

# MOGUL AG-461

For control of bacteria, yeasts, fungi and algae in industrial water systems.

## Use and Application:

**Recirculating Cooling Tower System:** MOGUL AG-461 controls bacteria, yeasts, fungi and algae in cooling water systems. The product is added to the cooling tower basin or the cold water sump as a slug treatment at a dosage of 2.9 to 14.4 fluid ounces per 1000 gallons of contained water (24.5 to 121.5 parts of product per million parts of water), or two to three times per week depending upon the severity of the problem. In systems with heavy microbiologic contamination, 10.5 to 22.7 fluid ounces per 1000 gallons of contained water, slug-fed daily, may be necessary until control is obtained. Then use the normal slug treatment dosage.

Badly fouled systems should be cleaned before starting treatment.

**Papermills:** MOGUL AG-461 is added to the whitewater system or to the stock furnish at a normal rate of 0.2 to 1.1 pounds per ton of dry paper, to control bacteria, fungi and yeasts, and their associated slimes. The exact dosage will depend upon operating conditions and extent of microbiologic contamination in the system. If slime build-up is heavy, addition is best made in periodic shock dosages such that the total required dosage is added within a two-to-four-hour period. Otherwise, the microbicide may be metered continuously into the system at the recommended dosage.

## Handling Precautions:

**DANGER:** Keep out of reach of children.  
Causes eye burns and skin irritation.  
May be harmful or fatal if swallowed or absorbed through skin.  
Combustible. Do not use, pour, spill or store near heat or open flame.  
Do not get in eyes, on skin, on clothing.  
Avoid breathing vapor or mist.  
Keep container closed.  
Use with adequate ventilation.  
Wear rubber gloves and goggles or face shield when handling.  
Wash thoroughly after handling.

**FIRST AID:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes; call a physician.

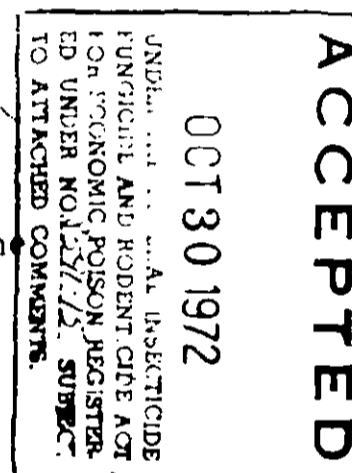
**CAUTION:** This product is toxic to fish and wildlife. Treated effluent should not be discharged where it will drain into lakes, streams, ponds or public water. Do not contaminate water by cleaning of equipment or disposal of wastes. Apply this product only as specified on this label.

Do not use empty drum. Return to drum reconditioner or destroy by perforating or crushing and burying in a safe place.

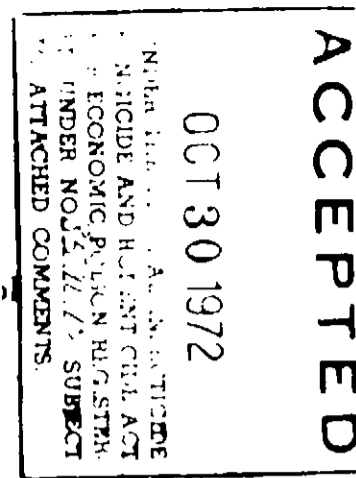
## Ingredients:

Active ingredients:  
Methylene bis(thiocyanate) ..... 5.1%  
Dimethyl formamide ..... 11.9%  
Inert ingredients ..... 83.0%

Product Weight 9.00 pounds per gallon



Microbiological Control



MOGUL AG 461

PRODUCT BULLETIN

### APPLICATION

MOGUL AG 461 is an extremely effective control of bacteria and fungi in recirculating cooling water systems. MOGUL AG 461 also controls microbiological slime deposits in pulp, paper and paperboard mills. MOGUL AG 461 is especially effective in systems loaded or saturated with organic and inorganic process hydrocarbons. MOGUL AG 461 will provide general microbiological control at low treatment levels without the limitations of oxidizing microbicides.

### PRODUCT PROPERTIES

Appearance Amber Liquid

Weight 9 pounds/gallon

Odor Hydrocarbon

### DOSAGES (See drum label for details)

Dosage levels of MOGUL AG-461 will depend on the severity of the microbiological infestation.

#### For Contaminated Systems (95 - 190 ppm)

11-22 Ounces per 1000 gallons of water to be treated will provide good control over severe infestations and provide excellent penetration and dispersion for the removal of existing deposits - repeated applications should be made until the system is free of deposits.

#### For Normal Control (25 - 120 ppm)

3 - 14 Ounces per 1000 gallons of water to be treated should be added once or twice weekly or as needed to maintain proper microbiological control.

All applications of MOGUL AG-461 should be maintained at minimum treatment levels for 6 hours. Optimum pH levels in the treated system are between 5.5 - 7.5. pH levels above 8.0 will result in poor treatment efficiency.

For Paper Mills - Use from 1.4 to 11.8 pounds per ton of dry paper, added to the whitewater system or the stock furnish. Continuous feed is preferred for best control.

### FEEDING

MOGUL AG 461 can be fed either on a slug basis or continuously, depending on system characteristics. When fed continuously, MOGUL AG-461 can be applied as shipped or as a 5% water emulsion.

Use feeding equipment which is acid-resistant or lined with high density polyethylene or polypropylene. Stainless steel can also be used. Do not use standard metals or other plastics since deterioration can occur.

### TESTING & CONTROL

No direct test for MOGUL AG-461 is possible. Feeding rates should be based on calculations of the system capacity and holding time index. Control should be based on visual results and analytical test for microbiological levels.

### HANDLING & STORAGE

(See cautions on drum label)

Irritating to skin and eyes. Absorption through skin harmful. Harmful if swallowed.

MOGUL AG 461 should be handled carefully. Do not get in eyes, on skin, or on clothing. When handling, protective clothing, goggles or a face shield are necessary.

Do not take internally. In case of contact immediately wash skin with soap and water for 15 minutes. For eyes, flush with large

THE MOGUL CORPORATION

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amounts of water for at least 15 minutes and get medical attention.

Maximum in-plant storage time of six months is recommended.

This product is toxic to fish and wildlife. Treated effluent should not be discharged where it will drain into lakes, streams, ponds, or public water. Do not contaminate water by cleaning of equipment or disposal of wastes. Apply this product only as specified on the drum label.

## PACKAGING & SHIPPING

MOGUL AG-461 is shipped in non-returnable polyethylene-lined fiber drums.

F.O.B. Shipping Point.