in that condition. This product must only be used in only those cases where visible microbial growth has been detected in the system and then only after removing that growth and identifying and correcting the conditions that led to that growth. If you need help in understanding any part of these instructions or have additional questions after reading these instructions, DO NOT APPLY THIS PRODUCT until you have received the answers for all of your questions.

2.0 Inspection

Prior to inspecting, cleaning, treating, repairing or otherwise working on a duct section, the HVAC system should be turned off or the section under repair physically isolated from sections in active use.

Prior to any application of BBJ MICROBIOCIDE FOR AIR DUCTS the system must be inspected for cleanliness and mechanical condition. When initiating any measures to repair, clean or treat ducts and associated HVAC system components, industry standards from the National Air Duct Cleaners Association (NADCA) and other organizations must be followed.

HVAC systems should be routinely inspected for cleanliness by visual means. The NADCA Standard, *Assessment, Cleaning and Restoration of HVAC Systems* (ACR 2002 or the latest revision), provides minimum recommended inspection frequency schedules for ducts and other system components. More information on NADCA standards can be obtained from the NADCA web site at www.nadca.com.

2.1 Cleanliness Inspection

According to NADCA Standards, HVAC system cleaning must be performed when any of the following conditions are found in the cleanliness inspection. If any of these deficiencies are found during inspection, cleaning in accordance with industry standards must be performed prior to the application of BBJ MICROBIOCIDE FOR AIR DUCTS:

2.1.1 Contamination

- HVAC systems should be operated in a clean condition. If significant accumulations of contaminants or debris are visually observed within the HVAC system, then cleaning is necessary. Likewise, if evidence of microbial growth is visually observed or confirmed by analytical methods, then cleaning is required.
- If the HVAC system discharges visible particulate into the occupied space, or a significant contribution of airborne particles from the HVAC system into the indoor ambient air is confirmed, then cleaning is necessary.
- Heat exchange coils, cooling coils, air flow control devices, filtration devices, and air-handling equipment determined to have restrictions, blockages, or contamination deposits that may cause system performance inefficiencies, air flow degradation, or that may significantly affect the design intent of the HVAC system, require cleaning.
- Drain pans must be free from slime and sludge or other contamination. Badly rusted or corroded drain pans must either be repaired or replaced.
- Fans and fan housings must be free from accumulations of microbial growth and particulate matter.

ACCEPTED

APR 15 2003

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide, registered under EPA Reg. No. 67212-1

If you need help in understanding existing industry standards, consult a qualified professional or contact BBJ Customer Service at 800.889.2251for guidance and further direction or consult the information at www.epa.gov (search on "air ducts"). In addition, the following association and society Internet sites should be consulted for information on standards and guidelines they have developed:
ACCA – www.acca.org
ASHARE – www.ashrae.org
NADCA – www.nadca.com
NAIMA – www.naima.org
SMACNA – www.smacna.org

2.2 Mechanical Inspection

BBJ MICROBIOCIDE FOR AIR DUCTS must be used only on ducts and other HVAC system components in sound mechanical condition as defined in 2.2.1 and 2.2.2 (below). The HVAC system components must be designed and installed in conformance with industry standards and guidelines. Prior to using the product, inspect the ducts and assure that they are in sound mechanical condition. The following general guidelines, supplemented by industry standards from SMACNA, NAIMA ASHRAE, ACCA and other organizations, must be followed:

2.2.1 Air Leaks and Mechanical Defects

The ducts must be free from air leaks and other mechanical defects. Air leaks will promote condensation of water that causes microbial growth and will lead to failure of BBJ MICROBIOCIDE FOR AIR DUCTS to protect the system adequately.

2.2.2 Design and Installation

ASHRAE, SMACNA, NAIMA and other industry organizations have established guidelines and standards for the design and installation of HVAC and duct systems. You should determine that the duct system you wish to treat conforms to industry practice. If you are not knowledgeable of industry guidelines and standards, consult a qualified professional or contact BBJ Customer Service at 800.889.2251 for assistance.

In some situations, the inspection may reveal that the duct system or other component is badly damaged or in such poor operating condition that it cannot be corrected through cleaning and/or minor repair. In these situations, the system should be replaced or rebuilt in conformity to the applicable industry standards prior to using BBJ MICROBIOCIDE FOR AIR DUCTS. Some (but not all) of the conditions that would indicate the need for major repairs or replacement of the system include:

- Improper size of ducts – Ducts must be sized to achieve correct airflow. When air-handling equipment is changed or new inlets or outlets added, the size of all components in the system should be recalculated and replacements made as needed.
- Physical damage – Crushed or deformed air ducts will restrict airflow and may leak (especially at joint areas). Damaged sections should be replaced or if there is extensive damage, the entire system should be replaced.
- Badly corroded metal components including duct sections, housings and cabinets, coil assemblies, drain pans, fans and their housings and heat exchange surfaces.
- Loose, damaged, friable or missing insulation – Insulation is important in preventing moisture condensation and subsequent growth of mold and other organisms. If insulation (either interior or exterior) is damaged, missing or not properly fastened it must be repaired or replaced or the associated duct sections replaced. Air handler, mixing, and VAV box housings are also normally insulated and this insulation should be checked for damage in a like manner.

Removed components that are contaminated with mold and other microbial growth may spread contamination while being removed from the building. To prevent this, smaller items should be placed in plastic bags that should then be sealed before being removed. Larger items that cannot be safely packaged should be treated before

being moved through occupied spaces. An appropriately labeled disinfectant can be used during treatment. Care must be used during treatment to assure that fumes from the agent being used are not released into occupied spaces. Products used should be used according to their label directions. Please contact BBJ Customer Service at 800.889.2251 for guidance on the appropriate disinfectant to use for treatment.

3.0 General Directions for BBJ MICROBIOCIDE FOR AIR DUCTS Usage

BBJ MICROBIOCIDE FOR AIR DUCTS effectively controls by inhibiting growth of odor causing bacteria, fungi, and other odor, stain or damage causing organisms in air ducts in residential, commercial, institutional, and industrial buildings. BBJ MICROBIOCIDE FOR AIR DUCTS also eliminates odors associated with bacteria, mold, mildew, smoke, animals, cooking, spoilage, musty and other odors and removes odor-causing organisms when used as part of such a comprehensive preventative maintenance program in air ducts and other HVAC system components.

BBJ MICROBIOCIDE FOR AIR DUCTS is a bacteriostat, fungistat (mold and mildew), mildewstat and deodorizer for use in residential, commercial and industrial settings. It will not stain or bleach materials or fabrics and will not harm or damage HVAC system components.

