PRECAUTIONARY STATEMENTS
DANGER

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Corrosive. Causes eye damage and skin irritation. Methanol may cause blindness. Harmful or fatal if swallowed. **DO NOT** get in eyes, on skin or on clothing. Avoid contamination of food. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Vapors harmful. Avoid breathing spray, mist or vapors. Wear a NIOSH/MSHA respirator approved for formaldehyde exposure, chemical resistant boots or shoe covers, chemical resistant gloves and goggles (if a full face respirator is not used) when handling.

Formaldehyde is a primary skin sensitizing agent which may cause allergic contact dermatitis. Inhalation studies in test animals have produced an excess of tumors. Users should consider the possibility that overexposure to the active ingredient may pose a cancer risk. Formaldehyde is considered an occupational carcinogen by OSHA and users should be aware of the occupational exposure standard PEL (Permissible Exposure Limit) of 0.75 ppm.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. **DO NOT** discharge effluent containing this active ingredient 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 into sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flames.

IN CASE OF FIRE: Use CO_2 or dry chemical for small fires, alcohol type aqueous film forming foam or water spray for large fires. Use water spray to cool fire exposed containers. Wear self-contained breathing apparatus and complete personal protective equipment when potential for exposure to vapors or products of combustion exists.

IN CASE OF SPILL: Clean up immediately. Place leaking containers in well ventilated area. Eliminate ignition sources. To clean up spills, flush area sparingly with water or use absorbent. Avoid run-off to storm sewers and ditches leading to natural waterways. Neutralize with ammonium hydroxide or sodium hydroxide.

Do not allow access to treated areas by any person unless provided with a respirator approved by NIOSH/MSHA for formaldehyde exposure unless the formaldehyde vapor level has been determined to be below 0.75 PPM. Warning signs may be removed only after the vapor level drops below 0.75 PPM as determined by an OSHA approved method used in accordance with the manufacturer's instructions.

MONITORING OF PERSONNEL - In accordance with Formaldehyde regulation 29 CFR Section 1910.1048, all personnel who transport, pour, apply and clean-up Formaldehyde must monitor Formaldehyde in order to ensure workplace safety. The Formaldehyde vapor level must be measured to be below 0.75 ppm, using a PEL (8 hour) monitor that meets the NIOSH method 3500, following the manufacturer's instructions. All personnel that transport, poor, apply and clean up Formaldehyde must monitor peak exposure to Formaldehyde at below 2.0 ppm with a STEL (15 minute) monitor that meets the NIOSH method 3500, in accordance with the manufacturer's directions. PEL monitors are to be worn throughout the work shift. STEL monitors are to be worn for 15 minutes during the time of potential peak exposure.

UN2209

FORMALDEHYDE SOLUTION, 8, III, RQ

CH20 Solutions MicroBiocide

FOR USE IN HATCHERIES AS A FUMIGANT. FOR USE IN POULTRY AND SWINE CONFINEMENT BUILDINGS, MUSHROOM HOUSES, CITRUS FACILITIES, AND FOR USE IN DISINFECTING AND FUMIGATING ROOMS, FEED TRUCKS AND RAILROAD CARS. FOR USE BY FORMULATORS IN PREPARATION OF FORMULATED PRODUCTS.

Active Ingredient:	
Formaldehyde	37.0%
Other Ingredients	63.0%
Total	100.0%

(Contains methanol)

KEEP OUT OF REACH OF CHILDREN

DANGER/PELIGRO
POISON

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted a detalle (If you do not understand the label, find someone to explain it to you in detail.)

POTENTIAL CANCER HAZARD based on animal data and limited epidemiological evidence. May cause allergic skin reaction, reproductive disorders, lung damage, liver damage, kidney damage, brain and nervous system damage.

