

AMA-10  
ANTIMICROBIAL AGENT

TECHNICAL DATA

AMA-10 is an excellent, low cost liquid antimicrobial agent for use in a variety of systems for the control of microorganisms. It contains a dispersant and penetrant to promote optimum effectiveness of the active ingredient.

COMPOSITION:

Active ingredient: Methylene bis(thiocyanate)	10%
Inert ingredients:	90%
TOTAL	100%

TYPICAL PHYSICAL PROPERTIES:

Physical form: Straw colored liquid	Density: 8.3 lbs. per gallon
Specific gravity: 0.99@25°C	Solubility: Water soluble at use concentration
Flash Point: 127°F (TOC)	

EFFICACY:

AMA-10 has been found to be an effective agent against many bacteria and fungi.

Following is a tabulation showing the ppm of AMA-10 required to give complete inhibition at 96 hours:

<u>MICROORGANISM</u>	<u>PPM</u>	<u>MICROORGANISM</u>	<u>PPM</u>
<u>BACTERIA</u>		<u>FUNGI</u>	
1. <u>Flavobacterium capsulatum</u>	2.2	5. <u>Aspergillus niger</u>	20.0
2. <u>Enterobacter aerogenes</u>	4.0	6. <u>Penicillium expansum</u>	4.0
3. <u>Bacillus subtilis</u>	20.0	7. <u>Fusarium oxysporum</u>	40.0
4. <u>Pseudomonas fluorescens</u>	12.0		

COMBINATION OF BACTERIA

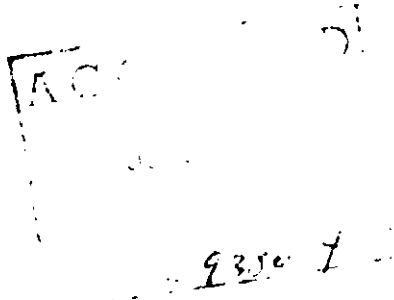
1,2, and 4 (Bacterial Combination)	9.0
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COMBINATION OF FUNGI

5,6, and 7 (Fungal Combination)	30.3
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SULFATE-REDUCING BACTERIA

Desulfovibrio desulfuricans


  
 9350 1

DIRECTIONS FOR USE:

**PAPER MILL SLIME CONTROL : FOR THE CONTROL OF SLIME-FORMING AND/OR SPOILAGE BACTERIA:** AMA-19 is added at a point in the system (raw stock chest; beater and/or refiner chest or machine chest - wirepit) where it will be uniformly mixed. Application may be continuous or intermittent for a certain number of hours/day or per shift, depending upon system characteristics. Add 2 to 5 fluid ounces of AMA-19 per ton of paperboard produced.

**INTERMITTENT FEED METHOD:** Apply 3.0 to 5.0 fluid ounces of AMA-19 per ton (dry basis) of pulp or paper for 2 hours every 8 hours. Badly fouled process systems must be cleaned before initial treatment.

**CONTINUOUS FEED METHOD:** Apply 2 to 4 fluid ounces of AMA-19 per ton (dry basis) of pulp or paper produced on a continuous basis. Badly fouled process systems must be cleaned before initial treatment.

Consult your Vinings representative for technical advice concerning certain site problems.

**RECIRCULATING COOLING WATER SYSTEMS : FOR CONTROL OF SLIME-FORMING BACTERIA (cooling towers, evaporative condensers):** Bacterial control: Use 1.6 to 7.9 fluid ounces per 1000 gallons water (1.25 to 6.20 ppm), actual, of AMA-19 as a continuous treatment, one to three times a week or as required to maintain control.

When the system is just noticeably fouled, use 5.8 to 12.5 fluid ounces per 1000 gallons water (4.5 to 9.8 ppm), actual, of AMA-19 as a continuous treatment daily or as required to obtain control. Badly fouled systems must be cleaned before treatment is begun.

Apply at a point in the system where uniform mixing and even distribution will occur, such as the cooling tower basin or sump.

