

Bio-Guard WTB-20 is recommended to control the growth of green algae (Chlorella, Scenedesmus, blue-green algae, Plectonidium), Anaerobic, anaerobic sulfate reducing bacteria, Desulfovibrio, and aerobic heterotrophic bacteria (Bacillus, Pseudomonas, Spirillum) in oil field water cooling systems, evaporative condensers, and subsurface injection systems in oil field and tertiary recovery systems.

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

DANGER: High concentrations causes skin and eye damage. May be fatal if swallowed. Do not get in eyes, on skin or in clothing. Wear goggles or face shield and rubber gloves when handling. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS: This product is toxic to fish. Do not discharge into lakes, streams, ponds, or public waters. Consult with an NPDES Permit. For guidance, contact the regional office of EPA.

**DIRECTIONS FOR USE
GENERAL CLASSIFICATION**

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

Bio-Guard WTB-20 may be metered, pumped, gravity fed or poured from a suitable container into the treatment system. Centrifugal injection, piston or diaphragm pumps are satisfactory. Algaecide feed pumps, meters and feed lines may be stainless steel, neoprene, glass, plastic or unpigmented fiberglass.

RECIRCULATING WATER COOLING TOWERS

Initial Treatments: To a visually clean system or when algae or slime is first visible to sump water near pump suction, add 25 to 50 ounces of Bio-Guard WTB-20 for each 1,000 gallons of water (195 to 390 ppm) in the system. Repeat initial dose at day intervals until algae and slime control is evident. Badly fouled systems should be cleaned before initiating treatment.

Maintenance Treatments: The frequency at which additional dosages must be added to control slime and algal growth can only be determined by experience since each system will vary in water composition and in amounts and types of microorganisms present.

A treatment of this algaecide once or twice a month or when algae or slime first appears is usually sufficient to control growth of green algae in cooling towers. To control slime bacteria, a dose may be necessary once a week or once every two weeks. Use 18 to 38 oz per 1,000 gallons of water (150 to 300 ppm) for subsequent dosages.

Feeding: Bio-Guard WTB-20 may be fed directly from the drum or diluted with water and fed by any suitable feed system. Dose directly into the sump or any other convenient location providing good distribution of treatment.

OIL FIELD AND PETROCHEMICAL SUBSURFACE INJECTION SYSTEMS

Biological requirements vary from site to site. Areas frequently requiring

**BIO-GUARD
WTB-20
MICROBIOCIDES — ALGICIDE**

Controls algae slime growth on recirculating water cooling towers and evaporative condensers.

Controls anaerobic sulfate-reducers and aerobic heterotrophic bacteria in oil field and petro-chemical water injection systems.

ACTIVE INGREDIENTS: 14.0% (w/v) Chlorine Dioxide
INERT INGREDIENTS: 86.0%
TOTAL INGREDIENTS: 100.0%

**KEEP OUT OF REACH OF CHILDREN
DANGER**

PRACTICAL TREATMENT (FIRST AID): In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before reuse.

If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution or if these are not available, drink large quantities of water. Avoid alcohol. Call physician immediately.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock as well as oxygen and measures to support breathing manually or mechanically may be needed. If persistent convulsions may be controlled by cautious intravenous injection of a short-acting barbiturate drug.

SEE ADDITIONAL PRECAUTIONS ON SIDE PANEL
NOT FOR USE OR STORAGE AROUND THE HOME ENVIRONMENT
FOR COMMERCIAL AND INDUSTRIAL USE ONLY

**A PRODUCT OF
BIO-LAB, INC.
Decatur, Georgia 30031**

EPA Reg. No. 5185-320
EPA Est. No. 5185-GA-1

Net Contents: 55 U.S. Gallons

control are raw water sources, mainly itself. The primary treatment location depends on the site problems and equipment. The microbicide should be applied daily and uniformly to the gas at screens, filters, pumps, mixing water to the water as it is pumped to the tower for the formation.

SLUG DOSES: An effective treatment is 100-400 ppm Bio-Guard WTB-20 (12 to 50 ounces per 1,000 gallons). A slug dose for anaerobic sulfate-reducers use 30-118 ppm (3 to 10 ounces per 1,000 gallons) for three to five days until control is achieved. To maintain control, use a continuous treatment intermittent doses.

INTERMITTENT DOSES: To prevent fouling, intermittent doses may be applied. Intermittent doses may vary with individual systems and experience. Intermittent doses may be applied to some systems. Other systems may require two weeks. For heterotrophic bacteria use 30-118 ppm (3 to 10 ounces per 1,000 gallons) for three to five days until control is achieved. To maintain control, use a continuous treatment intermittent doses.

CONTINUOUS TREATMENT: Fouled to get initial control, followed by continuous use 30 to 100 ppm Bio-Guard WTB-20 (3 to 10 ounces per 1,000 gallons). The lower dose controls Desulfovibrio. Higher doses may be beneficial to bacteria.

