



U.S. ENVIRONMENTAL PROTECTION AGENCY  
 Office of Pesticide Programs  
 Antimicrobials Division (7510P)  
 1200 Pennsylvania Ave., N.W.  
 Washington, D.C. 20460

**EPA Admin. Number:**  
 94602-13

**Date of Issuance:**  
 10/18/21

**NOTICE OF PESTICIDE:**

Registration  
 Reregistration  
 (under FIFRA, as amended)

**Term of Issuance:**  
 Conditional

**Name of Pesticide Product:**  
 GBS 428-2% WT

**Name and Address of Registrant (include ZIP Code):**

Gray Beard, LLC  
 1931G Rohlwing Road  
 Rolling Meadows, IL 60008

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Antimicrobials Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.
2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 94602-13."
3. Submit one copy of the revised final printed label for the record before you release the product for shipment.

**Signature of Approving Official:**

*E. Miederhoff*  
 Eric Miederhoff  
 Product Manager 31  
 Regulatory Management Branch I  
 Antimicrobials Division (7510P)  
 Office of Pesticide Programs

**Date:**

10/18/21

1. You are required to comply with the data requirements described in the DCIs identified below:

- ADBAC GDCI-069105-30882; GDCI-069105-1679

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 04/23/2021
- Alternate CSFs 1 thru 3 dated 04/23/2021

If you have any questions, you may contact Mohammad Alavi at (703) 347-0522, or via email at [Alavi.mohammad@epa.gov](mailto:Alavi.mohammad@epa.gov).

Enclosure

# GrayBeard, LLC

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1931G Rohlwing Road • Rolling Meadows, IL 60008 • 800-837-0499

## GBS 428-2% WT

EPA Reg. No. 94602-  
EPA Est. No

**ACCEPTED**

10/18/2021

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No. 94602-13

(Note to Reviewer: Marketing claims may be used on the front panel.)

### ACTIVE INGREDIENTS:

Alkyl (50%C<sub>14</sub>, 40%C<sub>12</sub>, 10%C<sub>16</sub>)

dimethyl benzyl ammonium chloride .....2.0%

**OTHER INGREDIENTS** .....98.0%

**TOTAL:** .....100.0%

{Weight Approx. 8.3 lbs./gallon}

## KEEP OUT OF REACH OF CHILDREN DANGER {PELIGRO}

{Note to Reviewer: In accordance with 40 CFR 156.68(d), all first aid  
statements, as prescribed, will appear on the front panel of the product label.}

### FIRST AID

In case of emergency, call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**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.

**IF ON SKIN:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

**IF 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.

**IF SWALLOWED:** 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. Call a poison control center or doctor immediately for treatment advice.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

{For [{chemical}] {and} {or} {medical} {and} {or} {environmental}] emergencies, call {insert name and/or number of emergency contact} {hours of operation} {24 hours a day} {7 days a week}}.

(Note to Reviewer: This referral statement may be organized in any order to be grammatically correct.)

{{Consult} {See {additional} {sheet} {insert} {inside} {outer container} {Product Information} {Bulletin} for {other} {directions for use} {and} {information} {claims} {organisms} {applications}}.

Manufactured for: Gray Beard LLC  
1931G Rohlwing Road  
Rolling Meadows, IL 60008

Net Contents:

{{Batch} {Lot} No} {Manufacturing Date}:  
{Product of USA} {Made in the USA}

## MARKETING CLAIMS

**(Note to Reviewer:** Marketing text is considered optional. Commas and the words “and” “or” can be added to phrases to make text grammatically correct.)

### {LOCATIONS/SURFACES}

**(Note to Reviewer:** The locations/surfaces have been grouped for space purposes only; they can be used individually or grouped together in any order however at least **one** location/surface must appear on the label. In the case where one or more location/surface is chosen, an “and” “&” “or” may be used to link locations/surfaces.)

This product is for use in *(insert location)*  
For use {in} {on} *(insert location/surface)*.

### {LOCATIONS}

#### **{Water Treatment}** *{Not for use in California}*

- Air washers
- Auxiliary water systems
- Commercial recirculating cooling water towers
- Drilling, completion and workover fluids systems
- Gas production and transmission pipeline and systems
- Gas storage wells and systems
- Hydrotesting facilities
- Industrial {and/or} {commercial} recirculating cooling towers.
- Oil field water flood or salt water disposal systems {and fracturing fluid systems}
- Oil field injection and waste water
- Once through fresh {and sea} water cooling systems
- Once through freshwater systems
- Packer fluid systems
- Pipeline pigging and scraping operations
- Recirculating water systems
- Retort water systems
- Waste water systems
- Water cooling systems

#### **{Swimming Pool}**

- Fountains
- Ponds
- Swimming pools
- Whirlpools, spas, hot tubs

#### **{Wood Treatment}** *{Not for use in California}*

- Wood processing facilities
- Millwork
- Construction Timbers
- Decking
- Wood applications
- Wood shingles
- Wood posts

#### **{Sap Stain Control}** *{Not for use in California}*

- Lumber yards, timber mills, saw mills, manufacturers of dimensional lumber, manufacturers of wood products {(such as plywood, particle board, OSB panels)}, manufacturers of wood structural components {(such as trusses, prefab panels, composites beams and arches)}, manufacturers of wood composite products {(composite decking and siding)}.
- Wood Processing facilities

**{SURFACES}**

**{Wood Treatment} {Sap Stain Control} {Not for use in California}**

- Processed wood
- {Construction products such as} lumber, construction timbers, millwork, posts, decking, wood applications, wood shingles, concrete, sheetrock, wallboard, block and steel.
- Roofs {(shakes, shingles, composite clay and concrete tile)}
- Siding
- Awnings, tents, patio furniture, and outdoor carpets.
- Concrete, asphalt, stucco, wood shingles and siding, floors, walls, tile & other inanimate environmental surfaces

**{SURFACES}**

**{{Remove} {Kill} Moss, Mold, Algae and Mildew}**

Buildings

- Siding, eaves, gutters, roofs, shingles, screens, stairs, trim, awnings, shade sails,
- foundations.

Landscaping

- Patios, sidewalks, driveways, pavers, artificial turf, basketball courts, tennis courts.

Outdoor Structures

- Decks, porches, fences, gazebos, greenhouses, lanais, retaining walls, privacy walls, sheds,
- playhouses, storage units, glass houses.

Yard & Garden

- Hammocks, outdoor furniture, outdoor mats/rugs, outdoor pots, patio umbrellas, plastic climbing
- toys, swing sets, trampolines, fountains, sculptures, tombstones, signs.

Pools

- Pool patios, surrounds, liners, equipment, toys, inflatable devices, diving boards.

Marinas

- Boat bodies, seats, carpeting, bilges, dodgers, sails, life jackets.

Camping

- Cabins, outdoor furniture, pop-up campers, RVs, tents.

Vehicles

- Cars, trucks, trailers.

**EFFECTIVE ON:**

- Aluminum
- asphalt
- brick
- canvas
- cement
- ceramic
- clay
- concrete
- dryvit/EIFS
- fiberglass
- flagstone
- limestone
- log beams
- marble
- metal
- painted surfaces
- plastic
- PVC
- rock
- rubber
- sandstone
- slate
- steel
- stone
- stucco
- teak
- tile
- vinyl
- wood natural, painted, or stained)

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## WATER TREATMENT MARKETING CLAIMS *{Not for use in California}*

**(Note to Reviewer:** The following marketing claims may be used with the prefix “This product” or “This product is {a} {an}”.)