**OILFIELD DRILLING MUDS AND WORKOVER OR COMPLETION FLUIDS : FOR CONTROL OF SLIME-FORMING AND/OR SPOILAGE BACTERIA:** Determine the total volume of the circulating system.

Calculate the number of gallons of Vinings AMA-19 needed to produce a concentration of 5000 ppm (1.75 lb/bbl) of Vinings AMA-19 in the drilling fluid circulating system. For example, 211 gallons of Vinings AMA-19 per 1000 barrels of drilling fluid will produce the proper concentration.

For best results add Vinings AMA-19 to the stream to the well pit while the drilling fluid is circulating.

As the total volume increases, additional Vinings AMA-19 will be required to maintain the proper concentration.

**OILFIELD WATER TREATMENT AND WATER FLOODS FOR CONTROL OF SLIME-FORMING AND/OR SPOILAGE BACTERIA :** Calculate the total volume of water to be treated. Using this volume, calculate the number of gallons of Vinings AMA-19 needed to produce a concentration of approximately 750 ppm Vinings AMA-19. For example, 0.75 gallons of Vinings AMA-19 per each 1000 gallons of total volume will produce this dilution.

50 ppm Vinings AMA-19, added each week, is recommended to maintain bacterial control. This may be accomplished by adding 0.50 gallons of Vinings AMA-19 to each 1000 gallons of total volume.

**TECHNICAL ASSISTANCE :**

The service of our engineers is available at any time, upon request, to assist in solving problems pertaining to use of Vinings' products. Information concerning this service is available from your regular sales representative or may be obtained by writing to Vinings Chemical Company, Atlanta, Georgia 30339.

**STORAGE AND DISPOSAL :**

**PROHIBITIONS :** Do not contaminate water, food, or feed by storage or disposal. Open dumpings prohibited.

**CONTAINER DISPOSAL :** Reseal container and offer for reconditioning, or triple rinse (or equivalent) and offer for recycling, reconditioning, or disposal in approved landfill, or bury in a safe place.

**GENERAL :** Consult Federal, State or Local Disposal Authorities for approved alternative procedures.

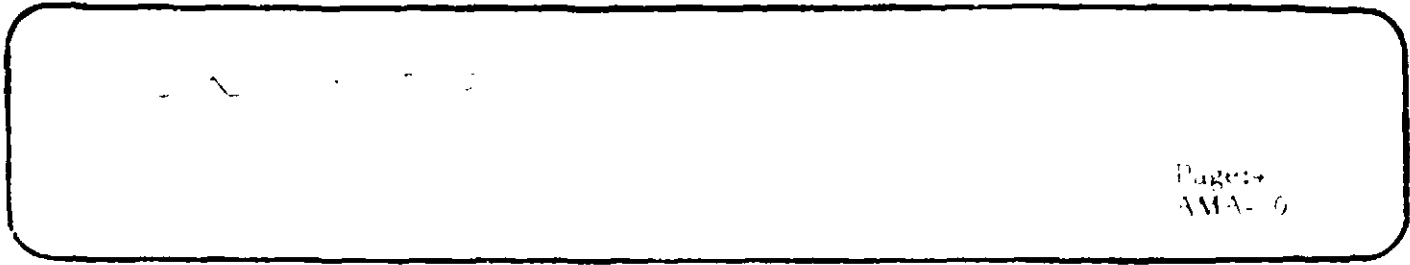
**PRECAUTIONARY STATEMENTS :**

**AMA-19 IS HARMFUL OR FATAL IF SWALLOWED OR ABSORBED THROUGH THE SKIN. CAUSES EYE DAMAGE AND SKIN IRRITATION.** In case of contact remove contaminated clothing and immediately wash skin with soap and water. If irritation persists get medical attention. In case of contact with eyes, immediately flush with water and get medical attention. Wash contaminated clothing before reuse. The use of goggles or face shield and rubber gloves is recommended.

**DO NOT USE OR STORE NEAR HEAT OR OPEN FLAME**

**FISH AND WILDLIFE ENVIRONMENTAL WARNING :**

This pesticide is toxic to fish. Do not apply in marine or other estuarine or fields. Do not discharge treated effluent into lakes, streams, ponds or public waters unless in accordance with NPDES permit. For guidelines contact your regional office of the Environmental Protection Agency.