FIRST AID

IF INHALED: Move victim to fresh air. If 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 IN EYES: Hold eyes open. Rinse slowly with water for 15-20 minutes. Remove contact lenses, if present after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for at least 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

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. Do not give anything by mouth to an unconscious person.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

SEE LEFT SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

Distributed By:
Formaldehyde Solutions LLC
309 Railroad Ave.
Hanska, MN 56041
(507) 766-0305

EPA REG. No. 8743-17-92846
EPA EST. No. 92846-MN-001

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

AGRICULTURAL WORKER SAFETY USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements in this labeling about personal protective equipment, restricted-entry intervals, and notification to workers. These requirements only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the Agency responsible for Pesticide Regulation.

Entry Restrictions: Follow the applicable entry restrictions listed elsewhere on the product labeling.

Notification Instructions: Follow the rules in the WPS for notifying workers of the application.

Exception: If there are instructions elsewhere on the product labeling that requires the posting of specific signs at treated areas, you must notify workers of the application by warning them orally AND by posting the signs specified on the labeling.

Personal Protective Equipment (PPE) Requirements:

Handler PPE: Applicators and other handlers must wear:
Air purifying full-face respirator with formaldehyde cartridges if in area being treated. Coveralls over long-sleeved shirt & long pants. Chemical resistant gloves such as barrier laminate or viton. Chemical resistant footwear plus socks. Protective eyewear, and chemical resistant headgear for overhead exposure. Chemical resistant apron when cleaning equipment, mixing or loading.

Early Entry PPE required for early entry to treated areas that is permitted under Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

Air purifying full-face respirator with formaldehyde cartridges. Coveralls over long-sleeved shirt & long pants. Chemical resistant gloves such as barrier laminate or viton. Chemical resistant footwear plus socks. Protective eyewear, and chemical resistant headgear for overhead exposure.

Conflicting Instructions: If the requirements of the WPS conflict with instructions listed elsewhere on this product label, users must obey the more protective requirements.

FOR EMERGENCY INFORMATION, CALL CHEMTREC AT 1-800-424-9300

BEFORE USING CONSULT SAFETY DATA SHEET

It is a violation of Federal Law to use this product in a manner inconsistent with its label.

STORAGE AND DISPOSAL

STORAGE: Do not contaminate water, food or feed by storage or disposal. Should be stored apart from other combustibles, acids or oxidizing agents. Storage facilities should be non-combustible.

- Keep away from lights, fire and sparks.
- Keep closure up to prevent leaking.
- Make certain closure is securely tightened before moving.
- Keep container closed.
- Loosen closure carefully.
- Keep out of sun and away from heat.
- Store in a cool place.
- Never use pressure to empty.
- Ground container before emptying.
- Always handle in upright position.
- Never roll a container.
- Never add other material to container.

PESTICIDE DISPOSAL: Do not contaminate water, food or feed by disposal. Pesticide wastes are toxic. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or Hazard Waste representative at nearest EPA Regional Office for guidance.

CONTAINER HANDLING:
Nonrefillable container. Do not reuse or refill this container. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full of water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. After this container has been emptied, it may contain flammable vapors. Keep away from heat, sparks, and flames. If rinsate cannot be used, follow pesticide disposal instructions. If not triple rinsed, these containers are acute hazardous wastes and must be disposed in accordance with local, state and federal regulations. Then offer for recycling if available and dispose in a sanitary landfill, or by other procedures approved by state and local authorities. Do not cut, puncture, or weld on or near this container when empty.

SPILL CLEAN UP REQUIREMENTS: Should a spill occur, contaminated soil and other clean up debris is a hazardous waste. If a reportable quantity is exceeded, report spill/leak to the National Response Center (800-424-8802). Reportable quantity (RQ) for formaldehyde is 100 pounds.

FORMALDEHYDE
CH_2O • SOLUTIONS

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

SEE SIDE PANELS FOR ADDED DIRECTIONS FOR USE.