- Algacide
- Aids in the control of bacterial, fungal and algal slimes in evaporative condensers, heat exchange water systems, industrial and commercial cooling towers, air washers, retorts, pasteurizers, and industrial water scrubbing systems.
- Water treatment microbiocide for industrial and/or commercial recirculating cooling water towers, retort water systems and flood systems and fracturing fluids.
- Aids in the control of bacterial, fungal and algal slimes in evaporative condensers, heat exchange water systems, industrial and commercial cooling towers, Influent systems such as flow through filters and lagoons, industrial water systems and brewery pasteurizers.
- Aids in the control of bacterial, fungal and algal slimes in retort water systems
- Water treatment microbiocide for industrial and/or commercial recirculating cooling water towers, and oil field flood/salt water disposal systems and fracturing fluids.
- Microbiocide for use in controlling sulfate-reducing bacteria and slime forming bacteria in oil well drilling, oil field processing applications, oil field water systems, oil and gas productions and transmission pipelines and systems, and gas storage fields and equipment; such as steam-injection water holding tanks, flood water, injection water, holding pond water, disposal-well water, water holding tanks, fuel storage tanks and related refinery and oil field closed systems, industrial recirculating water handling systems.
- Water treatment microbiocide for use in controlling microorganisms such as sulfate-reducing bacteria, slime forming bacteria, algae, and mold and yeast in oil and gas systems, and building and industrial cooling tower systems.
- Microbiocide for use in controlling slime forming bacteria, sulfate-reducing bacteria (SRB) and fungi (yeast and molds) and algae in air washers and industrial scrubbing systems, process water systems including those that contain reverse osmosis membranes and in service water and auxiliary systems and heat transfer systems and in wastewater systems including wastewater sludge and holding tanks.
- Controls, algae and algal slime growth in industrial and/or commercial recirculating cooling water towers and once through freshwater cooling systems.
- For the control of Mollusks and algae, bacterial and fungal slimes in Once Through and Closed Cycle fresh and sea water cooling systems.
- This product helps to effectively control algae, bacteria, fungi and macrofouling species such as clams, barnacles, and mussels in commercial and industrial recirculating and once through cooling systems, influent water systems, brewery pasteurizers, auxiliary water systems and waste water systems.
- Effective against the growth of algae.
- For control of algae, algal, fungal and bacterial slimes in recirculating water systems, auxiliary water and waste water systems and water cooling systems, oil field water flood systems.
- Has been designed specifically for control of sulfate-reducing bacteria that contribute to souring, the production of sulfide, and abiotic corrosion in water cooling systems, oil field systems, gas production and transmission pipelines and systems.
- Kills and prevents algae.
- The residual effectiveness of this algacide tends to stabilize the total chemical treatment system.
- This product is effective for the control of odor-forming and slime-forming bacterial, fungi and algae in auxiliary service water systems such as fire protection systems and pump or screen bays, waste water systems such as storage tanks, storage piles, associated piping, setting ponds or lagoons, transport spillways or canals and disposal wells.
- This product reduces bacterial contamination and degradation of fracturing fluids and gels used in oil and gas well stimulations.

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## SWIMMING POOL TREATMENT MARKETING CLAIMS

- Algacide
- Kills and prevents algae.
- For control of algae {and algae slime} growth in swimming pools, {outside} spas/whirlpools/hot tubs {baths}, {containerized} {decorative} fountains *{“Containerized” must be used for products used in California}*
- The residual effectiveness of this algacide tends to stabilize the total chemical treatment system.
- Compatible with most {swimming pool} chemicals {used in pool water} {and} {when used as directed} is not harmful to the metal, paint, plastic or non-porous glazed tile {surfaces} {of swimming pool}. will not damage tile, concrete, metal or plastics.
- Keeps pool water free and sparkling, clear of visible green and blue-green algae, slime {slime} and green brown colors.
- This product improves filter operation and reduces need for other chemicals.
- This product is formulated to complement swimming pool water being treated with normal chlorine systems.
- Effective against growth of algae
- Aids in maintaining pool water clarity and sparkle.
- The residual effectiveness of this algacide tends to stabilize the total chemical treatment system.
- Especially effective against growth of algae and being non-volatile, aids in maintaining pool water clarity and sparkle
- Formulated to complement swimming pool water being treated with [{BioGuard Softswim System,} {Bacquacil,} {and} {other non-halogen systems}].

- Supports your overall pool chemical maintenance program, offering a residual effectiveness that protects your pool against algae formation while keeping your pool water sparkling clear.
- Protects the unattended pool when you're away (refer to Vacation Treatment section under Directions For Use).

### **{WOOD TREATMENT} {SAP STAIN CONTROL} MARKETING CLAIMS *{Not for use in California}***

- A concentrated biocide for use as a wood preservative.
- Wood articles that will be protected by these treatments would include:} millwork, construction timbers, decking, wood applications, wood shingles, posts and other articles to be used in above ground applications.
- For the control of mold, mildew and fungi in sap stains and wood preservatives.
- For the control of mold, mildew and fungus on green or freshly cut lumber.
- When used as directed, this product will protect treated wood articles from the destructive attack of fungi, mold, mildew and both Reticulitermes and Formosan species of termites.
- This product will protect treated wood articles from the destructive attack of fungi, mold or mildew.
- {Concentrate for use as a} Preventative treatment for algae, mildew and mold on concrete, asphalt, wood shingles, posts, shake roofs, siding, other inanimate environmental surfaces
- Prevents and controls mold and mildew on *{insert site from Surfaces}*

### **MOSS, MOLD, MILDEW & ALGAE MARKETING CLAIMS**

Removes Moss, Mold, Mildew & Algae stains from

- {Cleans exterior surfaces with} no pressure washing or scrubbing required.
- Apply with {normal} {pump up} garden sprayer
- Non-Caustic
- Non-Acidic
- No Bleach
- Outdoor {Moss,} {Mildew,} {Algae,} {Mold,} {Lichen,} {Fungus} {&/and} {Fungus-Related Growth} Stain Remover & Cleaner.
- {Removes} {Eliminates} {moss,} {mildew,} {algae,} {mold,} {lichen,} {fungus,} {&/and} {other fungus-related} from outdoor surfaces: Cleans. Prevents.
- Removes stains.
- Prevents regrowth.
- {Removes} {Eliminates} {moss,} {mildew,} {algae,} {mold,} {lichen,} {fungus,} {&/and} {other fungus-related} stains with the rain.
- {Removes} {Eliminates} stains\* with the rain.
- Uses rain to {remove} {eliminate} stains.\*
- \*{Removes} {moss,} {mildew,} {algae,} {mold,} {lichen,} {fungus,} {&/and} {other fungus-related} stains.
- Just spray and go!
- Works best on surfaces exposed to direct rainfall.
- No scrubbing or rinsing.\*
- No scrubbing, rinsing or pressure washing.\*
- \*On surfaces exposed to direct rainfall.
- Removes ugly stains from {moss,} {mildew,} {algae,} {mold,} {lichen,} {fungus,} {&/and} {other fungus related growth}.
- {Prevents regrowth} of {moss,} {mildew,} {algae,} {mold,} {lichen,} {fungus,} {&/and} {other fungus-related growth}

### **GENERAL MARKETING CLAIMS**

***{Note to Reviewer: The following marketing claims may be used with the prefix "This product" or "This product is {a} {an}"}.***

- Efficient and non-staining when used as directed.
- Is non-staining
- Will not damage tile, concrete, metal or plastics.

### **PACKAGING CLAIMS**

- Concentrate{d}
- 10% Concentration
- Make (insert value) [{Gal.} {quarts} {Containers}]
- This [{container} {bottle}] is made of {at least} (x)% post-consumer recycled plastic.



## DIRECTIONS FOR USE

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

**(Note to Reviewer (General Considerations):** Numbered instructions will be used if label space permits, otherwise may appear in paragraph format. Unit abbreviations can be spelled out. When choosing optional text, appropriate punctuation can be inserted or deleted. Equivalent use dilution ratios may be substituted within the directions.)