BBJ MICROBIOCIDE FOR AIR DUCTS is formulated for use in all kinds of ducts and HVAC components including:

- Unlined sheet metal.
- Air supply and return ducts and plenums fabricated with plywood, OSB or other wood like material.
- Flexible air ducts fabricated of metal or plastic.
- Air distribution components such as air handlers, mixing boxes, transfer boxes, transitions, turning vanes, dampers, fans and fan housings and associated components.
- Condensate drain pans.

Follow the directions below for the specific type of duct or component being treated. It is vital that the following directions be carefully read and understood prior to using the product. If you have any questions, need further information, require clarification, or do not understand any of the directions, call BBJ Customer Service at 800.889.2251 prior to use.

3.1 Mixing Instructions

This package contains the activator. The diluent is in the attached container. Prior to using, the contents of this package must be mixed with the contents of the diluent container, and then properly diluted with tap water:

3.1.1 Read and observe the instructions and precautions on package.
3.1.2 Remove the top from this container.
3.1.3 Open diluent container and empty liquid contents into this container.
3.1.4 Shake this container and allow to stand for 30 seconds or until crystals are completely dissolved.
3.1.5 This makes a concentrate that then must be diluted with tap water before use. Dilute according to the following chart:

Concentrate (active plus Diluent)	Tap Water	Final Quantity
0.75 fl. Oz.	31.25 fl. Oz.	1 Quart
3 fl. Oz.	125 fl. Oz.	1 Gallon
6 fl. Oz.	250 fl. Oz.	2 Gallons
9 fl. Oz.	375 fl. Oz.	3 Gallons
12 fl. Oz.	3 Gallons plus 116 fl. Oz.	4 Gallons
15 fl. Oz.	4 Gallons plus 113 fl. Oz.	5 Gallons

3.1.6 As an option, the concentrate can be used in the BBJ Model 904 power sprayer, which dilutes to the proper concentration as spraying takes place. In this case, follow the directions on the sprayer for proper dilution.

3.2 Application Equipment and Devices

Refer to the precautionary statements for the Personal Protective Clothing and other special instructions that must be followed.

3.2.1 Brush, Mop or Wipe Application

Brush, Mop or Wipe Application may be specified by some facility maintenance or remediation plans. These techniques are generally more labor intensive than other methods and are normally used only when specifications require. These methods are suitable only for smooth uniform surfaces. Do not use on porous or non-uniform surfaces. If in doubt about a given surface, contact BBJ Customer Service at 800.889.2251 before proceeding. When using brush or mop application, tools and materials used should be reserved only for application of BBJ MICROBIOCIDE FOR AIR DUCTS, kept clean and protected between uses and replaced when worn or visibly soiled. Natural fiber brushes are preferred although any quality brush is acceptable. Mops types should be those that leave minimal lint behind. Micro-fiber or other non linting cloths are preferable. Where other types of cloths are used, they must be soft enough that they absorb a sufficient quantity of liquid to provide uniform application.

During Brush, Mop or Wipe Application, the applicator must have access to the surfaces being treated. Usually this will require entering the ducts. In such cases, application must start from the point most distant from the point of entry into the duct. The applicator will then work from that point back to the entry point covering a 3 foot length of duct at a time. Apply to the top of the duct first, followed by the sides then the floor of the duct. Overlap applications to assure complete coverage. Cover completely while avoiding runs or pooling.

3.2.2 Spray Applicators

Spray application is preferred on large surfaces that are easily accessible (such as in long runs of large diameter ducts, coil assemblies and the interior of cabinets and housings with removable access panels). The spray equipment chosen should provide a consistent fine (1-300 micron) particle size and uniform spray pattern. Powered medium pressure sprayers such as the BBJ Model 902 or Model 904 are preferred. However, airless sprayers are suitable.

Where airless sprayers are used, the most satisfactory spray pattern will be achieved using a 0.011" spray tip. For other brands and options contact BBJ Customer Service at 800.889.2251.

Pump up garden type sprayers can be used but care must be taken to maintain maximum pressure by pumping frequently and the spray nozzle must be adjusted for the finest spray pattern possible. During application achieve complete uniform coverage. Avoid excessive wetting and do not allow the spray to run or pool.

3.2.3 ULV or Mist Generating Sprayers

ULV or mist or other wet small particle application is preferable where surfaces are irregular or less accessible. Equipment capable of generating particles in the 15 to 60 micron range is most satisfactory. Avoid use of thermal type fog generators. BBJ Model 903 is preferred. Contact BBJ Customer Service at 800.889.2251 for information on other devices.

Generally a fog will carry and provide adequate coverage up to 8 feet from the point of application so adequate penetrations must be cut in the ducts to assure complete coverage without over wetting. SMACNA, NADCA and NAIMA have established standards and guidelines for making and sealing openings in ducts. Operators should be trained on proper application techniques as well as correct duct penetration and sealing procedures using these standards and guidelines. Operators should also carefully read and follow directions for the brand of equipment used. BBJ Customer Service personnel should be contacted at 800.889.2251 for information on training for using various types of equipment. Duct penetrations should be properly closed following application, in accordance with industry standards.

3.2.4 Automated Atomizing or Spray System

There are a number of automated spraying systems on the market including those that are carried by a "robot" through air ducts. These may provide an excellent option for application of BBJ MICROBIOCIDE FOR AIR DUCTS in parts of air ducts that are difficult to access if they produce the correct spray pattern and application quantity. These devices must be visually monitored using video or other means while applying spray so proper application rate will be maintained. Please contact BBJ Customer Service at 800.889.2251 regarding a specific device should you have questions.

3.3 Application Techniques

BBJ MICROBIOCIDE FOR AIR DUCTS must be applied evenly throughout duct system and over other surfaces that are being treated. Even and uniform application is essential for satisfactory results. The procedures, equipment and techniques described below have been tested and provide the desired results. Other procedures, equipment or techniques may also achieve satisfactory results but should not be used without discussing the specific situation and equipment with a BBJ Customer Service Representative who can be reached toll free at 800.889.2251.

3.3.1 Application from Exterior of the HVAC System

BBJ MICROBIOCIDE FOR AIR DUCTS may be sprayed into openings at intervals throughout the duct system or on components that are accessible through removable panels or access doors. Spray into openings every 8 feet at a minimum. Existing supply openings can be used where they provide a clear view of the surfaces being sprayed so that uniform application can be achieved. However, additional penetrations will have to be made as needed, so enough openings will be available to achieve total and uniform coverage.

Spray application is not an acceptable technique where openings are greater than 8 feet apart, additional openings cannot be made and properly sealed, and/or the duct geometry does not allow for uniform coverage. In such cases, application from within the HVAC system is necessary (see 3.3.2 below).

3.3.2 Application from Within the HVAC System

When BBJ MICROBIOCIDE FOR AIR DUCTS cannot be sprayed into openings at intervals throughout the duct system, you must gain entry into the system and spray the product onto interior duct and other surfaces until they are thoroughly and uniformly covered using hand or powered spray equipment. This is the most frequently used technique and is the technique of choice for air handlers, other components with access panels or doors and large diameter (generally 20" x 20" minimum) ducts where direct access can be gained to surfaces being treated.