IN-CONTAINER PRESERVATIVE: CH20 Solutions MicroBiocide is recommended as an in-container preservative for industrial and household consumer products such as air fresheners, automotive products, fabric softeners, hand cleaners, polishes for floors and furniture, shoe polishes, moist sponges and towelettes, spray starch, waxes and automotive polishes, hand and automatic dish detergents, liquid laundry detergents and car washes, household cleaners, industrial cleaners, liquid hand soaps, oil and grease removers, carpet cleaners and spot removers, waterless hand cleaners, raw materials for cleaning products, surfactants and silicone emulsions. Use range = 0.10 to 1000 ppm in final product.

Formulators are responsible for obtaining FDA clearance for their formulated products in pulp and paper products and coatings that may come in contact with food. **CH20 Solutions MicroBiocide** may not be used in products coming in direct contact with food and/or drinking water.

AGRICULTURAL USES: Prior to all housing applications, warning signs must be posted on confinement buildings as specified in State, Local and Federal Regulations. Where required, trained personnel must be present during introduction of the **CH20 Solutions MicroBiocide.**

FOR DISINFECTING AND FUMIGATING ROOMS, FEED TRUCKS AND RAILWAY CARS: For each 1,000 cubic feet of space to be fumigated, use 16 2/3 oz. Potassium Permanganate and 20 oz. **CH20 Solutions MicroBiocide.** Place on floor, a large dishpan in which a smaller pan is set. Put Potassium Permanganate into smaller pan and pour **CH20 Solutions MicroBiocide** over it. Leave area immediately, closing tightly for about five hours, then, ventilate. Area may be reentered when level of formaldehyde is below 0.75 ppm as determined by an OSHA approved method used in accordance with manufacturer's instructions.

FOR FUMIGATION OF HATCHING EGGS: Incubators/hatchers may be fumigated using a maximum of 2 fl. oz. of **CH20 Solutions MicroBiocide** per 1,000 eggs in a 24-hour period. Dilute solution is to be placed in an open container and allowed to naturally evaporate or in slight vacuum condition from air ventilation. Potassium permanganate should not be used as a catalyst to liberate formaldehyde gas. Fumigation may be performed on both empty incubators/hatchers and incubators/hatchers containing eggs. Incubators/hatchers must be vented to outside air. Room housing the incubators/hatchers should also have adequate ventilation. Warning signs must be placed on incubators/hatchers and in surrounding area before fumigation may begin.

Eggs to be fumigated should be held on clean racks or egg flats which permit air circulation. Fumigation is most effective if applied to nest clean eggs as soon after collection as possible, when eggs are delivered to the hatchery or when set in incubators/hatchers. Fumigation of eggs **should not** be done between 24 hours and five (5) day incubation because embryo damage may occur at this time.

Fumigation procedures may be repeated at a maximum rate of 2 fl. oz. of **CH20 Solutions MicroBiocide** per 1,000 eggs in a 24-hour period. Last application of **CH20 Solutions MicroBiocide** should be added at least 12 hours before chicks are pulled to allow time for its complete evaporation. General access to the area may be allowed, and warning signs may be removed, when sufficient aeration has occurred to reduce formaldehyde vapor level to below 0.75 ppm as determined by an OSHA approved method used in accordance with manufacturer's instructions.

FOR USE IN FUMIGATION OF POULTRY AND SWINE CONFINEMENT BUILDINGS: CH20 Solutions MicroBiocide can only be applied to unoccupied poultry and swine confinement buildings by either spray sled method or fixed sprinkler method. No workers are permitted in treated building during treatment. All application methods must be carried out and controlled from outside the area being fumigated.

For Poultry or Swine Confinement Buildings: Remove all poultry or swine and feed from premises to assure adequate surface coverage. Remove all portable equipment. Remove all bedding, manure and debris. Clean all appropriate surfaces. Empty all water troughs and feed racks. Clean rinse all surfaces with water. Sanitize with a suitable and approved sanitizing solution.