{Please read entire label and use strictly in accordance with precautionary statements and directions.}

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### WATER TREATMENT *{Not for use in California}*

Do not use water containing residues from use of this product to irrigate crops for food or feed.

**(Note to Reviewer:** The following sentence must be used with the air washer use listed in the direction:)  
For use only in industrial air washers and air washer systems which have mist-eliminating components.

**COOLING TOWERS, INDUSTRIAL {{AND/OR} COMMERCIAL} RECIRCULATING COOLING WATER TOWERS, RETORT WATER SYSTEMS, EVAPORATIVE CONDENSERS, HEAT {{EXCHANGE}} {WATER} SYSTEMS:** For best results, clean heavily contaminated systems before treatment with this product. If soap or anionic detergent is used, rinse thoroughly before charging with this algaecide. {Cooling tower waters that are inherently low in algae growth and bacteria count may be adequately controlled by the lower range of these dosages.} {Product application may be made intermittently (slug dose) or continuously. Noticeably fouled systems can be shocked with this product. Under these conditions, blow down should be discontinued for up to 24 hours.} Repeat every seven days or increase frequency if needed. Should slime develop again, repeat initial dosage. Noticeably fouled systems must be cleaned before treatment is begun.

1. **Dosing Location:** This product is to be applied at a point in the system where it will be uniformly mixed, such as the basin area, the sump, or another reservoir or collecting area.
2. **Dosing Conditions:** This product must be applied when the system is in jeopardy of being affected or after cleaning systems where efficiency is already impaired. {Tower bleed off valves must be closed to permit a retention time of 4 hours.}
3. **Method of Application:**

a) **INTERMITTENT OR SLUG METHOD**

**Initial Dose:** When the system is noticeably fouled, apply 1 - 2 gal. of this product per 1,000 gal. of water {(20-40 ppm active)} in the system. Repeat until control is achieved.

**Subsequent Dose:** When microbial control is evident, add 0.25 - 0.75 gal.)} of this product per 1,000 gal. of water {(5-15 ppm active)} in the system weekly or as needed to maintain control. Badly fouled systems must be cleaned before treatment is begun.

**MODIFIED INTERMITTENT METHOD**

**Initial Dose:** When the system is noticeably fouled, apply 1 - 2 gal. of this product per 1,000 gal. of water {(20-40 ppm active)} in the system. Apply half this initial dose when half of the water in the system has been lost by blowdown.

**Subsequent Dose:** When microbial control is evident, add 0.25 - 0.75 gal. of this product per 1,000 gal. of water {(5-15 ppm active)} in the system. Apply half this initial dose when half of the water in the system has been lost by blowdown.

c) **CONTINUOUS FEED METHOD**

**Initial Dose:** When the system is noticeably fouled, apply 1 - 2 gal. of this product per 1,000 gal. of water {(20-40 ppm active)} in the system.

**Subsequent Dose:** Maintain this treatment by starting a continuous feed of 0.25 - 0.75 gal. of this product per 1,000 gal. of water {(5-15 ppm active)} lost by blowdown. Badly fouled systems must be cleaned before treatment is begun.

**ONCE THROUGH FRESH {AND SEA} WATER COOLING SYSTEMS:** Use of this product in either public/municipal or single or multiple family private/residential potable/drinking water systems is strictly prohibited. Use of the product in any cooling water system that discharges effluent within ¼ mile of either public/municipal or single or multiple family private/residential potable/drinking water intake is strictly prohibited

{For best results, slug feed. The frequency of addition of microbicide needed depends on many factors. To optimize your use of water treatment microbicide, follow this procedure.}

1. **Dosing Location:** This product is to be applied at a point in the system where it will be uniformly mixed, such as at the sump.
2. **Dosing Conditions:** This product must be applied when the system is in jeopardy of being affected or after cleaning systems where efficiency is already impaired.
3. **Method of Applications:**
  - a) Wear safety glasses, rubber gloves and impervious apron.
  - b) To reduce foaming, mix 10 parts of water to 1 part of this product.
  - c) {Use} {Add} 6.4 to 64 fluid oz. {(1- 10 ppm on an active quaternary basis)} per 1,000 gal.
  - d) Do not discharge without performing proper deactivation. To perform deactivation use Bentonite Clay. The minimum ratio to be used is 5 ppm of clay to 1 ppm of product
  - e) Treatment time cannot exceed 120 hours/application nor exceed 4 times per year.



f) Avoid oxidizers and reducing agents. Product is cationic and must not be mixed with soap or anionic surfactants.

(OR)

*(Note to reviewer: Alternate Method of Application language can be used in place of item #3 directly above.)*

**3) Method of Application:**

**INTERMITTENT OR SLUG METHOD**

**Initial Dose:** When the system is noticeably fouled, apply 6.4 – 64 oz. of this product per 1000 gal. of water {(1 - 10 ppm active)} based on system flow rates. The minimum treatment is 6 to 24 hours. Repeat until control is achieved. Deactivation must be conducted prior to discharge from the system by using bentonite clay at a minimum ratio of 5 ppm clay to 1 ppm product.

**Subsequent Dose:** When microbial control is evident, add 0.32 – 32 oz. of this product per 1000 gal. of water {(0.5 - 5 ppm active)} based on system flow rates on an as needed basis to maintain control. Frequency of feed must be tied to an in-plant monitoring program for macrofouling growth. Deactivation must be conducted prior to discharge from the system by using bentonite clay at a minimum ratio of 5 ppm clay to 1 ppm product.

*(Note to Reviewer: Deactivation instructions must be used with the above Once Through directions for use.)*

**DEACTIVATION:** Use bentonite clay at the minimum ratio of 5 ppm clay to 1 ppm product. Deactivation must occur prior to discharge of the NPDES outfall. Do not apply this product more than 4 times a year.

**MACROFOULING CONTROL IN RECIRCULATING AUXILIARY COOLING WATER AND WASTE WATER SYSTEMS**

**Initial Dose:** For the control of macrofouling growth such as clams, barnacles, and mussels, add 6.4 – 64 fluid oz. of this product per 1,000 gal. of system water (1- 10 ppm). Repeat as necessary to achieve control.

**Subsequent Dose:** When control is evident add 6.4 – 32 fluid oz. of this product per 1,000 gal. of system water (1 – 5 ppm) as needed to maintain control.

**AUXILIARY SERVICE WATER AND WASTE WATER SYSTEMS:** Add 2.5 - 90 gal. of this product per 10,000 gal. of water {(5-180 ppm active)} in the system continuously. This product must be added to the system at a point of uniform mixing by slug or intermittent feed or by spraying onto a waste pile. The frequency of feed or spray and the duration of treatment will depend upon the severity of the contamination. Additions to water systems must be made during the pumping operation and as close to the pump as possible to ensure adequate mixing.

## OIL FIELD, GAS PRODUCTION AND TRANSMISSION PIPELINE AND SYSTEMS *{Not for use in California}*

**{OIL FIELD} {GAS PRODUCTION} {TRANSMISSION PIPELINE} {AND} {SYSTEMS}:}** {For the control of sulfate-reducing bacteria and slime forming bacteria, this product must be added to a gas production or transmission pipeline via direct injection at a point where uniform and maximum distribution will occur. The application must be conducted to ensure maximum distribution of the product through the internal surface of the pipeline by adding an amount of biocide which eventually comes out the other end of the pipeline. Criteria for success of the treatment will be reduction in bacterial count and/or corrosion rates. To facilitate application, it is desirable to dilute the product with an appropriate solvent immediately before use. The concentration in the solvent must not fall below an active concentration range of 500- 5000 ppm active based on the volume of water in the pipeline. For pipeline uses, after application and complete distribution throughout the pipeline, a detectable amount of residue product should be present at the back end of the pipeline system. Injections to the system must be weekly, or as needed to maintain control.}

Specific treatment requirements vary among oil and/or gas field sites and subsystem components. {Oil field fluids and subsystems most commonly requiring microbial contamination control are raw water sources, separators, ballasts, storage and mixing tanks, screens, surface injection equipment, production equipment {(such as injection and production piping casting, completion and valving)} and the formation itself.} The primary point of treatment will vary among oil and/or gas field operations depending on the site problems, water-flood treatment methods and equipment. This product must be added where it will disperse rapidly and uniformly to the desired area of treatment.