3.4 Rate of Application

The recommended rate of application for BBJ MICROBIOCIDE FOR AIR DUCTS varies depending on the surface being treated. Users of this product must carefully follow the rate of application instructions provided below:

3.4.1 Bare Metal and Flexible Ducts

Apply until surface is evenly wet. Mist or wipe coverage 1,000 ft^2 per gallon. Spray coverage 500 ft^2 per gallon. If the above application rates result in surface runoff or liquid pooling on the bottom of the duct, lower the application rate until the surface is thoroughly and evenly wet without runoff or pooling. The exception to this is when treating coil assemblies. In this case, the spray should be applied generously until there is runoff into the drain pan so as to penetrate the coil assembly to the greatest possible depth.

3.4.2 Semi Porous Surfaces such as Concrete or Plaster

Apply until surface is evenly wet. Mist coverage 500 ft^2 per gallon. Wipe not recommended. Spray coverage 250-ft^2 per gallon. BBJ MICROBIOCIDE FOR AIR DUCTS must penetrate into surface crevices and irregularities or it will not be effective. Inspect and assure that penetration is satisfactory. It may be helpful to apply half of the quantity needed for full coverage spraying from side to side then repeat the application moving the spray from top to bottom.

3.5 Frequency of Application

Normally, infrequent application (6 months to every two years) will provide effective control. Some critical applications such as duct systems serving critical health care spaces or clean rooms where it is essential to minimize the generation of particulate matter that may be released as a byproduct of microbial growth may require more frequent treatment. Do not apply more often than monthly and then only if there is evidence of re-growth. This product must only be used in those cases where visible microbial growth has been detected in the system and then only after removing that growth and identifying and correcting the conditions that led to that

growth. Prior to reapplication in such cases, investigate to determine the cause of re-growth and correct that problem prior to re-application. Before embarking on a program of frequent application (more frequent than every six months) contact BBJ Customer Service at 800.889.2251 and discuss the specific application and situation. Also make sure the reoccurrence of microbial growth does not have another cause such as persistently high humidity, standing water or hidden leaks.

Prior to reapplication, the interior of the ducts and other surfaces must be inspected and found to be free of accumulated soil. If soil or growth is found, the cause should be determined and corrected and then the ducts cleaned in accordance with accepted industry practice.

If microbial growth persists following application re-inspect for duct leaks, carryover of water from cooling coils or humidifiers and other sources of moisture promoting growth. Eliminate such sources of moisture before retreating.

3.6 Returning the System to Operation following Application

Fans and blowers in the section of duct being treated must be turned off during application of BBJ MICROBIOCIDE FOR AIR DUCTS. If the system cannot be shut down, the section of duct being treated must be isolated until treatment is complete. This will prevent the spray of fog from being blown away from the surface that is being treated.

Do not attempt to use the system fan or blower to carry BBJ MICROBIOCIDE FOR AIR DUCTS to the surfaces in the air duct system. Such a practice will not result in uniform application of the product to the surfaces being treated and will lead to ineffective control. This should never be attempted.

The system can be returned to full operation as soon as treatment is completed or at any time following completion of treatment. BBJ MICROBIOCIDE FOR AIR DUCTS will dry on surfaces within 15 minutes following application. Extended drying time does not have an impact on effectiveness of treatment. BBJ MICROBIOCIDE FOR AIR DUCTS should not be rinsed off following application so it will continue to inhibit the growth of microorganisms on treated surfaces.

When the above directions are followed properly, there will not be significant concentrations of BBJ MICROBIOCIDE FOR AIR DUCTS released to the spaces served by a system being treated. There is no need to have occupants leave the building during application.

HVAC/R EQUIPMENT
DIRECTIONS FOR USE
IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING

THE PERSON APPLYING THIS PRODUCT IS RESPONSIBLE FOR FOLLOWING THESE DIRECTIONS UNDER BOTH STATE AND FEDERAL LAWS.

1.0 General

BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT is designed to be used as one component of a comprehensive HVAC system maintenance program. The purpose of such a program is to assure that the HVAC system and air ducts function in the manner they were designed to, remain free from mold and other microbial growth and other contamination, and continue in that condition. This product should be used in those cases where visible microbial growth has been detected in the system and then only after removing that growth and identifying and correcting the conditions that led to that growth. It may also be used to inhibit growth on surfaces that normally become wet during operation of the system. These normally include (but are not limited to) evaporator coils, un-insulated piping, condensate drain pans, drain lines, mist eliminators and cabinet or housing components subject to wetting by mist or carryover of water. If you need help understanding any part of these instructions or have additional questions after reading these instructions, DO NOT APPLY THIS PRODUCT until you fully understand and have received answers for all of your questions.

2.0 Inspection

Prior to inspecting, cleaning, treating, repairing or otherwise working on an air conditioning system the system should be turned off or the component being serviced physically isolated from sections in active use.

Prior to any application of BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT units must be inspected for cleanliness and mechanical condition. When initiating any measures to repair, clean or treat HVAC system components, industry standards from the American Society for Heating Refrigeration and Air-conditioning Engineers (ASHRAE), National Air Duct Cleaners Association (NADCA), Indoor Air Quality Association (IAQA) and other organizations must be followed.

HVAC systems should be routinely inspected for cleanliness by visual means. Equipment manufacturers' maintenance information should be consulted for recommended inspection frequency when available. If such information is not available, equipment should be inspected every six months at a minimum.

2.1 Cleanliness Inspection

If any of the following cleanliness deficiencies are found during inspection, cleaning in accordance with industry standards must be performed prior to the application of BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT. At a minimum, these standards require removing all loose soil and debris with a HEPA filter equipped vacuum cleaner and complete cleaning of soil from all heat exchange surfaces using a special cleaner formulated so as to clean such soils effectively yet not damage heat exchange components or release unpleasant or potentially damaging fumes. BBJ POWER COIL CLEAN is especially formulated to work with BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT

2.1.1 Contamination (Identification and Corrective Action)

- HVAC systems should be operated in a clean condition. If significant accumulations of contaminants or debris are visually observed within the HVAC system, then cleaning is necessary. Likewise, if evidence of microbial growth is visually observed or confirmed by analytical methods, then cleaning is required.

- If the HVAC system discharges visible particulate into the occupied space, or a significant contribution of airborne particles from the HVAC system into the indoor ambient air is confirmed, then cleaning is necessary.

- Heat exchange coils, cooling coils, air flow control devices, filtration devices, and air-handling equipment determined to have restrictions, blockages, or contamination deposits that may cause system performance inefficiencies, air flow degradation, or that may significantly affect the design intent of the

HVAC system, require cleaning.