Posting: Post warning signs on confinement building prior to start of fumigation. Post signs in plainly visible locations on or in immediate vicinity of all entrances. Do not remove signs until fumigation, ventilation and final testing has been completed, and building is safe for reentering. Warning signs shall be printed in red on white background and shall contain, in English and Spanish, the following statement in letters not less than two inches in height: **"DANGER-FUMIGATION"**. They shall also depict a skull and crossbones not less than one inch in height and shall state in letters not less than one-half inch in height **"FORMALDEHYDE"** date and time fumigant was introduced, and name, address and telephone number of the applicator performing the fumigation.

Trained personnel must be present during the introduction of **CH20 Solutions MicroBiocide** and, after 24-hour treatment period, if entry is necessary into treated confinement building for purposes of facilitating aeration. Establish prohibited entry zones extending at least 25 feet from building wherever aeration of fumigant is accomplished by opening doors or windows in areas where workers may be present. Identify prohibited entry zones with cones and yellow cautionary tape, staked 3 to 4 feet off the ground, using posting signs as described above.

Mixing/Loading Instructions for remote house application methods: Calculate volume of building to be treated. Use 20 – 60 fluid ounces (590 - 1770 mL) **CH20 Solutions MicroBiocide** for each 1000 cubic feet of building volume. **Dilution: See specific dilution recommendations under application methods below.** Transfer through a closed system appropriate amount of **CH20 Solutions MicroBiocide** to the mixing tank containing appropriate amount of water. This product should be diluted with sufficient water to thoroughly wet all surfaces during application.

Sprinkler Application Method: Install sprinkler system in poultry or swine confinement building. Use plastic rain-bird impact sprinklers on six-inch stands, spaced 20-30 feet apart using flexible 1/2-inch PVC irrigation hose. Some buildings may require two systems, one at each end covering one-half of building. Connect end of the sprinkler system to the truck or trailer mounted mix and pumping system or adapted agricultural spray rig. Close and secure door(s). Fumigate with **CH20 Solutions MicroBiocide** by mixing 1 part **CH20 Solutions MicroBiocide** with 10 parts water (a 1:11 dilution). All application activities must be carried out from outside confinement building. Application sprinklers should be rinsed following application solution with clean water, disconnected from pumping system, and left in confinement house until reentry is acceptable. Treated buildings should be left closed, locked and secured for a minimum of 24 hours, then ventilated for sufficient time so that airborne levels of formaldehyde are less than 0.75 ppm as determined by an OSHA approved method used in accordance with manufacturer's instructions.

Spray Sled Application Method: Apply using a portable spray sled (such as U.S. Patent #5,489,066 method, Advance Pest Control, Lemoore, CA). Spray sled shall be of a design that allows it to spray **CH20 Solutions MicroBiocide** in a rearward direction providing uniform coverage of sides, ceiling and floor as hose is recoiled and spray sled is pulled through poultry or swine confinement building. Dilution: Dilute CH20 Solutions MicroBiocide with sufficient water to provide uniform coverage (recommended dilution rate - 1 part formaldehyde to 4 parts water).

Position vehicle carrying application pump delivery system approximately 20 feet from access to poultry or swine confinement building. Position spray sled equipment and feeder hose in poultry or swine confinement building at farthest distance from vehicle mounted pump delivery system. Spray formaldehyde solution in a rearward direction towards sides, ceiling and floor as hose is recoiled and spray sled is pulled through poultry or swine house. Keep entrance door closed to width of sled or approximately 30 inches. Follow application solution with sufficient clean water to flush sled system. Pull sled out of poultry or swine house. Close and secure entrance door. Follow treatment period and aeration procedure below.

Treatment and Aeration of Treated Poultry Confinement Buildings: Treated buildings must be left closed, locked and secured against unauthorized entry for a minimum of 24 hours.