Additions of this product must be made with the proper type of metering pump equipment, suction (low pressure) side of pumping equipment or similar device. This product must be added to the system by slug, continuous or on an intermittent basis, depending on the degree of system fouling.

**{OIL FIELD} WATER FLOOD {or SALT WATER} {DISPOSAL} SYSTEMS, AND FRACTURING FLUIDS:** {To control slime forming and sulfate reducing bacteria {Desulfovibrio desulfuricans.}} This product must be added to the water flood at a point of uniform mixing.

1. **Continuous Use:** Add 2.5 – 5 gal. of this product per 10,000 gal. of water {(5-10 ppm active)} to control slime forming and sulfate reducing bacteria. Levels for effective control will vary depending on conditions at the site.
2. **{Slug Dose} {Intermittent Use}:** **{Add} {Dose}** at a rate of 2.5 - 10 gal. of this product per 10,000 of water {(5-20 ppm active)} for 4 to 8 hours per day, one to four times a week as needed to maintain control.
3. **Treatment of flow back return water {(Post Hydraulic Fracturing)}:** Dose at a rate of 2.5 - 10 gal. of this product per 10,000 gal. of water {(5-20 ppm active)} for 4-8 hours per day, one to four times a week as needed to maintain control.

**OIL FIELD INJECTION AND WASTE WATER:** This product must be added to the water handling system at a point of uniform mixing such as the area of addition of make-up water to the holding tank.

### Method of Application:

1. **Continuous Injection:** Add this product at 1.5 gal. of this product per 1,000 gal. of water {(30 ppm {active})} when system is noticeably fouled. When microbial control is evident, add 0.75 gal. of this product per 1,000 gal. of water {(15 ppm {active})} to maintain control.
2. **Batch Treatment:** Add this product at 9 gal. of this product per 1,000 gal. of water {(180 ppm {active})} over a period of 4 – 6 hours one or more times per week when the system is noticeably fouled. When microbial control is evident, add 4.5 gal. of this product per 1,000 gal. of water {(90 ppm {active})} over a period of 4 – 6 hours one or more time per week.

OR

For use in oil field and/or petrochemical water subsurface injection systems of secondary and/or tertiary oil recovery systems to reduce the number of anaerobic bacteria, aerobic bacteria, sulfate-reducing bacteria.

1. **DOSING LOCATION** (site of use): This product is to be applied at a point in the recovery system where it will be uniformly mixed, such as at the screens, storage tanks and other mixing device locations.
2. **DOSING CONDITIONS:** This product should be applied when the system is in jeopardy of being affected. Badly fouled systems must be cleaned before treatment is begun.
3. **EQUIPMENT USED:** Use the injection pump to apply the product.
4. **USE LIMITATIONS:** Dependent upon pH, temperature and salt content, adjust according to conditions found at the site as needed to maintain control.
5. **DOSAGE APPLICATIONS:**
  - a. **SLUG METHOD**  
**Initial Dose:** When the system is noticeably fouled, apply 3 gal. (60 ppm active ingredient) of this product per 1000 gal. of water in the system. Apply for 3 to 8 hours daily until control is achieved.  
**Subsequent Dose:** When microbial control is evident, add 1.5 gal. (30 ppm active ingredient) of this product per 1000 gal. of water in the system daily or as needed to maintain control.
  - b. **INTERMITTENT DOSAGE**  
**Initial Dose:** When the system is noticeably fouled, apply 3 gal. (60 ppm active ingredient) of this product per 1000 gal. of water in the system. Apply for 3 to 8 hours daily until control is achieved.  
**Maintenance Dose:** When control of microbial growth is evident, apply 1.5. (30 ppm active ingredient) of this product per 1000 gal. of water in the system daily or as needed to maintain control.
  - c. **CONTINUOUS FEED METHOD**  
**Initial Dose:** When the system is noticeably fouled, apply 0.75 gal. (15 ppm active ingredient) of this product per 1000

gal. of water in the system.

**Subsequent Dose:** Maintain this treatment by starting a continuous feed of 0.75 gal. (15 ppm active ingredient) of this product per 1000 gal. of water daily or as needed to maintain control.

**GAS STORAGE WELLS AND SYSTEMS:** Treat individual injection wells with 3.25 - 50 gal. of this product per 1,000 gal. of water {(65-1,000 ppm active)}. Update treatment rate as needed. This product must be diluted by the water present in the formation. Injection takes place before gas is injected and may be repeated yearly or as needed to maintain control.

**PIPELINE PIGGING AND SCRAPING OPERATIONS:** Add this product to slug water immediately following the scraper {(keep the water volume to a minimum and contained between the scraper and the [following] [trailing] pig)}. Add an effective concentration of 0.38- 2.5 gal. of product per 100 gal. of water {(75-500 ppm active)} depending on the length of the pipeline and the severity of the biofouling.

**DRILLING {(MUDS)}, COMPLETION AND WORKOVER FLUIDS SYSTEMS:** {To control slime forming and sulfate reducing bacteria {Desulfovibrio desulfuricans.}} This product is to be added to these fluid systems at a point of uniform mixing, such as a circulating, holding or mud tank. Levels for effective control will vary depending on conditions at the site and the severity of the contamination.

1. **Initial treatment:** Add 3.25- 50 gal. of this product per 1,000 gal. of freshly prepared fluid {(65 - 1,000 ppm active)}.
2. **Maintenance dosage:** Add 3.25 - 50 gal. of this product per 1,000 gal. of freshly prepared fluid {(65 - 1,000 ppm active)}.

**PACKER FLUIDS:** This product is to be added to the packer fluid at a point of uniform mixing such as a circulating holding tank {and} {other mixing device locations}. Add 3.25 - 50 gal. of this product per 1,000 gal. to a freshly prepared packer fluid {(65-1,000 ppm active)}. Levels for effective control vary depending on conditions at the site and the severity of contamination. Seal the treated packer fluid in the wall between the casing and the production tube.

**HYDROTESTING:** Treat water used to hydro test pipelines or vessels by adding 3.25 - 50 gal. of this product per 1,000 of water {(65-1,000 ppm active)} depending on the water quality and length of time the equipment will remain idle.

**AUXILLARY SERVICE WATER AND WASTE WATER SYSTEM:** This product is effective for the control of odor-forming and slime-forming bacterial, fungi and algae in auxiliary service water systems such as fire protection systems and pump or screen bays, water waste systems such as storage tanks, storage piles, associated piping, setting ponds or lagoons, transport spillways or canals and disposed wells.

Add 5 – 180 ppm (active) of this product (2.5 – 90 gal. per 10,000 gal. of water) continuously. This product must be added to the system at a point of uniform mixing by slug or intermittent feed or by spraying onto a waste pile. The frequency of feed or spray and the duration of treatment will depend upon the severity of the contamination. Additions to water systems must be made during the pumping operation and as close to the pump as possible to ensure adequate mixing.

