

1172 57-79

MAY 29 1991

Mr. Dennis L. McFadden
Great Lakes Chemical Corporation
P.O. Box 2200
West Lafayette, IN 47906

Dear Mr. McFadden:

Subject: Adding Mollusca Control and Once Through Cooling Tower Use
WTA Sodium Bromide
EPA Registration No. 5785-66
Sodium Bromide
EPA Registration No. 5785-67
Liquibrom 3800
EPA Registration No. 5785-76
Liquibrom 100
EPA Registration No. 5785-78
Liquibrom 4300
EPA Registration No. 5785-79 ✓
WTA 1500
EPA Registration No. 5785-80
WTA 4000
EPA Registration No. 5785-81
Your Amendment Dated April 11, 1991

BEST AVAILABLE COPY

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records.

Sincerely yours,

WCF

Walter C. Francis
Product Manager (32)
Antimicrobial Program Branch
Registration Division (R7505C)

Enclosure *Sample 5-29*

62731; 1:1A-4; Pringle; L32-07; KEVIC; 05/28/91; 06/24/91; av:wo:aw

LIQUIBROM 4300

FOR USE AS A DISINFECTANT, SANITIZER, BACTERICIDE,
SLIMICIDE, ALGICIDE, AND MOLLUSK CONTROL AGENT
IN RECIRCULATING COOLING WATER SYSTEMS, BREWERY
PASTEURIZING SYSTEMS, AIR WASHERS, ONCE THROUGH COOLING WATER
AND WASTEWATER TREATMENT SYSTEMS, AND PULP AND PAPER MILLS

Active ingredient:		
Sodium bromide	42.8%	
Inert Ingredients	57.2%	
Total	100%	

KEEP OUT OF REACH OF CHILDREN

WARNING

STATEMENT OF PRACTICAL TREATMENT

Eye Contact: Flush eyes with cold water for at least 15 minutes. If irritation persists, seek medical attention immediately.

Skin Contact: Prolonged contact can produce skin irritation. If skin contact occurs, wash with cold water for 15 minutes.

SEE OTHER PRECAUTIONS ON SIDE PANEL

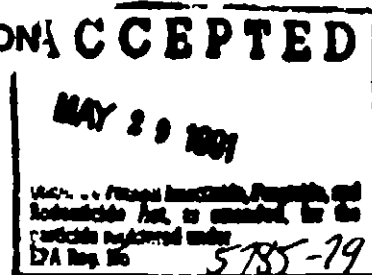
NET WEIGHT: _____

EPA REG. NO. 5785-79

LOT NUMBER: _____

EPA EST. NO. 5785-AR-01

GREAT LAKES CHEMICAL CORPORATION
P.O. BOX 2200
WEST LAFAYETTE, IN 47906



GLK-79-E

HAZARDS TO HUMANS
and skin exposure. Avoid contact with clothing before reuse.

ENVIRONMENTAL HAZARDS
in accordance with applicable regulations.

PHYSICAL AND CHEMICAL
by other materials, and in self-contained breathing apparatus.

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

STORAGE. Keep product in a cool, dry, well-ventilated area. Protect from moisture.

DISPOSAL. Wastes from this product should be disposed of in accordance with approved waste disposal practices or reconditioning, or other methods approved by state and local authorities.

RECIRCULATING COOLING WATER PASTEURIZERS. When used in recirculating cooling water systems, such as flow-through systems, it is effective against fungal slimes and ciliates (Dreissena) or the Asiatic clam.

DOSAGE RATES. Apply at the following mole ratio. For example:

- 1) 1.8 to 2.0
 - 2) 1.4 to 1.6
- of sodium bromide per gallon of water.

Initial Dose: When the system is noticeably fouled, add 0.0003 to 0.022 gallons of LIQUIBROM 4300 per 1000 gallons of water contained in the system and oxidize with either gas chlorine (0.008 to 0.042 lbs. gas chlorine per 1000 gallons of contained water), or sodium hypochlorite solution (0.007 to 0.034 gallons of 12.5% sodium hypochlorite solution per 1000 gallons of contained water).