Note: For effectiveness, relative humidity should be at least 70% and temperature at least 70° F (21° C) or higher. Following treatment, rooms are opened to outside fresh air for thorough venting while using appropriate personal protective equipment. Removal of gas phase formaldehyde is a function of the number of building volumes (air exchanges) of air exhausted. If mechanical ventilation equipment is used, ventilate for a minimum of 20 air exchanges and 12 hours. If no mechanical ventilation equipment is used ventilate for a minimum of 24 hours.

Reentry After Aeration: Do not allow access into aerator treated areas by any person unless formaldehyde vapor level has been determined to be below 0.75 ppm. Warning signs may be removed only after vapor level drops below 0.75 ppm as determined by direct reading device, approved by OSHA and used in accordance with manufacturer's instructions.

FOR USE IN DISINFECTION OF MUSHROOM HOUSES, TOOLS AND EQUIPMENT: This product may be used in the disinfection of mushroom houses, tools and equipment.

CH20 Solutions MicroBiocide can only be applied to unoccupied mushroom houses by the method following on this label. No workers are permitted in treated building during treatment. All application methods must be carried out from outside the mushroom house.

Remove all mushrooms, soil and debris from premises to assure adequate coverage. Remove all portable equipment. Clean and sanitize with suitable solutions as needed. Rinse all surfaces with water.

Post warning signs on confinement buildings prior to start of fumigation. Post signs in plainly visible locations on or in immediate vicinity of all entrances. Do not remove signs until fumigation, ventilation and final testing has been completed, and building is safe for reentering. Warning signs shall be printed in red on white background and shall contain, in English and Spanish, the following statement in letters not less than two inches in height: **"DANGER - FUMIGATION"**. They shall also depict a skull and crossbones not less than one inch in height and shall state in letters not less than one-half inch in height **"FORMALDEHYDE"**, date and time fumigant was introduced, and name, address and telephone number of the applicator performing the fumigation.

Trained personnel must be present during the introduction of formaldehyde and, after 24 - hour treatment period, if entry is necessary into treated confinement building for purposes of facilitating aeration.

PROCEDURE: WEAR FULL PROTECTIVE CLOTHING AND FULL-FACE RESPIRATOR WHEN USING FORMALDEHYDE.

APPLICATION:

1. Tools and Equipment: Wash thoroughly with water to remove debris; then, dip with a solution made by mixing 1 gallon of **CH20 Solutions MicroBiocide** with tap water to make 100 gallons [a 0.37% solution of formaldehyde]. Rinse with water to remove all traces of formaldehyde.
2. Nonproducing areas - corridors, packing sheds, empty growing sheds, etc.
   A. Empty mushroom house of all growing media. Sweep out thoroughly.
   B. Wet out growing boards.
   C. Close up house, sealing as appropriate, to avoid formaldehyde fume seepage.
   D. Inject steam into house until interior temperature reads 140°to 150°F [about 12 hours of steam injection required].
   E. Inject **CH20 Solutions MicroBiocide** into steam [4 gallons in small houses of up to 37 ft by 48 ft by 15 ft high]; [5 gallons in regular dimension houses of 37 ft by 60 ft by 15 ft high]; [8 gallons in large houses 37 ft by 80 ft by 15 ft high].
   F. Continue steaming for 12 hours.
   G. Turn on exhaust fans for 4 hours and, then open doors for 24 hours before permitting reentry into house. Prior to reentry, check house for formaldehyde fumes at outside of exhaust fans and at entrances.

Treatment and Aeration of Treated Mushroom Houses: Treated buildings must be left closed, locked and secured against authorized entry for a minimum forced ventilation period of 4 hours. Removal of gas phase is a function of the number of building volumes (air exchanges) of air exhausted. If mechanical ventilation equipment is used, ventilate for a minimum of 20 air exchanges and 12 hours. If no mechanical ventilation equipment is used, ventilate for a minimum of 24 hours.