## SWIMMING POOL

This product is compatible with most chemicals normally used in swimming pool maintenance. However, in its concentrated form, this chemical must not come in contact with high concentrations of chlorine or any other oxidizer. **DO NOT MIX THIS PRODUCT AND CHLORINE OR ANY OTHER OXIDIZER TOGETHER** before adding to the pool. These chemicals must be handled separately.

This product was formulated to complement most swimming pool sanitizers. This product is not a stand-alone product. It must be used with either halogen based or non-halogen based pool sanitizers. When using other products as outlined in directions for this product, always follow directions on those products.

This product requires no special equipment for treating swimming pool water. The correct use dilution may be added directly to the pool in any spot or added to the water circulation equipment. This product works the best when added by itself directly to pool water by pouring around entire outside perimeter of pool.

Do not allow swimming in pool for at least 15 minutes after this product has been applied.

Ensure all pool equipment is working properly. Backwash the filter system following manufacturers' directions. Adjust pH between 7.2-7.6. Adjust chlorine residual to 1-3 ppm. In a chlorine treated pool, add stabilizer to establish a minimum level of 40-50 ppm to reduce the degradative effects of sunlight upon the chlorine residual. Check for metals and if present add stain and scale inhibitor to prevent staining of pool surface due to metals. Check chlorine residual and adjust to 1-3 ppm. Maintain sanitizer residual in accordance with label directions found on your sanitizer of choice. Ensure that water quality conditions are maintained for the successful use of the product.

### TO DETERMINE POOL CAPACITY

**Rectangular Pools:** Length (times) width (times) average depth (in feet) (times) 7.5 (equals) gal.

**Round and Oval Pools:** Long diameter (times) short diameter (times) average depth (in feet) (times) 5.9 (equals) gal.

*(Note to Reviewer: Appropriate dilution rates may be substituted as long as they are equivalent dilution rates.)*

**{SWIMMING POOL TREATMENT DILUTION TABLE: (Note to reviewer: This DILUTION TABLE is optional.)}**

Swimming Pool Capacity Gallon of Water	Initial Treatment	Maintenance Dose Booster Dose
5,000	64 oz.	16 oz.
10,000	128 oz.	32 oz.
15,000	192 oz.	48 oz.
20,000	256 oz.	64 oz.
25,000	320 oz.	80 oz.
30,000	384 oz.	96 oz.
40,000	512 oz.	128 oz.
50,000	640 oz.	160 oz.

### INITIAL APPLICATION FOR SWIMMING POOLS {{USING} {{HALOGENATED} {NON-HALOGENATED}} {SANITIZERS}}:

1. Backwash the filter thoroughly.
2. Vacuum algae debris and thoroughly brush pool.
3. Add 5 gal. of this product to each 50,000 gal. of water {{1 gal. per 10,000 gal.}}.
4. Vacuum pool after 24 hours to remove dead algae.
5. If algae is still visible repeat dose (steps 3 & 4) as necessary until pool is free of visible algae.
6. Allow the filter to run for at least six (6) hours after adding algaecide. During this period, swimmers must not be allowed into the water.
7. Once algae are under control, clean filter and return to normal operation.

**MAINTENANCE APPLICATION:** Add 1.25 gal. of this product per 50,000 gal. of water {{(or equivalent use dilution)}} 5-7 days depending on weather and use factors. After each rain of consequence, add 1.25 gal. per 50,000 gal. water {{(or equivalent use dilution)}}. Even when the pool may not be in use for periods of time, algaecide additions must be made since a heavy accumulation of algae growth is difficult to remove. The appropriate amount of this product must be added by pouring a portion of the specified amount into several areas of the pool until the required quantity has been added. Recirculation accomplished by running the filter will assure rapid dispersion of product.

**BOOSTER APPLICATION:** Add 1.25 gal. of this this product per 50,000 gal. of water {{(or equivalent use dilution)}} after a heavy or prolonged rainfall or when there is a heavy bathing load.

The directions must be followed even when the pool is not in use. If algae growth is noticeable, apply initial dose. {For persistent algae

{or slime producing organisms} add 0.5 gal. of this product per 50,000 gal. of water {(or equivalent use dilution)} in to the skimmer with the filter pump running. After one minute shut off pump and allow the system to remain off overnight. The following day, restart the filter pump and add 0.5 gl. of this product per 50,000 gal. of water {(or equivalent use dilution)} to the pool. Run filter continuously for 24-48 hours brushing the sides and bottom of the pool frequently.}

**VACATION TREATMENT:** When you are going to be away for one week or more add 1 gal. of this product per 10,000 gal. of water {(or equivalent use dilution)} for every week unattended. Pour product around the edges of the shallow end of the pool, if shock is also being applied in the deep end of pool.

**WINTERIZING TREATMENT** {*Not for use in California*}: {When swimming pool season is over, add 3.35 gal. of this product per 10,000 gal. of water {(or equivalent use dilution)} left in pool. This dose helps provide a measure of control of algae growth during the winter months. {Clean pool water line, shut down filter, drain pump and winterize as per manufacturer’s instructions. Cover pool with solid cover, if possible. Pools without a solid cover may need a second treatment later in the non-swimming season.}}

{When swimming pool season is over, add a maintenance dose of chloride or oxygen shock. Top up with {{BioGuard Softswim System, Bacquacil.} {or} {other non-halogen systems}} to 50 ppm. Add 3.35 gal. of this product per 10,000 gal. of water {(or equivalent use dilution)} left in pool. This dose helps provide a measure of control of algae growth during the winter months. {Clean pool water line, shut down filter, drain pump and winterize as per manufacturer’s instructions. Cover pool with solid cover, if possible. Pools without a solid cover may need a second treatment later in the non-swimming season.}}

**FOR ALGAE TREATMENT OF {{SPAS} {WHIRLPOOLS} {HOT {TUBS} {BATHS}}}** {*Not for use in California*}

**Initial Dose:** Add 0.5 gal. of this product per 5,000 gal. of pool water {(or equivalent use dilution)}. Initial dose is used upon filling of {{spa} {whirlpool} {hot {tub} {bath}}}.

**Maintenance Dose:** Add 16 oz. of this product per 5,000 gal. of water {(or equivalent use dilution)}. Maintenance dose must be added at 3 – 5 day intervals. If high temperatures prevail or {{spa} {whirlpool} {hot} {tub} {bath}} has unusually heavy use, add maintenance dose more frequently. Drain and clean {{spa} {whirlpool} {hot} {tub} {bath}} at least once a month or as needed depending upon bather load.

**BIRD BATHS** {*Not for use in California*}: DO NOT use when fish are present. Clean to remove algae growth prior to filling birdbath and spray the exposed surfaces with a solution of 5 oz. of this product per gal. of water {(or equivalent use dilution)}. Allow to air dry and brush off dead algae.

**WALKWAYS** {*Not for use in California*}: This product will inhibit the growth of algae on hard, non-porous walkways. For heavy infestations, spray or swab a solution of 5 oz. of this product per gal. of water {(or equivalent use dilution)}. Let stand for an hour or more then brush and wash away dead algae. Soak area again with the solution. Do not rinse. Allow to dry on the surface and repeat application when algae growth returns. For sprayer applications, use a coarse spray only. Allow surfaces to remain wet for 10 minutes the air dry. Prepare a fresh solution daily or when visibly dirty.

**FOUNTAIN AND POOL TREATMENT DILUTION TABLE:** (*Note to Reviewer: This DILUTION TABLE is optional.*)

Fountain or Pools Capacity in gallons of water	Initial Treatment	Maintenance Dose Booster Dose
195	2.5 oz.	0.06 oz.
390	5.0 oz.	0.12 oz.
781	10.0 oz.	0.25 oz.
1562	20.0 oz.	0.5 oz.
3,125	40.0 oz.	1.0 oz.
6,250	80.0 oz.	2.0 oz.
12,500	160.0 oz.	4.0 oz.
25,000	320 oz.	8.0 oz.