- Drain pans must be free from slime and sludge or other contamination. Badly rusted or corroded drain pans must either be repaired or replaced.
- Fans and fan housings must be free from accumulations of microbial growth and particulate matter.
- Filters must be in good condition and cleaned or replaced as needed to avoid exceeding the allowable pressure drop for the equipment.

If you are not aware of existing industry standards, consult a qualified professional or contact BBJ Customer Service at 800.889.2251 for guidance and further direction. In addition, the following association and society Internet sites should be consulted for information on standards and guidelines they have developed:
ACCA – www.acca.org
ASHARE – www.ashrae.org
IAQA – www.iaqa.org
NADCA – www.nadca.com
NAIMA – www.naima.org
SMACNA – www.smacna.org

2.2 Mechanical Inspection

BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT must be used only on HVAC system components in sound mechanical condition as defined in 2.2.1 and 2.2.2 (below). The HVAC system components must be designed and installed in conformance with industry standards and guidelines. Prior to using the product, inspect the system and assure that it is in sound mechanical condition. The following general guidelines, supplemented by industry standards from SMACNA, NAIMA ASHRAE, ACCA and other organizations, must be followed:

2.2.1 Air Leaks and Mechanical Defects

The equipment housings and cabinets must be free from air leaks and other mechanical defects. Air leaks will promote condensation of water that causes microbial growth and will lead to failure of BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT to protect the system adequately.

2.2.2 Design and Installation

ASHRAE, SMACNA, NAIMA and other industry organizations have established guidelines and standards for the design and installation of HVAC and duct systems. You should determine that the system component(s) you wish to treat conform to industry practice. If you are not knowledgeable of industry guidelines and standards, consult a qualified professional or contact BBJ Customer Service at 800.889.2251 for assistance.

In some situations, the inspection may reveal that the component is badly damaged or in such poor operating condition that it cannot be corrected through cleaning and/or minor repair. In these situations, the system should be replaced or rebuilt in conformity to the applicable industry standards prior to using BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT. Some (but not all) of the conditions that would indicate the need for major repairs or replacement of the system include:

- Improper size of system or component – The system and all components must be sized to achieve correct airflow and be of the proper capacity for the load. When air-handling equipment is changed or new inlets or outlets added, the size of all components in the system should be recalculated and replacements made as needed.
- Physical damage – Crushed or physically damaged equipment may leak, or fail to perform as designed. Damaged equipment must be repaired or replaced or if there is extensive damage, the entire system may need to be replaced.
- Badly corroded metal components including duct sections, housings and cabinets, coil assemblies, drain pans, fans and their housings and heat exchange surfaces.
- Loose, damaged, friable or missing insulation – Insulation is important in preventing moisture

condensation and subsequent growth of mold and other organisms. If insulation (either interior or exterior) is damaged, missing or not properly fastened it must be repaired or replaced or the associated component replaced. Air handler, mixing, and VAV box housings as well as air ducts are normally insulated and this insulation should be checked for damage.

Removed components that are contaminated with mold and other microbial growth may spread contamination while being removed from the building. To prevent this, smaller items should be placed in plastic bags and sealed before being removed. Larger items that cannot be safely packaged should be treated before being moved through occupied spaces. An appropriately labeled disinfectant can be used for treatment. Care must be used during decontamination to assure that fumes from the agent being used are not released into occupied spaces. Products selected should be used according to their label directions. Please contact BBJ Customer Service at 800.889.2251 for guidance on the appropriate disinfectant to use for decontamination.

3.0 General Directions for BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT Usage

BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT effectively controls by inhibiting growth of bacteria, fungi, and other odor, stain or damage causing organisms in HVAC system components in residential, commercial, institutional, and industrial buildings. BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT also eliminates odors associated with bacteria, mold, mildew, smoke, animals, cooking, spoilage, musty and other odors and removes odor-causing organisms when used as part of a comprehensive preventative maintenance program in HVAC system components.

BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT is a bacteriostat, fungistat (mold and mildew), mildewstat and deodorizer for use in residential, commercial and industrial settings. It will not stain or bleach materials or fabrics and will not harm or damage HVAC system components.

BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT is formulated for use in all kinds of HVAC components including:

- Furnaces.
- Air Handlers.
- Packaged units including Rooftops and Packaged Terminal Air Conditioner (PTAC) units.
- Fan Coil Units.
- Air distribution components such as air handlers, mixing boxes, transfer boxes, transitions, turning vanes, dampers, fans and fan housings and associated components.
- Condensate drain pans.
- Humidifiers.
- Dehumidifiers; both Desiccant and Refrigerated.
- Registers, Grills and other air intake and discharge devices.

ACCEPTED
APR 15 2003
Under the Federal Insecticide, Fungicide ...
EPA Reg. No. 67212-1

Follow the directions below for the specific type of component being treated. It is important that the following directions be carefully read and understood prior to using the product. If you have any questions, need further information, require clarification, or need help understanding any of the directions, call BBJ Customer Service at 800.889.2251 prior to use.

3.1 Mixing Instructions

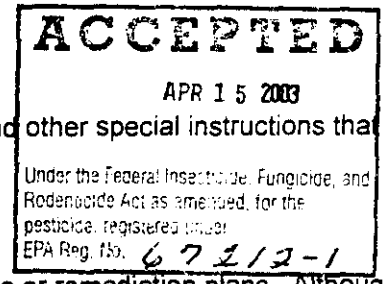
This package contains the microbiocide. The diluent is in the attached container. Prior to using, the contents of this package must be mixed with the contents of the diluent container and properly diluted with tap water:

3.1.1 Read and observe the instructions and precautions on package.
3.1.2 Remove top from this container.
3.1.3 Open diluent container and empty contents into this container.
3.1.4 Shake this container and allow to stand for 30 seconds or until crystals are completely dissolved.
3.1.5 This makes a concentrate that then must be diluted with tap water before use. Dilute according to the following chart:

Concentrate (active plus Diluent)	Tap Water	Final Quantity
0.75 fl. Oz.	31.25 fl. Oz.	1 Quart
3 fl. Oz.	125 fl. Oz.	1 Gallon

3 fl. Oz.	125 fl. Oz.	1 Gallon
6 fl. Oz.	227 fl. Oz.	2 Gallons
9 fl. Oz.	375 fl. Oz.	3 Gallons
12 fl. Oz.	3 Gallons plus 116 fl. Oz.	4 Gallons
15 fl. Oz.	4 Gallons plus 113 fl. Oz.	5 Gallons

3.1.6 As an option, the concentrate can be used in the BBJ Model 904 power sprayer, which dilutes to the proper concentration as spraying takes place. In this case, follow the directions on the sprayer for proper dilution.