Reentry After Aeration: Do not allow access into aerator treated areas by any person unless formaldehyde vapor level has been determined to be below 0.75 ppm. Warning signs may be removed only after vapor level drops below 0.75 ppm as determined by direct reading device, approved by OSHA and used in accordance with manufacturer's instructions.

FOR USE IN CITRUS PACKING HOUSES:
For use in citrus packing houses including storage, degreening and pre-cooling rooms to inhibit blue mold, green mold, sour rot, dosage should be 16 fluid oz. of **CH20 Solutions MicroBiocide** per thousand cubic feet of space to be treated. Application to be made as a fogging spray using a stationary, mounted spray manifold and suitable air operated foggers. Units are to be controlled from outside area being fumigated. Where necessary, more than one manifold or fogger may be used per room. Frequency of application is to be limited to twice per year for each packing house. No workers are permitted in treated building during treatment. **Formaldehyde is phytotoxic to citrus. Remove all fruit from space to be treated. Allow formaldehyde residue to dissipate from storage boxes before filling with fruit.**

Application Method: Room should be tightly closed, and humidity introduced for at least 24 hours or longer to bring up humidity in empty boxes, walls and floors of room. Doors and windows that do not fit tightly should be sealed securely with tape to eliminate any significant escape of fumigant. Tape all suspected sources of leaks from outside the packing house. Do not wet down with hose. Air scrubbers should be drained, and water pumps turned off. Place spray manifold in an elevated position, several feet off floor and close to a return for recirculating fan. A compressed air connection should be hooked up to spray manifold and recirculating fans turned on. Air should be on 100% recirculation with no outside air intake. All persons should leave room(s) and all doors, openings shut tightly. Compressed air to spray manifold should be turned on from a position outside area (room) to be treated. Turn fans off two (2) hours after fogging is completed. Room should remain closed for a minimum of twenty-four (24) hours. Room may then be opened to outside fresh air for thorough venting for a minimum of twenty-four (24) hours or longer until testing has shown formaldehyde has dissipated to less than 0.75 ppm. Empty field bins and degreening boxes can remain in rooms to be treated. Tools, equipment, and articles which may come in contact with citrus must be removed prior to treatment or thoroughly washed with an effective cleaning compound followed by a potable water rinse before reuse.

Spray Manifold Application Method: Dilution: CH20 Solutions MicroBiocide must be used undiluted or diluted with sufficient water to provide uniform coverage, dependent on the size of air recirculating capabilities of the area being treated, up to a dilution rate of 1 **part CH20 Solutions MicroBiocide** to 10 parts water.

Fumigation is accomplished by using one or more spray manifold units, each having two to four nozzles mounted onto the top of carboy-type containers. (Five-gallon capacity recommended.) These nozzles must be designed to give adequate dispersal at an air pressure of 50 to100 p.s.i.. The nozzles are further specified as 1/4 J set-up #5 (180 air capacity, 100-150 fluid capacity) air orifice 100-150 (Spray Systems, Inc. Wheaton, IL) or equivalent. Spray manifolds (plumbed with 1/4-inch brass fittings) are fitted through a carboy-type container cap with drilled holes for spray manifold with siphon tube and Dry-Cam Disconnect DC-100A dry-break disconnect attachment (S & R Specialties, Cocoran, CA) or equivalent, sealed tightly for use. All containers of formaldehyde, including carboy-type containers must be plainly labeled with the name of the active ingredient, **FORMALDEHYDE.**

All mixing and loading procedures must be performed using closed systems. Fill carboy-type container with water to level that will result in the proper dilution of **CH20 Solutions MicroBiocide (for applications where dilution is desirable).** Tightly close the modified top of the carboy-type container, fitted with the spray manifold unit as described above, onto the container. Transfer the appropriate amount of **CH20 Solutions MicroBiocide** into a Chemsure III closed system liquid measurement device (Chemlor Mfg, Co., Inc., Salinas, CA), or equivalent, using a Pacer-Pump self-priming HP Pump (Pacer Pumps, Leole, PA), or equivalent hand pump. Use the same pump to transfer the measured quantity through the dry-break disconnect attachment into closed carboy-type container fitted with the spray manifold. The dry-break disconnect attachment at the carboy-type container should allow the filled bottle to be moved to the fumigation site while avoiding loss of fluids.