**FOR ALGAE TREATMENT OF {CONTAINERIZED} FOUNTAINS, WATER DISPLAYS, DECORATIVE AND SWIMMING**

**POOL/PONDS: AND POOLS** {*“Containerized” must be used for products used in California*}: DO NOT use when fish or other wildlife are present. This product is not to be used in open water ways connected to larger watersheds or in waters that serve as natural habitats for aquatic and amphibious organisms. {Spray from fountains treated with this product will not harm {poolside} {nearby} plantings.}

Remove floating algae by raking, dragging with cable or chain, skimming, or any other suitable method. {It is more economical to remove floating type algae before the water is treated.}

{{Treat water by “dribbling” this product around the edges where visible algae growth is evident.} {Apply 1.25 gal. of this product per 12,500 gal. of water {(or equivalent use dilution)}.}} Apply prepared solution liberally along the windward side to float across the water and along the leeward side where contamination gathers. Where spraying is available, it may be used to apply the prepared solution instead of the hand “dribbling” method. Each week repeat maintenance dosage or add this product using a test kit to maintain the proper concentration.}

**Initial Dose:** Add 1.25 gal. per 12,500 gal. of water {(or equivalent use dilution)} at any point that is convenient, such as the bowl, pool, or sump.

**Weekly Maintenance Dose:** Add 4 oz. of this product per 12,500 gal. of water {(or equivalent use dilution)} every 3 – 5 days as to maintain 0.5 ppm active. Each month drain and clean bowl. Refill with fresh water and repeat initial treatment. Draining removes airborne dirt, dust, contamination and alkali buildup.

{**Note:** Algae does not usually grow in water that is 5 feet or more in depth. However, floating type algae may grow on pond weeds that grow on the surface of the water.}

**Discharge Directions for [Commercial] and [Residential], [Pool], [Spa], [Hot Tub] or [Fountain] Uses** *{Not for use in California}*

Before draining a treated [pool], [spa], [hot tub] or [fountain] contact your local sanitary sewer and storm drain authorities and follow their discharge instructions. Do not discharge treated [pool], [spa], [hot tub] or [fountain] water to any location that flows to a gutter, storm drain or natural water body unless discharge is allowed by state and local authorities.

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## WOOD PRESERVATIVES *{Not for use in California}*

Do NOT use treated wood for the construction/repair of bee hives.

**WOOD PRESERVATIVES:** {Wood articles that will be protected by these treatments would include millwork, construction timbers, decking, wood shingles, posts and other articles to be used in above ground applications.}

Treatment can be done [{by brush and/or spray,} {brush, spray for wood shingle applications,} {{and} by pressure, double vacuum or dip {method} {for other wood products.}} {Although dip, brush and spray cannot be used for protection against termites.} Apply in well ventilated area.

(OR)

Treatment can be done by brush or spray for wood shingle applications, and by pressure, double vacuum or dip method or other wood products. Wood articles that will be protected by these treatments would include millwork, construction timbers, decking, wood shingles, and posts

{This product can be used in combination with other EPA registered organic and inorganic wood preservatives or it can be used alone.} Dilute 32 – 96 oz. this product per gal. of either water or mineral spirits {or Sentry GoldSeal™} to produce a 0.5% to 1.5% active solution.

*{(Note to reviewer: This DILUTION TABLE is optional.)}*

To make a 0.5% to 1.5% active solution, use the following table:

Percent Active Quat Solution	Ounces of this product per gallon of water
0.5	32
1.0	64
1.5	96

To find the ounces of this product per gallon of water for other dilutions take the percent active desired and divide by 0.0156.

**THIS PRODUCT AND COPPER COMPOUNDS:** This product is only for use in combination with the following copper compounds in pressure treatment applications. Mix this product with water and either [{ACQ-C2, EPA Reg. No. 83997-4 or ACQ-C, EPA Reg. No. 83997-2} {NW 100-C, EPA Reg. No. 3008-87 or NW 200-C, EPA Reg. No. 3008-89}]. Refer to the product labels for [{ACQ-C and ACQ-C2} {NW 100-C and NW 200-C}] for precise mixing instructions.

**THIS PRODUCT AND BORATES:** This product is only for use in combination with the following borates in pressure treatment or dip treatment applications. Mix this product and [{an EPA registered source of Disodium Octaborate Tetrahydrate} {using either} {Wood Bor, EPA Reg. No. 3008-61,} {BoraSol WP, EPA Reg. No. 69529-2,} {TimberSaver, EPA Reg. No. 83997-8, TimberSaver PT, EPA Reg. No. 83997-8,} {Tim-Bor, EPA Reg. No. 1624-39,} {Cellu-Treat DOT Wood Preservative, EPA Reg. No. 64405-8} {Bor-Ram, EPA Reg. No. 64405-18,} {Borathor Max PT, EPA Reg. No. 81824-11}] in water. Refer to the product labels for precise mixing.

This product is only to be used in combination with the following borates in brush or spray applications. Mix this product and [{Lum-Bor, EPA Reg. No. 19713-286} {or} {BoraSol WP, EPA Reg. No. 69529-2}], in water. Refer to the product label for precise mixing instructions.

This product is only to be used in combination with the following borates in dip treatment applications. Mix this product and [{BORA-CARE, EPA Reg. No. 64405-1} {or} {BoraSol WP, EPA Reg. No. 69529-2}] in water. Refer to the product label for precise mixing instructions.

**FOR PRESSURE TREATMENT APPLICATION:** Place the wood article to be treated into the pressure cylinder and seal unit. Treat the wooden articles using the pressure treatment procedures consistent with the equipment being used and standard treatment practices. Treatment conditions must be such as to produce a 0.1 to 0.6 lb./cu. ft. retention in the treatment article. Such treated wood is to be used for above ground uses only.

**FOR DOUBLE VACUUM APPLICATION:** Stack the wooden articles to be treated in the treatment vessel so that the preservative solution will have access to all sides of the articles. Seal the vessel. Reduce the pressure within the vessel to –10 inches for 5 minutes. Cover all the articles with preservative solution. Allow the pressure to return to atmospheric conditions and discharge the preservative solution. Reduce the pressure to –20 inches and maintain for 20 minutes. Allow the pressure to return to atmospheric and remove treated wood articles. Treatment conditions must be used as to produce a 0.1 to 0.6 lb./cu. ft. retention of ADBAC in the treated article. Wood treated to this retention for above ground use only.

**FOR DIP TREATMENT:** Stack the wood to be treated on a suitable holder and convey the stack into the treating solution making sure the stack is completely immersed. Dip times range from 30 seconds (individual pieces) up to 30 minutes (bundled wooden articles). Use a concentration of 0.5 to 3.0% active quaternary ammonium compound. The concentration should be customized to the degree of sap stain protection desired, which must be determined by an independent test on the intended species of wood.



**FOR BRUSH OR SPRAY APPLICATIONS:** A 0.5% to 3.0% active quaternary ammonium solution with water {(or Sentry GoldSeal™)} may applied by brush or spray for use on wood shingles or shake roofs, siding on existing homes by commercial applicators, on interior construction products and surfaces such as lumber, concrete, sheetrock, wallboard, block and steel. Use low-pressure equipment for spray applications. A moderately fine spray, not an aerosol or fog provides the best coverage at practical product concentrations. Apply only to point of runoff.

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## {SAP STAIN CONTROL} {Not for use in California}

DO NOT use treated wood for the construction/repair of bee hives.

**SAP STAIN CONTROL:** Seasonal variation in storage and shipping conditions, species and condition of wood should be considered in selection of end use concentrations. For effective inhibition of mold and fungus, lumber and logs must be dipped or sprayed in a manner that insures that all surfaces are uniformly treated.