STORAGE AND

1. PROHIBITIONS: DO NOT CONSUME. FEED BY STORAGE OR DISPOSAL PROHIBITED.

2. PESTICIDE DISPOSAL: PESTICIDE SHOULD BE USED OR CHEMICALLY PROCESSED IN A LANDFILL APPROVED FOR SAFE PLACE AWAY FROM WATER SUPPLY.

3. CONTAINER DISPOSAL: (A) RETURN FOR RECONDITIONING, OR (B) TRASH AND OFFER FOR RECYCLING, REUSE IN APPROVED LANDFILL, OR BURY.

4. GENERAL: CONSULT FEDERAL AUTHORITIES FOR APPROVED ALTERNATIVES.

APPROVED FOR EXPORT
NOV 06 1981
EPA REG. NO. 5185-320



BIO-GUARD WTB-20 MICROBIOCIDES — ALGICIDES

Controls algae slime growth on recirculating water cooling towers and evaporative condensers.

Controls anaerobic sulfate-reducers and aerobic heterotrophic bacteria in oil field and petro-chemical water injection systems.

ACTIVE INGREDIENTS
Aqua Chlorine 14.0% (14.0% available chlorine)
INERT INGREDIENTS
TOTAL INGREDIENTS

**KEEP OUT OF REACH OF CHILDREN
DANGER**

PRACTICAL TREATMENT (FIRST AID) In case of contact immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes call a physician. Remove and wash contaminated clothing before reuse. If swallowed drink promptly a large quantity of milk, egg whites, gelatin solution or if these are not available drink large quantities of water. Avoid alcohol. Call physician immediately. **NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock as well as oxygen and measures to support breathing manually or mechanically may be needed. If persistent convulsions may be controlled by cautious intravenous injection of a short-acting barbiturate drug.

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the growth of green algae (Phormidium, Desulfobacter and Pseudomonas species) on evaporative condensers and in primary and tertiary o-

REMENTS NS AND ALS

eye damage. May be on clothing. Wear handling. Remove and

to fish. Do not unless in accordance the regional office of

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product in a manner

gravity fed or poured system. Centrifugal factory. Algicide feed steel neoprene glass

NG TOWERS:

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URFACE INJECTION

has been requiring

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NOV 06 1981
5185-320

controls are raw water sources, cooling tanks, screens, and the formation (see). The primary treatment location will vary from site to site. In site location, the site problems, water flood treatment methods and equipment. The microbicide should be applied where it will disperse through and uniformly to the treated area of treatment. This may be at screens, filters, pumps, cooling tanks, storage tanks, to prevent water to the water as it is pumped & the formation of it may be pumped directly to the formation.

SLUG DOSES: An effective treatment for aerobic heterotrophic bacteria is 100-400 ppm Bio-Guard WTB-20 (12 to 50 ounces per 1,000 gallons). A slug dose for anaerobic sulfate reducers is 30-118 ppm of Bio-Guard WTB-20 (3.75 to 12.5 ounces per 1,000 gallons). The appropriate slug dose should be applied for three to eight hours daily until the desired level of control is achieved. To maintain the system in an acceptable condition, periodic treatment with the algicide or apply continuously.

INTERMITTENT DOSES: To prevent a clean system from fouling, slug doses may be applied intermittently. The frequency of intermittent doses will vary with individual systems and can be established only through experience. Intermittent doses may be required 2 to 3 times a week in some systems. Other systems may require dosing once a week or once every two weeks. For heterotrophic bacteria use 100-400 ppm Bio-Guard WTB-20 (12 to 50 ounces per 1,000 gallons). For anaerobic sulfate reducers use 30-118 ppm Bio-Guard WTB-20 (3.75 to 12.5 ounces per 1,000 gallons). Maintain these doses for two to eight hours depending upon the requirements of your system.

CONTINUOUS TREATMENT: Fouled systems should be slug treated to get initial control followed by continuous treatment to maintain control. Use 30 to 100 ppm Bio-Guard WTB-20 (3.75 to 12.5 ounces per 1,000 gallons). The lower dose concentration is usually satisfactory for Desulfobacter. Higher doses may be needed for the aerobic heterotrophic bacteria.

STORAGE AND DISPOSAL

- 1. PROHIBITIONS:** DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE OR DISPOSAL. OPEN DUMPING IS PROHIBITED.
- 2. PESTICIDE DISPOSAL:** PESTICIDE OR RINSATE THAT CANNOT BE USED OR CHEMICALLY PROCESSED SHOULD BE DISPOSED OF IN A LANDFILL APPROVED FOR PESTICIDES OR BURIED IN A SAFE PLACE AWAY FROM WATER SUPPLIES.
- 3. CONTAINER DISPOSAL:** (A) RESEAL CONTAINER AND OFFER FOR RECONDITIONING OR (B) TRIPLE RINSE (OR EQUIVALENT) AND OFFER FOR RECYCLING, RECONDITIONING OR DISPOSAL IN APPROVED LANDFILL OR BURY IN A SAFE PLACE.
- 4. GENERAL:** CONSULT FEDERAL, STATE OR LOCAL DISPOSAL AUTHORITIES FOR APPROVED ALTERNATE METHOD.