

- A concentrated, ready-to-use bacteriostat that is a fungistat and deodorant
- EPA registered for application in HVACR systems No. 9804-3-65516
- Can be sprayed in occupied areas
- Kills odors and controls bacteria
- Eliminates odors where they exist

## Indoor Air Quality Products

### Bio-Fresh cd®



### Description

Bio-Fresh cd is a ready-to-use bacteriostat, fungistat and deodorizer based upon chlorine dioxide technology. It is recommended for control of bacteria, mold, mildew, fungi and yeast in IAQ applications. Its EPA registration includes application in HVACR ventilating equipment, including coils, condensate pans, filters and duct-work.

### Application

Evaporator coils, condensate drain pans, filters and duct-work in air conditioning systems can be an excellent breeding ground for bacteria and mold. Left untreated, it can grow and eventually affect indoor air quality, a major concern of the IAQ movement today. Use of a product like Bio-Fresh cd in a total program such as Nu-Calgon's IAQ Assurance Program will correct this problem by inhibiting the growth of bacteria or mold.

### Packaging

- 1 quart bottle **4126-34**
- 1 gallon bottle **4126-38**

### Microbial Control

Bacteria and mold are everywhere in our environment. For many allergy sufferers, their presence and growth in the air handling system can significantly aggravate or even initiate an allergic response. Bio-Fresh cd can address this by preventing the growth of bacteria, mold, etc. It specifically reacts with the microbial's cell wall, interfering with and preventing their growth.

### Deodorization

The powerful active ingredient in Bio-Fresh cd oxidizes odors associated with bacteria, mold, mildew, smoke, animals, etc. in the air and in air handling units. The product does not cover up or mask the odor with alcohol or perfumes, it eliminates or "oxidizes" the source of the odor, leaving the air fresh and clean.

### Toxicity & Safety

An enhanced benefit of Bio-Fresh cd is its low toxicity and safety rating from the EPA. Bio-Fresh cd does not use any environmentally damaging propellants or flammable ingredients, and may be applied to occupied spaces.

### Bio-Fresh Fogger

The Bio-Fresh fogger (Part Number 4693-0) can be used to spray Bio-Fresh cd into duct-work or other ventilating systems.



## Using the Bio-Fresh Fogger

The Bio-Fresh fogger is made of a one-piece, seamless heavy-duty copolymer. It uses a 48" flexible hose to facilitate application into duct-work, and it is adjustable from 0–18 oz. per minute with particle sizes up to 80 microns. It is an ideal instrument for dispensing Bio-Fresh cd into enclosed ventilating duct-work for disinfecting the interior surfaces.

### General Guidelines

1. These directions pertain to the use of Bio-Fresh cd with the Bio-Fresh fogger. They do not apply to the use with other chemical compounds. The use of any other chemicals in a sprayer that will be used with Bio-Fresh cd is discouraged. This eliminates the potential for contamination.
2. Bio-Fresh cd has low toxicity and is very safe, and it can therefore be applied when the living or office space is populated. However, it may be better to apply Bio-Fresh cd when the premises are vacant to help avoid difficulties with people that tend to be more susceptible or sensitive.
3. Bio-Fresh cd is a water-based product and should not be sprayed on to or dripped on to any surface that can be stained or harmed by water. This includes carpet and floors.
4. Bio-Fresh cd is a biocide and should not come into contact with exotic fish or plants.
5. Do not apply Bio-Fresh cd to a dirty coil. Always clean coil and pan prior to application with one of Nu-Calgon's cleaning products.
6. When spraying, "wet" the surfaces, do not soak them.
7. Practice using the sprayer with water prior to job. You will get a feel for how much product to apply into different areas of the system.

### Application Considerations

The sprayer will dispense the Bio-Fresh cd from as small as a 16 micron particle size at the minimum setting (dial setting of 0.33 oz./min.) to as large as an 80 micron particle size at the maximum setting (three complete turns of the dial). For applying Bio-Fresh cd, a 30-50 micron particle size is desired as it will encourage the setting of the mist on surfaces (interior of duct) in a reasonable time.

Variations in job-site conditions such as ambient temperatures, air currents/movement within duct, etc. will affect application results moderately. It is therefore important that you monitor the job carefully.

Plan to use approximately 1 gallon of product per 2,000 sq. ft. of conditioned space. Take a few minutes to survey the system to determine how and where you will inject the Bio-Fresh cd.

Discuss this with the homeowner or building manager/owner, if possible.

Remove and clean all registers. Loosely tape brown butcher paper over each register to catch droplets as they could exit the duct. Be sure to leave plenty of room for air to escape. You may want to spread plastic on the floor under the register for extra protection.

Spray return air for 3 – 5 minutes with fan off. Continue to move sprayer hose up and down to enhance coverage. Turning the fan on for short blasts of air movement will enhance coverage.

Access the system on the supply side of the coil. With the fan off, spray this side of the coil and pan.

As you fog, observe the direction of the drift. Normal air movement within duct should carry it one direction or another. Obviously, if a blower is used, the direction will be known ahead of time.

With the fan ON, spray Bio-Fresh cd into the duct system for 5 – 8 minutes or until you are confident of complete coverage. Continue to move the hose up and down for good coverage. It is a good idea to save some of the product in case you have to spray through some of the registers.

Check registers to see if the Bio-Fresh cd made it to the butcher paper. Paper will darken when wet. If product does not make it to each register, it will be necessary to spray back through the register into the system.

For ductless systems or common returns, simply lift the ceiling tiles every 15 – 20 ft. to allow you to spray into the return area. Remember to "wet" the surfaces, do not soak them. Be sure to spray into any ducts or returns above the tiles. Once treatment is complete, turn on blower to air-dry all interior duct surfaces.

NOTE: Bio-Fresh is not registered for sale in Canada.

Read and understand the product's label and Safety Data Sheet ("SDS") for precautionary and first aid information.

The SDS is available on the Nu-Calgon website at [www.nucalgon.com](http://www.nucalgon.com).