Place container with spray manifold in an elevated position, several feet off the floor and, where possible, close to a return for the recirculating fan. Where necessary, more than one manifold or fogger may be used per room. A compressed air connection should be hooked up to the spray manifold and the recirculating fans turned on. Air should be on 100% recirculation with no outside air intake. All persons must leave room(s) and all doors, openings shut tightly, (securely taping doors that have visible gaps). Compressed air to the spray manifold must be turned on from a position outside the area (room) to be treated. Adequate air pressure is necessary to obtain proper dispersion of the formaldehyde. Each spray manifold must use about 40 cubic feet of free air per minute at 80 to 100 p.s.i.. Without reentering rooms being fumigated, turn recirculating fans off two (2) hours after fogging is completed. Room must remain closed for a minimum of twenty-four (24) hours.

Note: Fogging mechanism must be checked with water in carboy (reservoir) prior to use. After testing, dump water and replace with diluted CH20 Solutions MicroBiocide. A closed, mixing and dispensing system is required. Adequate air pressure is required to obtain proper dispersion of formaldehyde. Each fogger manifold uses about 40 cubic feet of free air per minute at 80 to 100 p.s.i.

Posting: Post warning signs on citrus packing houses prior to start of fumigation. Post signs in plainly visible locations on or in immediate vicinity of all entrances. Do not remove signs until fumigation, ventilation and final testing has been completed, and building is safe for reentering. Warning signs shall be printed in red on white background and shall contain, in English and Spanish, the following statement in letters not less than two inches in height: **"DANGER-FUMIGATION"**. They shall also depict a skull and crossbones not less than one inch in height and shall state in letters not less than one-half inch height **"FORMALDEHYDE"**, date and time fumigant was introduced, and name, address and telephone number of the applicator performing the fumigation.

Treatment and Aeration of Citrus Facilities: Treated buildings must be left closed, locked and secured against unauthorized entry for a minimum of 24 hours. Following treatment, rooms are opened to outside fresh air for thorough venting while using appropriate personal protective equipment. Removal of gas phase formaldehyde is a function of the number of building volumes (air exchanges) of air exhausted. If mechanical ventilation equipment is used, ventilate for a minimum of 20 air exchanges and 12hours. If no mechanical ventilation equipment is used, ventilate for a minimum of 24 hours.

Reentry After Aeration: Do not allow access into aerator treated areas by any person unless formaldehyde vapor level has been determined to be below 0.75 ppm as determined by direct reading device, approved by OSHA and used in accordance with manufacturer's instructions.

Note: For effectiveness, relative humidity should be at least 70% and temperature at least 70°F (21 °C) or higher.

Buffer Zones:

Establish a worker buffer zone of 25 feet and a residential buffer zone extending from and surrounding the treated building during treatment and aeration. Determine the residential buffer zone based on the volume (cubic feet) of the structure being fumigated using a range of less than 100,000 cu. ft. requiring a buffer zone of 150 ft. to a zone of 1100 ft for buildings of 1,000,000 cu. ft. Buffer zone tables are available from the distributor. If aeration is conducted with mechanical exhaust ventilation, maintain buffer zones for 12 hour and until 20 air exchanges of air have been exhausted. If enclosure is aerated by passive means, maintain buffer zones for 24 hours. Access to the area within the worker buffer zone is acceptable for applicators or other employees with respiratory protection. Access to the larger area within the residential buffer zone outside the worker zone is acceptable for other employees and others that are not residing within the residential buffer zone. Keep all others from entering these zones while in place.