

ALBEMARLE® S909 BIOCIDES

FOR USE AS A DISINFECTANT, FUNGICIDE, ALGICIDE AND/OR SLIMICIDE FOR WASTEWATER, COMMERCIAL AND INDUSTRIAL RECIRCULATING COOLING WATER SYSTEMS, INDUSTRIAL ONCE-THROUGH COOLING WATER SYSTEMS, OILFIELD DRILLING MUDS AND PACKER FLUIDS, SECONDARY OIL RECOVERY SYSTEMS, AND PULP AND PAPER MILLS. CONTROLS BIOFILM DEPOSITS FROM PUMPS, PIPEWORK, HEAT EXCHANGERS, AND FILTERS ASSOCIATED WITH INDUSTRIAL WATER TREATMENT SYSTEMS.

ACTIVE INGREDIENT

Bromine Chloride 11.0%

OTHER INGREDIENTS 89.0%

Total 100.0 %

Total Available bromine = approximately 15%
(expressed as chlorine = approximately 7%)

KEEP OUT OF REACH OF CHILDREN

DANGER

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a doctor or get medical attention. Do not induce vomiting or give anything by mouth to an unconscious person. Drink promptly a large quantity of milk, eggwhites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol.
IF ON SKIN: Wash with plenty of soap and water. Get medical attention.
IF IN EYES: Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be need.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA Reg. No. 3377-55
EPA Est. No. 3377-

ACCEPTED
Dec. 6, 1999
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide, registered under EPA Reg No 3377-55

Net Contents lbs.
ALBEMARLE CORPORATION
451 FLORIDA STREET
BATON ROUGE, LA 70801

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

DANGER

Corrosive. Causes irreversible eye damage and skin burns. Do not get in eyes or on clothing. Wear protective eyewear (goggles or face shield), clothing and gloves. Harmful if swallowed, or absorbed through the skin. (Avoid breathing vapor or spray mist). Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public 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 to sewer systems without previously notifying the sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA. Apply this pesticide only as specified on the label.

PHYSICAL AND CHEMICAL HAZARDS

Albemarle S909 Biocide is not flammable. Avoid contact with strong oxidizers, acids, alkaloidal and heavy metal salts.

STORAGE AND DISPOSAL

STORAGE: Do not contaminate water, food, or feed by storage, disposal or cleaning of equipment.

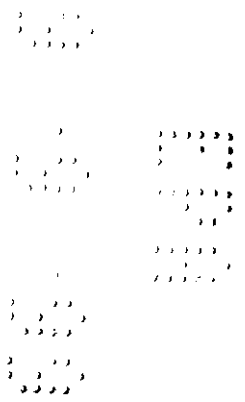
PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL

METAL CONTAINERS: Triple rinse (or equivalent).

Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

PLASTIC CONTAINERS: Do not reuse empty container. Triple rinse (or equivalent). Then puncture and dispose of in a sanitary landfill, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.



Directions for Use:

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

For use as a disinfectant, algicide, fungicide, and/or slimicide for wastewater, commercial and industrial recirculating cooling water systems and industrial once-through cooling water systems. ALBEMARLE S909 BIOCIDE may be added at system inlet water or other locations in the system.

WASTE WATER. When used as directed, ALBEMARLE S909 BIOCIDE disinfects wastewater effluent. The quantity of ALBEMARLE S909 BIOCIDE required varies with the degree of fouling. Add sufficient ALBEMARLE S909 BIOCIDE to achieve residual bromine levels of 3 ppm to 10 ppm when measured approximately 5 minutes after treatment. Applying 4 fluid ounces to 1000 gallons of water yields a maximum of 6.4 ppm of total bromine. Higher dosages may be necessary depending upon the system.

Depending on the construction of the wastewater system, ALBEMARLE S909 BIOCIDE may be effectively added to one or more different locations in the system. Frequently the compound is added to wastewater receiving secondary treatment at a contact tank preceding the effluent discharge or at the influent of the final clarifier.

The disinfection of sewage effluent must be evaluated by determining that the total number of coliform bacteria and/or fecal coliform bacteria, as determined by the MPN Procedure, of the disinfected effluent has been reduced to or below the maximum permitted by the controlling regulatory jurisdiction.