3.2 Application Equipment and Devices

Refer to the precautionary statements for the Personal Protective Clothing and other special instructions that must be followed.

3.2.1 Brush, Mop or Wipe Application

Brush, mop or wipe application may be specified by some facility maintenance or remediation plans. Although these applications methods are sometimes applicable for duct and plenum surfaces, they are not normally usable for HVAC system components. Contact BBJ Customer Service at 800.889.2251 before using these application methods on air handling equipment.

3.2.2 Spray Applicators

Spray application is preferred on large surfaces that are easily accessible (such as plenums, coil assemblies and the interior of cabinets and housings with removable access panels). The spray equipment chosen should provide a consistent fine (1-300 micron) particle size and uniform spray pattern. Powered medium pressure sprayers such as the BBJ model 902 or model 904 are preferred. However, airless sprayers are also suitable.

Where airless sprayers are used, the most satisfactory spray pattern will be achieved using a 0.011" spray tip. For other brands and options contact BBJ Customer Service at 800.889.2251.

Pump up garden type sprayers can be used but care must be taken to maintain maximum pressure by pumping frequently and the spray nozzle must be adjusted for the finest spray pattern possible. During application achieve complete uniform coverage. Avoid excessive wetting and do not allow the spray to run or pool. The exception to this is treatment of coil assemblies. In this case saturate the coil assembly to its full depth and allow BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT to run into the drain pan to assure full coverage.

3.2.3 ULV (Ultra Low Volume) or Mist Generating Sprayers

ULV or mist or other wet small particle application is preferable where surfaces are irregular or less accessible. Equipment capable of generating particles in the 15 to 60 micron range is most satisfactory. Avoid use of thermal type fog generators. BBJ model 903 is preferred. Contact BBJ Customer Service at 800.889.2251 for information on other devices.

Generally a fog will carry and provide adequate coverage up to 8 feet from the point of application so adequate penetrations must be cut in the housings or cabinets to assure complete coverage without over wetting. SMACNA, NADCA and NAIMA have established standards and guidelines for making and sealing openings in HVAC system components. Operators should be trained on proper application techniques as well as correct penetration and sealing procedures using these standards and guidelines. Operators should also carefully read and follow directions for the brand of equipment used. BBJ Customer Service personnel should be contacted at 800.889.2251 for information on training for using various types of equipment. Housing penetrations should be properly closed following application, in accordance with industry standards.

3.2.4 Automated Atomizing or Spray System

There is at least one automated coil cleaning and treatment device on the market. Such a device may constitute an excellent option for keeping cooling coils clean and for application of BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT. These devices must be installed and used according to the instructions provided by the manufacturer. Please contact BBJ Customer Service at 800.889.2251 regarding a specific device should you

have questions.

3.3 Application Techniques

BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT must be applied evenly to surfaces that are being treated. Even and uniform application is essential for satisfactory results. The procedures, equipment and techniques described below have been tested and provide the desired results.

3.3.1 Application from Exterior of the HVAC System

BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT may be sprayed into existing access openings where these provide adequate access. Normally these consist of removable panels or access doors. Completely cover all non-electrical components taking care to avoid wetting electrical components that are not sealed to exclude moisture. Existing supply openings can be used where they provide a clear view of the surfaces being sprayed so that uniform application can be achieved. However additional penetrations will have to be made, as needed so enough openings will be available to achieve total and uniform coverage.

Spray application is not an acceptable technique where openings are greater than 8 feet apart, additional openings cannot be made and properly sealed, and/or the component design does not allow for uniform coverage. In such cases, application from within the HVAC system is necessary (see 3.3.2 below).

3.3.2 Application from Within the HVAC System

When BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT cannot be sprayed into existing openings so as to achieve adequate coverage, you must gain entry into the component and spray the product onto surfaces until they are thoroughly and uniformly covered using hand or powered spray equipment. This is the technique of choice for large penthouse or built up air handlers and other components with access panels or doors.

Some protection is provided for drain pans by excess BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT that runs off of cooling coils when they are treated. Additional protection can be provided by spraying BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT onto the surfaces of the pan or pouring into the drain pan until the bottom of the pan is uniformly wetted. Before treating the drain pan, check to determine that the drain line is clear and free running and that the drain pan is clean and free of loose corrosion. Replace badly deteriorated pans. Drain pans that do not drain completely and retain water may experience microbial growth even when treated. Level drain pans and otherwise adjust them so water completely drains from them.

3.4 Instructions for Specific Components

3.4.1 Fans and Fan Housings

Fans create air turbulence which can lead to condensation of water that supports mold and other growth. As a result fan blade and blower wheel surfaces as well as associated housings are especially prone to fouling from both microbial growth and soil accumulation. It may be necessary to partially or completely remove and disassemble these components so they may be properly cleaned prior to application of BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT. Complete cleaning must take place before attempting to treat these components.

3.4.2 Humidifiers and Dehumidifiers

Because of the amount of water present, humidifiers and dehumidifiers are often sites especially prone to microbial growth. They also attract and hold soil as growth related contamination builds up over time. This accumulated material must be thoroughly removed prior to treatment with BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT. For some units, cleaning may also signal the need to replace pads, belts, wheels or service other components. The manufacturer of the unit being maintained should be consulted on the proper maintenance and cleaning procedure.

3.5 Rate of Application

The recommended rate of application for BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT varies depending on the surface being treated. Users of this product must carefully follow the rate of application instructions provided below:

3.5.1 Bare Metal

Apply until surface is evenly wet. Mist or wipe coverage 1,000 ft^2 per gallon. Spray coverage 500 ft^2 per gallon. If the above application rates result in surface runoff or liquid pooling in the bottom of the housing, lower the application rate until the surface is thoroughly and evenly wet without runoff or pooling. The exception to this is when treating coil assemblies. In this case, the spray should be applied generously until there is runoff into the drain pan so as to penetrate the coil assembly to the greatest possible depth.

3.5.2 Drain Pans and Water Sumps

BBJ MICROBIOCIDE FOR HVAC/R SYSTEMS will inhibit growth of odor causing and damaging bacteria and bacterial slime in HVAC/R drain pans and other water sumps. Following cleaning, the interior of the drain pan should be rinsed with a dilute solution of BBJ MICROBIOCIDE FOR HVAC/R SYSTEMS and the excess solution allowed to flow into the drain where it will help inhibit growth in the drain line. For sumps where water stands such as humidifier sumps, monthly dosing of the sump may also be required to maintain control. In such cases measure or estimate the amount of water held by the sump and add one pint of dilute BBJ MICROBIOCIDE FOR HVAC/R SYSTEMS for each gallon of sump capacity. This should be added as often as needed to maintain control. Do not exceed one dose each week.

