

3377-55

11/20/2008

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

NOV 20 2008

Ann M. Oxford  
Albemarle Corporation  
451 Florida Street  
Baton Rouge, LA. 70801-1765

Subject: Application for Amendment dated: August 13, 2008  
Albemarle S909 Biocide  
EPA Registration 3377-55

Dear Ann:

The Agency has reviewed your submission in accordance with continuing registration under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as amended, and determined the action to be acceptable. In summary, the following change has been approved as an amendment to your label:

- Updated the Precautionary Statements and the Physical and Chemical Hazards;
- Removed most "not for use in California" restrictions;
- Removed the disclaimer, "This product cannot be used in paper mills and pulp manufacturing sites where food packaging materials are produced"; and,
- Updated the Storage and Container Disposal instructions.

A copy of your stamped accepted label is enclosed. If you have any questions concerning this letter, please contact Tom Luminello by telephone, (703) 308-8075, or by e-mail at [luminello.tom@epa.gov](mailto:luminello.tom@epa.gov).

Sincerely,

A handwritten signature in cursive script that reads "Emily H. Mitchell".

Emily H. Mitchell  
Product Manager 32  
Regulatory Management Branch II  
Antimicrobials Division (7510-P)

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# ALBEMARLE S909 BIOCID

FOR USE AS A FUNGICIDE, ALGICIDE, SLIMICIDE AND MICROBIOCIDE IN  
RECIRCULATING COOLING AND PROCESS WATER SYSTEMS,  
HEAT TRANSFER SYSTEMS,  
AIR WASHERS AND INDUSTRIAL SCRUBBING SYSTEMS,  
CONTAINERIZED PONDS AND DECORATIVE FOUNTAINS,  
INDUSTRIAL ONCE-THROUGH COOLING WATER SYSTEMS,  
PULP AND PAPER MILLS,  
WASTEWATER SYSTEMS,  
OILFIELD APPLICATIONS SUCH AS OIL RECOVERY WELL FLUIDS AND FRACTURING FLUIDS,  
SECONDARY OIL RECOVERY SYSTEMS, AND HYDROSTATIC TEST WATERS

CONTROLS BIOFILM DEPOSITS FROM PUMPS, PIPEWORK, HEAT EXCHANGERS, AND FILTERS  
ASSOCIATED WITH INDUSTRIAL WATER TREATMENT SYSTEMS AND OILFIELD 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/PELIGRO

### FIRST AID

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**If swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**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. Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.  
See side panel for additional precautionary statements

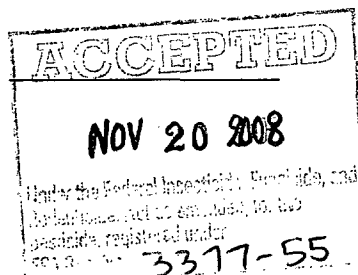
ALBEMARLE CORPORATION  
451 FLORIDA STREET  
BATON ROUGE, LA 70801

In case of emergency endangering life or property involving this product, call collect (225) 344-7147

EPA Reg. No. 3377-55  
EPA Est. 3377-AR-1, 42403-TX-1

Net Contents: \_\_\_\_\_

Batch number: \_\_\_\_\_



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

**DANGER** Corrosive. Causes irreversible eye damage and skin burns. Do not get in eyes on skin or on clothing. Wear protective eyewear (chemical goggles or face shield), protective clothing and rubber gloves resistant to chemical permeation. Harmful if swallowed, or absorbed through the skin. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing separately 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. This product is strongly basic and an oxidizing agent. Avoid contact with organic materials such as alcohols and aldehydes, strong reducing agents, strong oxidizers, acids, and ammonia containing products. Avoid contact with common metals such as steel, aluminum, iron and copper. Use of incompatible materials can promote the exothermic decomposition of the product. In extreme cases, this could result in vigorous gas formation and over-pressurization of storage containers.

**DIRECTIONS FOR USE**

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

When used as directed, ALBEMARLE S909 BIOCIDE effectively controls bacteria, fungi, algae and slime in commercial and industrial water systems. ALBEMARLE S909 BIOCIDE can also be used to control biofilm deposits from pumps, pipework, heat exchangers, and filters associated with industrial water treatment systems.

ALBEMARLE S909 BIOCIDE may be added at system inlet water or other locations in the system at a point of uniform mixing where the treated water will be circulated or mixed throughout the system. Badly fouled systems should be cleaned before treatment begins. The product may be applied to the system either continuously or intermittently (slug dose) or as needed to obtain the recommended total bromine level. The frequency of feeding and dosage rate will depend upon the severity of the problem.

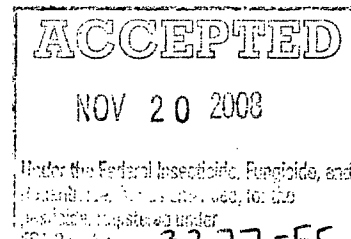
**INITIAL DOSES:** When the system is noticeably fouled, apply sufficient ALBEMARLE S909 BIOCIDE to achieve a total bromine level of 4 – 10 ppm or as needed to maintain control. Applying 4 fluid ounces to 1000 gallons of water yields a maximum of 6.4 ppm of total bromine.

**SUBSEQUENT DOSES:** When microbial control is evident, apply sufficient ALBEMARLE S909 BIOCIDE to achieve a total bromine level of 4 – 10 ppm or as needed to maintain control.

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. When a bromine test kit is used, results can be read directly as ppm bromine. 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.