To Apply to Lumber or Logs: spray or dip lumber/logs with a use solution of 50 gal. of this product per 50 – 200 gal. of water. Dip tanks and drip aprons must be roofed, paved and drained to prevent dilution and loss of the anti-stain solution. {The target deposition level of the active ingredient – Alkyl dimethyl benzyl ammonium chloride – on the surface of the treated lumber is 100 to 140 micrograms/sq. cm. (650 to 850 micrograms/sq. inch).} Do not use this product in conjunction with any anionic wetting agents or soaps.

For best results, green wood should be treated immediately, at least within 24 hours after cutting or sawing. Mold and fungus growth begins immediately after cutting so delayed treatment is much less effective and requires increased chemical concentration. Green, untreated lumber must not be used for stickers.

Freshly treated lumber must not be allowed to remain unprotected in heavy rains. Treated Lumber must be stored under cover, or indoors, or at least 100 from any pond, lake, stream, wetland, or river to prevent possible runoff of the product into the waterway. Treated lumber stored outdoors within 100 feet of a pond, lake, stream or river must be either covered with plastic or surrounded by berm to prevent surface water runoff into the nearby waterway. If a berm is used around the site, it must consist of impermeable material (clay, asphalt, concrete) and be of sufficient height to prevent runoff during heavy rainfall events.

**FOR DIP TREATMENT:** Stack the wood to be treated on a suitable holder and convey the stack into the treating solution making sure the stack is completely immersed. Dip times must range from 30 seconds (individual pieces) up to 30 minutes (bundled wooden articles). Use a concentration of 0.5 to 3.0% active quaternary ammonium compound. The concentration must be customized to the degree of sap stain protection desired, which must be determined by an independent test on the intended species of wood.

**FOR BRUSH OR SPRAY APPLICATIONS:** A 0.5% to 3.0% active quaternary ammonium solution with water {(or Sentry GoldSeal™)} may applied by brush or spray for use on wood shingles or shake roofs, siding on existing homes by commercial applicators, on interior construction products and surfaces such as lumber, concrete, sheetrock, wallboard, block and steel. Use low-pressure equipment for spray applications. A moderately fine spray, not an aerosol or fog provides the best coverage at practical product concentrations. Apply only to point of runoff.

## MOSS, MOLD, ALGAE AND MILDEW

**TO {REMOVE} {KILL} MOSS, MOLD, ALGAE, AND MILDEW:** Mix 0.5 gal. of this product per 5 gal. of water. Apply use solution to areas infested with moss, mold, algae, or mildew with a {pump up} {garden} sprayer until surface is thoroughly saturated. Let stand for 10 minutes and allow to air dry. Do not employ equipment until treatment has been absorbed, dried, or set. For heavy infestations, {wash off} {remove} dead moss, mold, algae 12 to 24 hours later with another application of this product.

This product is best applied in overcast dry conditions to avoid rapid evaporation. Do not apply if heavy rain is expected within 4 – 5 hours.

**Reaction Time:** Once treated with this product {growth} {stains} may take up to 6-12 months to come clean in the {very} worst case scenario. It is very important that the mixing instructions are followed.

**Maintenance:** Repeat application once a year or when new {growth} {stains} {appear{s}} {return{s}}.

**Wood Decks:** Follow mixing directions. Stains in Cedar or Redwood may require brushing for full stain removal. Use water and hard broom 1 month after application. Once cleaned, it may be maintained with this product to prevent {growth} {stains}.

**Golf Green & Tees:** Spry a solution of 6.5 oz. of this product per 5 gal. of water until surface is thoroughly saturated. If necessary, repeat spray applications after 10 days. Treatment is not to exceed 10 acres (2,000 gal.). Do not repeat treatment more than 6 times per year.

### EXTERIOR SURFACE MOSS, MOLD, ALGAE, MILDEW REMOVAL, {CONTROL} {AND} {STAIN REMOVAL}

Prep:

- Make sure the surface you are treating is COMPLETELY DRY.
- If possible, apply on an overcast day when evaporation will be slower.
- Do not apply in the rain or if heavy rain is predicted within 5 hours.

Mix 1 part of this product to 1 part water. Apply use solution with a {pump up} {garden} sprayer until {dry} surface is thoroughly saturated. {Let stand 10 minutes.} Allow to air dry. A second application 1- 2 months after the first may also assist when treating persistent stains. Do not repeat treatment more than 6 times per year.

OR

#### Application:

- Mix 1 part this product with 1 part water in a pump-style garden sprayer. Stir well. Note: The correct, consistent ratio is critical to be an effective treatment.
- Spray the affected surface {with the pump-style sprayer} until it is fully saturated.
- Allow to air dry. Do not rinse.
- Wait until fully dry—at least 10 minutes—before using or touching the surface.

#### {Special Circumstances:

- For heavy stains, wait 24 hours and reapply.
- For especially stubborn stains or stains that return, wait 1 month and reapply. Repeat once per month, if necessary, no more than six times in 1 year.
- For surfaces that are not exposed to direct rainfall, wait 1 month, then scrub and/or rinse away the residue. Reapply if necessary.
- Stains on cedar/redwood may require slight scrubbing. Wait 1 month after application and remove residue with a stiff-bristled brush and water.
- If the stain does not disappear after carefully following these steps, it may just be dirt [and] [-] not fungus-related.}

**NOTE:** This product must be properly applied to be effective. Please read through all directions completely before beginning. Occasionally, stains that appear to be fungus-related are actually just built up dirt and grime, which this product is not designed to remove.

*{Note to Reviewer: This statement will be used on labels that only include instructions for stain cleaning/removal.}*

**How it Works:** This product uses natural rainfall to do the hard work. For surfaces that are exposed to direct rainfall, you don't have to scrub or rinse—just spray it on and walk away. This product begins to remove {moss,} {mildew,} {algae,} {mold,} {lichen,} {fungus,} {&and} {other fungus-related growth} stains on contact and continues to removes stains as it sits. Most stains will disappear within one month.

**{Ongoing Maintenance:** Reapply once a year or when new growth appears. Do not treat more than [6] [six] times per year.}

*{Note to Reviewer: This statement will be used on labels that only include instructions for stain cleaning/removal.}*

**{Coverage:** 1 gal. concentrate makes 2 gal. {Treats {up to} {250-}750 {square} {sq.} {feet} {ft}}\*.  
1.5 gal. concentrate makes 3 gal. {Treats {up to} {375 -} 1,125 {sq.} {ft}}\*.  
2.25 gal. concentrate makes 4.5 gal. {Treats {up to} {550 -} 1,700 {sq.} {ft}}\*.  
3 gal. concentrate makes 6 gal. {Treats {up to} {750 -} 2,250 {sq.} {ft}}\*.

{\*Highly stained or porous surfaces may require more treatment.}}

Children/Pets: For treated areas that may come into contact with bare skin or paws, wait 24 hours after application and rinse down thoroughly with fresh water before allowing children or pets to return.

Plants: Do not use on plants. Rinse plants well with fresh water if direct contact occurs.

**For All Applications:** Treatment must be performed at least 100 ft. from any pond, lake, stream, or river to prevent possible runoff into waterways.

## CLEANING/DEODORIZING DIRECTIONS

**CLEANING/DEODORIZING DIRECTIONS:** Add 5 to 10 oz. per gal. {or equivalent dilution} of water to clean and deodorize windows, mirrors and glass surfaces. Use a coarse spray device. Spray 6-8 inches from surface. Rub with sponge or cloth. Do not breathe spray. Do not use on food contact surfaces.