3.6 Frequency of Application

For most surfaces infrequent application (every 6 months when inspected) will provide effective control. Some critical applications such as HVAC systems serving critical health care spaces or clean rooms where it is essential to minimize the generation of particulate matter that may be released as a byproduct of microbial growth may require more frequent treatment. Do not apply more often than monthly to surfaces and weekly in water sumps and then only if there is evidence of re-growth. Prior to reapplication in such cases, investigate to determine the cause of re-growth and correct that problem prior to re-application. Before embarking on a program of frequent application (more frequent than every six months) contact BBJ Customer Service at 800.889.2251 and discuss the specific application and situation. Also make sure the reoccurrence of microbial growth does not have another cause such as persistently high humidity, standing water or hidden leaks.

Prior to reapplication, the interior of the component should be inspected and found to be free of accumulated soil or microbial growth. If soil or growth is found, the cause should be determined and corrected and then the equipment cleaned in accordance with accepted industry practice.

3.7 Returning the System to Operation following Application

Equipment being treated must be turned off during application of BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT. If the system cannot be shut down, the section of the system being treated must be isolated until treatment is complete. This will prevent the spray or fog from being blown away from the surface that is being treated.

Do not attempt to use the system fan or blower to carry BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT to surfaces within the system. It will not result in uniform application of the product to the surfaces being treated and will lead to ineffective control. This should never be attempted.

The system can be returned to full operation as soon as treatment is completed or at any time following completion of treatment. BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT will dry on surfaces within 15 minutes following application. Extended drying time does not have an impact on effectiveness of treatment. BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT should not be rinsed off following application so it will continue to inhibit the growth of microorganisms on treated surfaces.

When the above directions are followed properly, there will not be significant concentrations of BBJ MICROBIOCIDE FOR HVAC/R EQUIPMENT released to the spaces served by a system being treated. There is no need to have occupants leave the building during application.

ACCEPTED

APR 15 2003

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 67202-1

FLOORS AND WALLS

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING

THE PERSON APPLYING THIS PRODUCT IS RESPONSIBLE FOR FOLLOWING THESE DIRECTIONS UNDER BOTH STATE AND FEDERAL LAWS.

1.0 General

BBJ MICROBIOCIDE FOR FLOORS AND WALLS is designed to be used to retard (or inhibit) odor, stain causing or other damage causing organisms including mold and mildew on floors, walls, contents and other interior building surfaces until such time as the cause of such growth can be identified and corrected. It is also used as one component of a comprehensive mold remediation or water damage restoration program. The purpose of such a program is to minimize damage from growth of mold and other odor, stain or damaging organisms, limit re-growth and help building interiors continue in that condition. This product should only be used in those cases where visible microbial growth has been detected (or conditions are likely to immediately result in such growth) and then only as part of a program that removes that growth and identifies and corrects the conditions that led to that growth. If you need help understanding any part of these instructions or have additional questions after reading these instructions, DO NOT APPLY THIS PRODUCT until you have received the answers for all of your questions.

2.0 Causes of Microbial Growth

Microbial (including bacteria, mold, mildew, and other fungi) growth is present at all times both outdoors and in our building interiors. Normally the natural balance of the environment limits such growth to acceptable levels. Under certain conditions, growth can reach problem levels and if not controlled, will cause foul odors, soil and damage furnishings and valuables and may even destroy structural components of a residence or other building. Normally, fungal spores, live organisms and food sources are plentiful in building interiors without uncontrolled growth taking place. Elevated water from the following lead to growth:

2.1 Floods

If water floods the interior of a building it brings a massive load of organic matter, bacteria and fungal spores. If the water and excessive organic load is not cleaned quickly, massive growth will result. Floods can be either from rising water or massive plumbing failures.

2.2 Leaks

Leaks release lesser amounts of water and often over extended time periods. Thus, they can lead to high levels of growth in wall cavities and other spaces where they are not visible until considerable damage has been done. Leaks can be both from plumbing and roof, wall or other structural failures.

2.3 Humidity

Microorganisms grow in moisture films that form on surfaces and within porous materials. This is known as water activity of the material or surface. High levels of humidity can lead to sufficient surface water activity to support accelerated growth if that elevated level is maintained for as little as 24 hours. Accelerated growth takes place with some fungi within 24 hours at humidity levels between 66%-70%.

3.0 Indications for use and Guidelines

Homeowners and building managers should survey their buildings at least monthly for any of the following conditions. When they are found, they should be corrected according to the following guidelines.

3.1 Visible Growth

Areas of visible growth of less than 30 square feet (the area of a single wall panel) can normally be remediated without elaborate procedures. When these areas are identified, mist (see application instructions below) lightly with BBJ MICROBIOCIDE FOR FLOORS AND WALLS to retard growth and spread of fungal spores and other contaminates until the area can be thoroughly cleaned and remediated. If growth is on ceiling tiles or other such easily removable items of nominal value, remove them and seal them in a plastic bag and dispose with normal trash. If the surface is not easily replaceable, clean with detergent and water then mist with BBJ MICROBIOCIDE

FOR FLOORS AND WALLS to retard future growth. If growth appears again in the same location, determine the cause and correct prior to attempting additional treatment.

Areas larger than 30 square feet require special procedures and individuals trained in remediation. Guidelines for remediation of large areas of contamination have been established by the Indoor Air Quality Association (www.iaqa.org) and The US Environmental Protection Agency (www.epa.gov). Many in the field also refer to the New York City Department of Health, "Guidelines on Assessment and Remediation of Fungi in Indoor Environments." Before using BBJ MICROBIOCIDE FOR FLOORS AND WALLS in mitigation of large projects, you should be knowledgeable of one or more of these guidelines and follow them when using the product. More information can be obtained from BBJ customer service at 800.889.2251.

3.2 Water Damage

Evidence of possible water damage includes water stains on ceilings or walls, persistent wet spots or actual flowing water whether from plumbing failure or outside sources. When water damage is suspected, the first priority is to find the source of water and cut it off. Once that has been accomplished, excess water should be removed. Detailed guidance on proper removal of excess levels of water is contained in, "Standard and Reference Guide fro Professional Water Damage Restoration" (IICRC S500) published by the Institute of Inspection, Cleaning and Restoration Certification (www.iicrc.org). If excess water has been removed completely in 24 hours or less, spraying surfaces that were wet with a light misting of BBJ MICROBIOCIDE FOR FLOORS AND WALLS will inhibit growth and no other steps should be necessary.