Subsequent Dose. When microbial control is evident, add 0.00014 to 0.022 gallons of LIQUIBROM 4300 per 1000 gallons of water contained in the system, and oxidize with either gas chlorine (0.004 to 0.042 lbs. gas chlorine per 1000 gallons of contained water), or sodium hypochlorite solution (0.003 to 0.034 gallons of 12.5% sodium hypochlorite solution per 1000 gallons of contained water).

ONCE-THROUGH COOLING WATER AND WASTEWATER TREATMENT SYSTEMS. When used as directed, LIQUIBROM 4300 effectively controls algae, bacterial and fungal slimes and controls the settlement and growth of mollusks such as the zebra mussel (*Dreissena*) or the Asiatic clam (*Corbicula*) in once-through fresh and sea water cooling systems and disinfects secondary and tertiary wastewater treatment systems.

DOSAGE RATES. Add LIQUIBROM 4300 to the system at a 0.125 to 2.0 sodium bromide/oxidant mole ratio. For example:

- 1) 1.8 to 29.0 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution;
- 2) 1.4 to 23.2 gallons sodium hypochlorite (12.5% available chlorine) per gallon of sodium bromide solution.

Initial Dose. When the system is noticeably fouled, add 0.0007 to 0.044 gallons of LIQUIBROM 4300 per 1000 gallons of water contained in the system, and oxidize with either gas chlorine (0.02 to 0.08 lbs. gas chlorine per 1000 gallons contained volume), or sodium hypochlorite solution (0.02 to 0.07 gallons 12.5% sodium hypochlorite solution per 1000 gallons contained volume).

Subsequent Dose. When microbial control is evident, add 0.0003 to 0.044 gallons LIQUIBROM 4300 per 1000 gallons of water contained in the system, and oxidize with either gas chlorine (0.008 to 0.08 lbs. gas chlorine per 1000 gallons contained volume), or sodium hypochlorite solution (0.006 to 0.07 gallons 12.5% sodium hypochlorite solution per 1000 gallons contained volume).

PULP AND PAPER MILLS. When used as directed, Liquibrom 4300 effectively controls algal, bacterial, and fungal slime in pulp and paper mill fresh and sea water influent water systems, cooling water systems, wastewater treatment systems, nonpotable water systems, and other process water.

Dosage Rates. Add LIQUIBROM 4300 to the system at a 0.125 to 2.0 sodium bromide/oxidant mole ratio. For example:

- 1) 1.8 to 29.0 pounds of chlorine gas (99.9%) per gallon of sodium bromide solution;
- 2) 1.4 to 23.2 gallons of sodium hypochlorite (12.5% available chlorine) solution per gallon of sodium bromide solution.

Add sufficient Liquibrom 4300 and oxidize with either gas chlorine or sodium hypochlorite to achieve a residual bromine level of 0.5 to 5 ppm or as needed to maintain the desired level. Liquibrom 4300 can be added whenever chlorination is applied.

Feed LIQUIBROM 4300 either before or after the oxidant injection point. Be sure rapid mixing of the treated water, LIQUIBROM 4300 and oxidant. Manufacturers can recommend the appropriate materials of construction for the feed LIQUIBROM 4300 or sodium hypochlorite solution. If used as the primary disinfectant, it should be handled and used only in accordance with practices recommended in the literature by the Chlorine Institute, Inc., New York. Use chlorine gas only in well-ventilated areas.

Treatment levels of LIQUIBROM 4300 and oxidant can best be measured in terms of residual bromine or chlorine. Tests should be made immediately after drawing water. Use test kits according to directions.

1. When a bromine test kit is used, results can be read directly.
2. When a chlorine test kit is used, results can be expressed in terms of bromine by multiplying chlorine values by the conversion factor 2.23.

LiquiBrom 4300 weighs 12.2 lbs/gal at 70° F.

NOTE: Seller warrants that this product complies with the specifications of the Chlorine Institute, Inc. Seller makes no other warranties; and disclaims all other warranties, expressed or implied, not limited to warranties of merchantability and fitness for the intended use. Any liability for default, breach, or failure under this label shall be limited to the amount of the purchase price. Seller shall have no liability for consequential damages.