**RECIRCULATING COOLING AND PROCESS WATER SYSTEMS**

When used as directed, ALBEMARLE S909 BIOCIDE effectively controls bacteria, fungi, algae and slime in commercial and industrial cooling towers; heat exchange water towers, evaporative condensers, utility plant cooling systems, industrial water scrubbing systems, and influent systems such as flow through filters, lagoons, etc.



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HEAT TRANSFER SYSTEMS

For control of bacteria and fungi in heat transfer systems such as hydrostatic sterilizers and retorts, pasteurizers and warmers, and batch and continuous cookers.

AIR WASHERS AND INDUSTRIAL SCRUBBING SYSTEMS

Use only in industrial air washer systems that have mist-eliminating components. For control of microorganisms in industrial air washer or scrubbing systems add sufficient ALBEMARLE S909 BIOCIDE to the air washer sump or chill water. The ALBEMARLE S909 BIOCIDE should be applied to achieve a total bromine level of 4 – 10 ppm or as needed to maintain control. Sampling of the treated systems should be at the bleed-off point and total bromine residuals determined with an appropriate test kit.

CONTAINERIZED PONDS AND DECORATIVE FOUNTAINS

ALBEMARLE S909 BIOCIDE may be applied at the pond or fountain inlet or at a location that permits complete diffusion into the water at maximum retention time before reaching the outlet. Sufficient ALBEMARLE S909 BIOCIDE should be fed to maintain a total bromine level of 4 – 10 ppm in all parts of the pond or fountain, or as needed to maintain control.

INDUSTRIAL ONCE-THROUGH COOLING WATER SYSTEMS

When used as directed, ALBEMARLE S909 BIOCIDE effectively controls bacteria, fungi, algae and slime 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.

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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, whitewater systems and other process water. The product may be applied to the system either continuously or intermittently (slug dose) or as needed to obtain the recommended total bromine level.

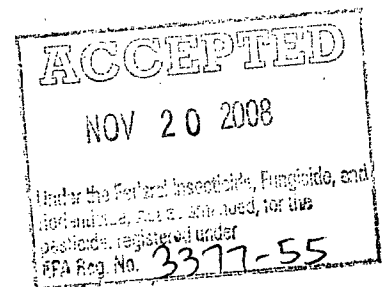
**DOSAGE RATES:** Add sufficient ALBEMARLE S909 BIOCIDE to achieve a residual bromine level of 4 – 10 ppm or as needed to maintain control of the system.

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.

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WASTEWATER SYSTEMS

When used as directed, ALBEMARLE S909 BIOCIDE controls microorganisms in wastewater systems. 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 – 10 ppm, or as needed to maintain control, 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. The product may be applied to the system either continuously or intermittently (slug dose) or as needed to obtain the recommended total bromine level.

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.



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Albemarle S909 Biocide label

### OILFIELD APPLICATIONS

This product is as an algicide, fungicide, and/or slimicide for oilfield applications. It controls biofilm deposits on pumps, pipework, heat exchangers, and filters associated with oilfield systems. It also controls biofilm deposits downhole in formations.

#### OIL RECOVERY WELL FLUIDS AND FRACTURING FLUIDS

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

Add sufficient amount of this product directly to the well fluid or fracturing fluid to achieve a residual bromine level of up to 10 ppm or as needed to maintain control of the system. This product may be added and premixed with the well fluid or fracturing fluid prior to the oilfield 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 bacteria, 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.

#### HYDROSTATIC TEST WATERS

This product may be used in hydrostatic test water systems for the control of sulfate-reducing bacteria and aerobic slime-forming bacteria, which impair the efficiency of the system and damage pipework by microbially induce corrosion.

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.

**Not for use in oilfield applications in the State of California.**

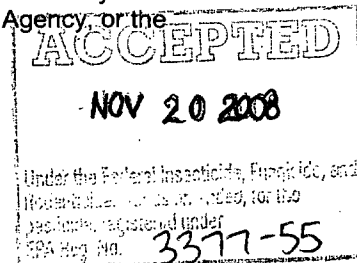
### STORAGE AND DISPOSAL

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

**STORAGE:** Avoid freezing, excessive heat or exposure to light, especially direct sunlight. If heating is necessary to prevent freezing, care must be taken to prevent overheating. The average product temperature should be maintained below 110° F. Temperature monitoring is recommended. At elevated temperatures, self-heating can lead to vigorous gas generation and over-pressurization of storage containers.

**STORAGE CONTAINER:** Vented and opaque containers: The product should be stored in vented containers as pressure can build-up in the headspace (nitrogen). To maximize product shelf life, store in opaque containers in a cool, dry, well-ventilated area.

**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:** [5 gallon] Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Offer for reconditioning if appropriate. Triple rinse as follows: Empty remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**CONTAINER DISPOSAL:** [30 and 55 gallon drums] Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Offer for reconditioning if appropriate. Triple rinse as follows: Empty remaining contents into application equipment or a mix tank. Fill the container 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 it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

**CONTAINER DISPOSAL:** [275-300 gallon tote or IBC] Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Offer for reconditioning if appropriate. Triple rinse as follows: Empty the remaining contents from this container into application equipment or a mix tank. Fill the 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.

*[The following statement will be used on labels for tank trucks]*  
Do not rinse or clean the tank after unloading the contents. Release the tank truck for return to Albemarle Corporation.

*[The following statements will be used on labels for stationary tanks]*  
Refillable container. Refill this container with like pesticide products. Do not reuse this container for any other purpose.  
**CONTAINER DISPOSAL:** Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the 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.