Where structural members and/or contents have been exposed to water in excess of 24 hours, there is a possibility of extensive microbial growth that may be visible or hidden. In that case a complete assessment and remediation plan must be prepared that properly incorporates the use of BBJ MICROBIOCIDE FOR FLOORS AND WALLS, provides for user and occupant safety and documentation and monitoring of the remediation process. If you are not experienced in preparing and executing such a plan, contact BBJ customer Service at 800.889.2251 for assistance. IICRC S500 contains excellent guidance. In the context of such a plan, BBJ MICROBIOCIDE FOR FLOORS AND WALLS can be used on materials to be removed and disposed of and in other applications where an Antimicrobial use is indicated. The Standard must be followed exactly and all growth and contaminated organic material removed prior to using BBJ MICROBIOCIDE FOR FLOORS AND WALLS.

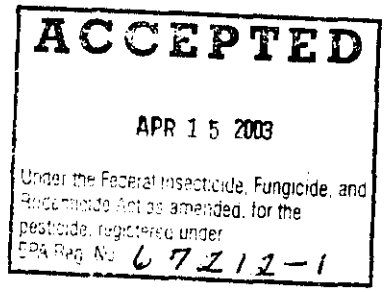
4.0 General Directions for BBJ MICROBIOCIDE FOR FLOORS AND WALLS Usage

BBJ MICROBIOCIDE FOR FLOORS AND WALLS effectively controls by inhibiting growth of odor causing bacteria, fungi, and other odor, stain or damage causing organisms on floors, walls and other surfaces in residential, commercial, institutional, and industrial buildings. BBJ MICROBIOCIDE FOR FLOORS AND WALLS also eliminates odors associated with bacteria, mold, mildew, smoke, animals, cooking, spoilage, musty and other odors and removes odor-causing organisms when used as part of a comprehensive preventative maintenance approach.

BBJ MICROBIOCIDE FOR FLOORS AND WALLS is a bacteriostat, fungistat (mold and mildew), mildewstat and deodorizer for use in residential, commercial and industrial settings. It will not stain or bleach materials or fabrics and will not harm or damage most interior surfaces. Test on an inconspicuous area if you are unsure of the surface you are working with.

BBJ MICROBIOCIDE FOR FLOORS AND WALLS is formulated for use on all kinds of surfaces including:

- Painted wallboard.
- Structural members and supports.
- Ceilings and above ceiling spaces.
- Basements and crawl spaces.
- Cabinets and countertops.
- Case goods and other furnishings.
- Floor surfaces.



Follow the directions for the specific type of component being treated. The following directions must be carefully read and understood prior to using the product. If you have any questions, need further information, require clarification, or do not understand any of the directions, call BBJ Customer Service at 800.889.2251 prior to use.

4.1 Mixing Instructions

This package contains the microbiocide. The diluent is in the attached container. Prior to using, the contents of this package must be mixed with the contents of the diluent container, and then properly diluted with tap water:

4.1.1 Read and observe the instructions and precautions on package.
4.1.2 Remove the top from this container.
4.1.3 Open diluent container and empty liquid contents into this container.
4.1.4 Shake this container and allow to stand for 30 seconds or until crystals are completely dissolved.
4.1.5 This makes a concentrate that then must be diluted with tap water before use. Dilute according to the following chart:

Concentrate (active plus Diluent)	Tap Water	Final Quantity
1 fl. Oz.	158 fl. Oz.	1.25 Gallons
4 fl. Oz.	316 fl. Oz.	2.5 Gallons
6 fl. Oz.	474 fl. Oz.	3.75 Gallons
8 fl. Oz.	632 fl. Oz.	5 Gallons

4.1.6 As an option, the concentrate can be used in the BBJ Model 904 power sprayer, which dilutes to the proper concentration as spraying takes place. In this case, follow the directions on the sprayer for proper dilution.

4.2 Application Equipment and Devices

Refer to the precautionary statements for the Personal Protective Clothing and other special instructions that must be followed.

4.2.1 Brush, Mop or Wipe Application

Brush, Mop or Wipe Application may be specified by some facility maintenance or remediation plans. These techniques are generally more labor intensive than other methods and are normally used only when specifications require. These methods are suitable only for smooth uniform surfaces. Do not use on porous or non-uniform surfaces. If in doubt about a given surface, contact BBJ Customer Service at 800.889.2251 before proceeding. When using brush or mop application, tools and materials used should be reserved only for application of BBJ MICROBIOCIDE FOR FLOORS AND WALLS, kept clean and protected between uses and replaced when worn or visibly soiled. Natural fiber brushes are preferred although any quality brush is acceptable. Mops types should be those that leave minimal lint behind. Micro-fiber or other non linting cloths are preferable. Where other types of cloths are used, they must be soft enough that they absorb a sufficient quantity of liquid to provide uniform application.

During Brush, Mop or Wipe Application, the applicator must have access to the surfaces being treated. Apply to a limited area at a time. Over lap applications to assure complete coverage. Cover completely while avoiding runs or pooling.

4.2.2 Spray Applicators

Spray application is preferred on large surfaces that are easily accessible and most uniformly shaped objects. The spray equipment chosen should provide a consistent fine (1-300 micron) particle size and uniform spray pattern. Powered medium pressure sprayers such as the BBJ model 902 or model 904 are preferred. However, airless sprayers are suitable.

Where airless sprayers are used, the most satisfactory spray pattern will be achieved using a 0.011" spray tip. For other brands and options contact BBJ Customer Service at 800.889.2251.

Pump up garden type sprayers can be used but care must be taken to maintain maximum pressure by pumping frequently and the spray nozzle must be adjusted for the finest spray pattern possible. During application achieve complete uniform coverage. Avoid excessive wetting and do not allow the spray to run or pool.

4.2.3 ULV (Ultra Low Volume) or Mist Generating Sprayers

ULV, mist or other wet small particle application is preferable where surfaces are irregular or less accessible.

Equipment capable of generating particles in the 15 to 60 micron range is most satisfactory. Do not use thermal type fog generators. BBJ model 903 is preferred. Contact BBJ Customer Service at 800.889.2251 for information on other devices.

Generally a fog will carry and provide adequate coverage up to 8 feet from the point of application so the fog must be directed in all directions to assure complete coverage without over wetting. Operators should also carefully read and follow directions for the brand of equipment used. BBJ Customer Service personnel should be contacted at 800.889.2251 for information on training for using various types of equipment.

Personal Protective Equipment including HEPA filtered face mask, hooded coveralls, and rubber gloves must be used when applying in open spaces with mist generating application equipment.

4.3 Application Techniques

BBJ MICROBIOCIDE FOR FLOORS AND WALLS must be applied evenly over surfaces that are being treated. Even and uniform application is essential for satisfactory results. The procedures, equipment and techniques described below have been tested and provide the desired results. Other procedures, equipment or techniques may also achieve satisfactory results but should not be used without discussing the specific situation and equipment with a BBJ Customer Service Representative who can be reached toll free at 800.889.2251.