**GENERAL DEODORIZATION:** To deodorize, nonfood contact surfaces add 5 oz. of this product to a gal. of water {or equivalent use dilution} {800 ppm active quat}. Excess material must be wiped up or allowed to air dry.

**FOR DEODORIZING GARBAGE CANS, GARBAGE TRUCKS, INDUSTRIAL WASTE RECEPTACLES AND GARBAGE HANDLING EQUIPMENT:** It is especially important to preclean for the product to perform properly. Then, apply a wetting concentration of 10 oz. of this product per gal. of water {or equivalent use dilution} {1,600 ppm quat active}. Treated surfaces must remain wet for 10 minutes.

**AIR FRESHENER/AUTOMOTIVE USES** {*Not for use in California*}: A solution of 5 oz. per gal. of water will effectively neutralize damp musty odors caused by mildew. Effective on smoking and food odors {garlic, fish, onions, etc.}, automobile odors from tobacco, musty carpet smell, and beverage smells will be eliminated. Spray or apply onto seats, carpets, headliner and ashtray or into trunk and all vents to eliminate odors from tobacco, beverage spills and musty carpet. For sprayer applications, use a coarse spray device. Allow surfaces to air dry.

**FOR ODORS CAUSED BY DOGS, CATS AND OTHER DOMESTIC ANIMALS** {*Not for use in California*}: Use on rugs, floors, walls, tile, cages, crates, litter boxes, mats, floor coverings, or any surface soiled by a pet. Test a small inconspicuous area first. Blot problem area. Then follow directions for "General Deodorization".

**TO CONTROL THE GROWTH OF MOLD AND MILDEW ON LARGE, INFLATABLE, NON-POROUS PLASTIC AND RUBBER STRUCTURES** {animals, promotional items, moonwalk, slides, obstacle course play and exercise equipment}: Thoroughly clean all surfaces with soap or detergent and rinse with water. Saturate surfaces with a use solution of 5 oz. per gal. {800 ppm active quat} of water {or equivalent dilution} for a period of 10 minutes. Ventilate buildings and other closed spaces. Do not use equipment until treatment has been absorbed, set or dried.

**HUMIDIFIER DIRECTIONS:** Thoroughly clean water tank and filters. Add ¼ oz. of this product per gal. of refill water {or equivalent use dilution}. Not for use in heat or atomizing type humidifiers. {*Not for use in California*}

{OR}

**HUMIDIFIER BACTERIA/ALGAE TREATMENT** {*Not for use in California*}: Formulated for use in portable humidifiers. Thoroughly clean water tank and filters before each heating season or sooner if necessary. For every gal. of water in the humidifier tank add ¼ oz. of this product {or equivalent use dilution}. When you refill the tank, add 1.25 oz. of this product for every gal. of water added in the tank {or equivalent use dilution}.

Not for use in heat vaporizing or atomizing type humidifiers.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

**{PESTICIDE} STORAGE:** Store only in original container. Keep this product under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper 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 HANDLING:

*(Note to Reviewer: One or more of the following paragraphs for Container Handling will be selected, depending on packaging use/type.)*

*{For non-refillable containers equal to or less than 5 gallons}*

Non-Refillable Container. Do not reuse or refill this container. Triple rinse container {(or equivalent)} promptly after emptying. Triple rinse as follows: Fill the container  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Drain for 10 seconds after the flow begins to drip. Follow Pesticide Disposal instructions for rinsate disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

*{For non-refillable containers greater than 5 gallons}*

Non-Refillable Container. Do not reuse or refill this container. Triple rinse container {(or equivalent)} promptly after emptying. Triple rinse as follows: Fill the container  $\frac{1}{4}$  full with 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 back and forth several times. Turn the container over onto its other end and tip back and forth several times. Follow Pesticide Disposal instructions for rinsate disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

*{Refillable containers}*

Refillable Container. Refill this container with this product only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

## **PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**DANGER.** Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed, absorbed through the skin or inhaled. Do not breathe spray mist. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and chemical-resistant gloves and protective clothing when handling. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

### **ADDITIONAL PRECAUTIONARY MEASURES FOR PRESSURE TREATMENT, DOUBLE VACUUM AND DIP TREATMENT**

Protective clothing must be changed when it shows signs of contamination. Dip/Spray treatment may require frequent changing. Discard clothing and other absorbent materials that have been drenched or heavily contaminated. Do not reuse them.

Applicators must not eat, drink or use tobacco products during those parts of the applications process that may expose them to the wood treatment formulation {e.g. manually opening/closing cylinder doors, moving trams out of cylinders, mixing chemicals, handling freshly treated wood}. Wash thoroughly after skin contact and before eating, drinking, use of tobacco products or using restrooms.

Protective clothing must be changed when it shows signs of contamination. Applicators must leave protective clothing and footwear and equipment at the plant. Worn out protective clothing and footwear must be left at plant and disposed of in a manner approved for pesticide disposal and in accordance with State and Federal regulations.

### **ADDITIONAL PRECAUTIONARY MEASURES FOR BRUSH AND SPRAY APPLICATIONS**

Protective clothing must be changed when it shows signs of contamination. Brush/Spray treatment may require frequent changing. Discard clothing and other absorbent materials that have been drenched or heavily contaminated. Do not reuse them.

Follow manufacturer's instructions for cleaning/maintaining protective equipment. If no such instructions exist for washables, use detergent and hot water. Keep and wash protective equipment separate from other laundry.

Worn out protective clothing and work shoes or boots must be disposed of in a manner approved for pesticide disposal and in accordance with State and Federal regulations.

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## **PHYSICAL OR CHEMICAL HAZARDS**

Do not mix with soap, anionic detergents or oxidizers. Do not use or store near heat or open flame.

## **ENVIRONMENTAL HAZARDS**

*(If container is equal to or greater than 5 gallons, the following statement must appear on the label.)*

This product is toxic to fish, aquatic invertebrates, oysters and shrimp. 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 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

*(If container is less than 5 gallons, use the following as an alternate to the above statement.)*

This product is toxic to fish, aquatic invertebrates, oysters and shrimp.

*(If the label includes pool/spa/hot tub/fountain directions, the following statement is required)*

In the Directions for Use section, under SWIMMING POOL, see specific "Discharge Directions for [Commercial] and [Residential], [Pool], [Spa], [Hot Tub] or [Fountain] Uses"

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## **{SPANISH ADVISORY STATEMENTS}**

*(Note to Reviewer: This statement is optional except when used on labels with agricultural uses.)*

{SI USTED NO ENTIENDE LA ETIQUETA, BUSQUE A ALGUIEN PARA QUE SE LA EXPLIQUE A USTED EN DETALLE. IF YOU DO NOT UNDERSTAND THE LABEL, FIND SOMEONE TO EXPLAIN IT TO YOU IN DETAIL.}

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## **{GRAPHICS AND ICONS}**

*(Note to Reviewer: These are representative icons for use sites/application methods that may appear on the label with the appropriate directions for use, PPE or package type.)*

*{Baby Drowning in Bucket Warning Graphic}  
{Made in USA Logo/Flag}*

## {WARRANTY STATEMENT}

*(Note to Reviewer: This statement is optional.)*

Read Product Safety Data Sheet prior to use, PRODUCT WARRANTY, DISCLAIMER AND LIMITATION OF LIABILITY ARE FOUND on the Product Material Safety Data Sheet. Unless inconsistent with applicable law, use of Product signifies agreement with these provisions.

Lea la Hoja de Seguridad del Producto antes de usarlo. LA GARANTIA DEL PRODUCTO, DECLINACION Y LIMITACION DE RESPONSABILIDAD SE ENCUESTRAN en la Hoja de Seguridad del Producto. A menos de que sea inconsistente con la ley, el uso del product significa acuerdo con estas disposiciones.