RECIRCULATING COOLING WATER SYSTEM. When used as directed, ALBEMARLE S909 BIOCIDE effectively controls bacteria, fungi, algae and slimes in commercial and industrial cooling towers; heat exchange water towers, industrial water scrubbing systems, and influent systems such as flow through filters, lagoons, etc.

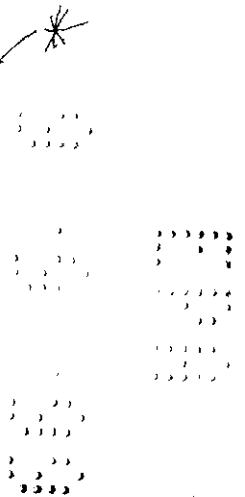
INDUSTRIAL ONCE-THROUGH COOLING WATER SYSTEMS. When used as directed, ALBEMARLE S909 BIOCIDE effectively controls bacteria, fungi, algae and slimes in once-through and closed-cycle fresh and sea water cooling systems. Apply ALBEMARLE S909 BIOCIDE to the system inlet water or before any other contaminated area in the system.

DOSAGE RATES:

INITIAL DOSES: When the system is noticeably fouled, apply sufficient ALBEMARLE S909 BIOCIDE to achieve a residual bromine level of 4-10 ppm or as needed to maintain control. Applying 4 fluid ounces to 1000 gallons of water yields a maximum of 6.4 ppm of total bromine.

SUBSEQUENT DOSES: When microbial control is evident, apply sufficient ALBEMARLE S909 BIOCIDE to achieve a residual bromine level of 4-10 ppm or as needed to maintain control. The product may be added to the system either continuously or intermittently or as needed to obtain the above residual. The frequency of feeding and dosage rate will depend upon the severity of the problem.

Albemarle S909 Biocide can also be used to control biofilm deposits from pumps, pipework, heat exchangers, and filters associated with industrial water treatment systems.



OIL RECOVERY DRILLING MUDS AND PACKER FLUIDS:

When used as directed, this product will control the growth of bacteria such as anaerobic sulfate-forming bacteria (*Desulfovibrio desulfuricans*) and aerobic slime-forming bacteria (*Pseudomonas fluorescens* and *Bacillus cereus*) which impair the efficiency of the muds and fluids.

Add sufficient amount of this product directly to the drilling muds and packer fluids to achieve a residual bromine level of up to 10 ppm or as needed to maintain control of the system. Fracturing fluids may be added and premixed prior to the fracturing operation or may be added directly to the blender during the operation. Be sure rapid mixing of the treated water with this product is achieved.

SECONDARY OIL RECOVERY SYSTEMS:

This product may be used in secondary oil recovery water systems, such as oil field water flood or salt water disposal systems for the control of sulfate-reducing bacteria and aerobic slime forming bacterial, which impair the efficiency of the system.

Add sufficient amount of this product to achieve a residual bromine level of up to 10 ppm or as needed to maintain control of the system. This product can be added whenever needed to maintain 10 ppm residual bromine. Feed this product directly into the water to be treated. Be sure mixing of the treated water with this product is achieved.

PULP AND PAPER MILLS: When used as directed, Albemarle S909 Biocide 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.

Advisory Statement: This product can not be used in paper mills and pulp manufacturing sites where food packaging materials are produced.

DOSAGE RATES: Add sufficient Albemarle S909 Biocide to achieve a residual bromine level of 4-10 ppm or as needed to maintain control of the system.

Feed Albemarle S909 Biocide directly into the water to be treated. Be sure rapid mixing of the treated water, and Albemarle S909 Biocide is achieved. Pump manufacturers can recommend the appropriate materials of construction and capacity for a pump to feed Albemarle S909 Biocide.

Treatment levels of Albemarle S909 Biocide can best be measured with test kits for either bromine or chlorine. Tests should be made immediately after drawing water samples from the system. Use test kits according to directions.

1. When a bromine test kit is used, results can be read directly as ppm bromine.
2. When a chlorine test kit is used, results can be expressed in terms of bromine by multiplying chlorine values by the conversion factor 2.25.