4.4 Rate of Application

The recommended rate of application for BBJ MICROBIOCIDE FOR FLOORS AND WALLS varies depending on the surface being treated. Users of this product must carefully follow the rate of application instructions provided below:

4.4.1 Hard, Smooth Surface (Glass, Metal)

Apply until surface is evenly wet. Mist or wipe coverage 1,000 ft^2 per gallon. Spray coverage 500 ft^2 per gallon. If the above application rates result in surface runoff or liquid pooling, lower the application rate until the surface is thoroughly and evenly wet without runoff or pooling.

4.4.2 Semi Porous Surfaces such as Concrete or Plaster or Wallboard

Apply until surface is evenly wet. Mist coverage 500 ft^2 per gallon. Wipe not recommended. Spray coverage 250-ft^2 per gallon. BBJ MICROBIOCIDE FOR FLOORS AND WALLS must penetrate into surface crevices and irregularities or it will not be effective. Inspect and assure that penetration is satisfactory. It may be helpful to make multiple applications at a lower application rate on some surfaces as the first application will wet the surface and facilitate penetration of following application(s).

4.5 Frequency of Application

Normally, infrequent application (once a year or less) will provide effective control. Do not apply more often than monthly and then only if there is evidence of re-growth. Prior to reapplication in such cases, investigate to determine the cause of re-growth and correct that problem prior to re-application. Before embarking on a program of frequent application contact BBJ Customer Service at 800.889.2251 and discuss the specific application and situation. Also make sure the reoccurrence of microbial growth does not have another cause such as persistently high humidity, standing water or hidden leaks.

Removed components that are contaminated with mold and other microbial growth may spread contamination while being removed from the building. To prevent this, smaller items should be placed in plastic bags that should then be sealed before being removed. Larger items that cannot be safely packaged should be treated before being moved through occupied spaces. An appropriately labeled disinfectant can be used for treatment. Care must be used during treatment to assure that fumes from the agent being used are not released into occupied spaces. Products used should be used according to their label directions. Please contact BBJ Customer Service at 800.889.2251 for guidance on the appropriate disinfectant to use for treatment.

AIR WASHERS

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING

For the effective control of odor, stain causing or other damage causing bacteria in air scrubbing units and to reduce built up slime deposits.

MIXING

Use as an intermittent flush treatment during regular maintenance/cleaning of air conditioning unit. Before use, remove visible debris and built-up contamination using a suitable industrial cleaner and rinse according to directions with clean water.

This package contains the microbiocide. The diluent is in the attached container. Prior to using, the contents of the package must be mixed with the contents of the diluent container and properly diluted with tap water:

1. Read and observe the instructions and precautions on package.
2. Remove top from this container.
3. Open diluent container and empty contents into this container.
4. Shake this container and allow to stand for 30 seconds or until crystals are completely dissolved.

Add to water so as to achieve the correct final concentration. The initial concentration must be adjusted to take into account water in the system to avoid over dilution.

METHOD AND LOCATION

Dosing should be carried out into the water sump of the scrubbing unit on a routine basis. Shock dosing is preferred.

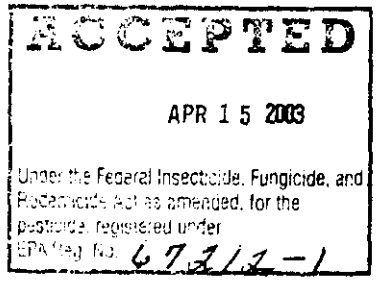
FREQUENCY

Shock dosing should be carried out on a regular basis. Heavily fouled systems may require twice weekly treatment but moderate of light contamination will require only once weekly to once monthly additions.

QUANTITY – INITIAL AND MAINTENANCE

Dosing should be carried out to give an initial concentration of 50 PPM. (50g/cubic meter or 0.84 lbs./1000 gallons). When the above treatment has been successful, dosing can be lowered to a minimum of 25 PPM. BBJ MICROBIOCIDE (25 g/cubic meter or 0.42 lb/1000 gallons) and a contact time of at least one hour.

BBJ MICROBIOCIDE can also be used as an intermittent flush treatment during regular maintenance/cleaning of the scrubbing unit. Before use, remove visible debris and built-up contamination using a suitable industrial cleaner and rinse according to directions with clean water. Dilute to 100 PPM (this package in [2 quarts] [2 gallons] [10 gallons] [110 gallons] of water). Apply using a spray, fog or pressure washer so as to thoroughly flush all parts that are normally wet during operation of this system. Do not rinse off. Following application, wait one hour before restarting unit.



EVAPORATIVE AIR CONDITIONERS
IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT
IN A MANNER INCONSISTENT WITH ITS LABELING

For the effective control of odor, stain causing or other damage causing bacteria and algae growth in evaporative air conditioning units and to reduce built up slime deposits.

MIXING
Use as an intermittent flush treatment during regular maintenance/cleaning of air conditioning unit. Before use, remove visible debris and built-up contamination using a suitable industrial cleaner and rinse according to directions with clean water.

This package contains the microbiocide. The diluent is in the attached container. Prior to using, the contents of the package must be mixed with the contents of the diluent container and properly diluted with tap water:

1. Read and observe the instructions and precautions on package.
2. Remove top from this container.
3. Open diluent container and empty contents into this container.
4. Shake this container and allow to stand for 30 seconds or until crystals are completely dissolved.

Add to water so as to achieve the correct final concentration. The initial concentration must be adjusted to take into account water in the system to avoid over dilution.

METHOD AND LOCATION
Dosing should be carried out into the water sump of the unit on a routine basis. Shock dosing is preferred.

FREQUENCY
Shock dosing should be carried out on a regular basis. Heavily fouled systems may require twice weekly treatment but moderate of light contamination will require only once weekly to once monthly additions.

QUANTITY – INITIAL AND MAINTENANCE
Dosing should be carried out to give an initial concentration of 50 PPM. (50g/cubic meter or 0.84 lbs./1000 gallons). When the above treatment has been successful, dosing can be lowered to a minimum of 25 PPM. BBJ MICROBIOCIDE (25 g/cubic meter or 0.42 lb/1000 gallons) and a contact time of at least one hour.

BBJ MICROBIOCIDE can also be used as an intermittent flush treatment during regular maintenance/cleaning of the unit. Before use, remove visible debris and built-up contamination using a suitable industrial cleaner and rinse according to directions with clean water. Dilute to 100 PPM (this package in [2 quarts] [2 gallons] [10 gallons] [110 gallons] of water). Apply using a spray, fog or pressure washer so as to thoroughly flush all parts that are normally wet during operation of this system. Do not rinse off. Following application, wait one hour before restarting unit.

ACCEPTED

APR 15 2003

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 67212-1

1 As per PR Notice 95-1, the bracketed effluent discharge language will only appear on containers when the net contents value is greater than or equal to 5 gallons.

ACCEPTED

APR 15 2003

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide, registered under EPA Reg. No. 67212-1