Pagets  
AMA- 6

FOOD AND DRUG REGULATIONS :

The ingredients in AMA-19 are cleared by the United States Food and Drug Administration for use in the manufacture of pulp and paper to be used for food packaging in accordance with FDA Regulation 21 CFR 176.300.

SHIPPING POINT :

Marietta, Georgia

PACKAGING :

55 gallon drums  
550 gallon portabins

WEIGHT PER GALLON :

8.3 pounds per gallon

VININGS CHEMICAL COMPANY  
2555 CUMBERLAND PARKWAY  
SUITE 200  
ATLANTA, GEORGIA 30339

1981

**PRECAUTIONARY STATEMENTS**

**KEEP OUT OF REACH OF CHILDREN**

**WARNING**

**AMA-10 IS HARMFUL OR FATAL IF SWALLOWED OR ABSORBED THROUGH THE SKIN. CAUSES EYE DAMAGE AND SKIN IRRITATION.** In case of contact remove contaminated clothing and immediately wash skin with soap and water. If irritation persists get medical attention. In case of contact with the eyes immediately flush with water and get medical attention. Wash contaminated clothing before reuse. The use of goggles or face shield and rubber gloves is recommended.

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**STORAGE AND DISPOSAL**

**PROHIBITIONS:** Do not contaminate water, food, or feed by storage or disposal. Open dumpings prohibited.

**CONTAINER DISPOSAL:** Recycle container and offer for recycling, reconditioning, or triple rinse (or equivalent) and offer for recycling, reconditioning, or disposal in approved land fill or bury in a safe place.

**GENERAL:** Consult Federal, State, or Local Disposal Authorities for approved alternative procedures.

**VININGS**  
*Chemical Company*

ATLANTA, GEORGIA

**AMA-1**

(Antimicrobial Agent)

(FOR INDUSTRIAL USE ONLY)

ACTIVE INGREDIENT

Methylene bis (Thiocyanate)

INERT INGREDIENTS

EPA REGISTRATION NO. 9386

EPA ESTABLISHMENT NO. 936

ACCEPTED  
JUL 17 1981  
9386 9

SEE SIDE PANEL FOR PRECAUTIONARY STATEMENTS

Manufactured By

**VININGS CHEMICAL**

MARIETTA, GEORGIA

**VININGS**  
*Chemical Company*

ATLANTA, GEORGIA

**AMA-10**

(Antimicrobial Agent)

(FOR INDUSTRIAL USE ONLY)

ACTIVE INGREDIENTS

Methylene bis (thiocyanate)

10%

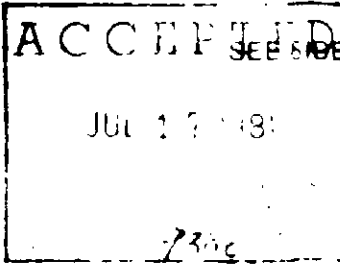
INERT INGREDIENTS

90%

Total 100%

EPA REGISTRATION NO. 9386-4

EPA ESTABLISHMENT NO. 9386-GA-1



SEE SIDE PANEL FOR PRECAUTIONARY STATEMENTS

Manufactured By

**VININGS CHEMICAL COMPANY**

MARIETTA, GEORGIA 30066

**DIRECTIONS FOR USE**

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH THE LABEL.

**PAPER MILL SLIME CONTROL: FOR THE CONTROL OF SLIME-FORMING AND/OR SPOILAGE BACTERIA:**

Apply to the system raw stock chest beater and/or refiner chest or to the water uniformly mixed. Application may be continuous or intermittent depending upon system. Use 1.0 to 1.5 gallons of AMA-10 per ton of paperboard produced.

**INTERMITTENT FEED METHOD:** Apply 3.5 to 5.0 fluid ounces of pulp or paper for 2 hours every 8 hours. Use 1.0 to 1.5 gallons of AMA-10 per ton of paperboard produced.

**CONTINUOUS FEED METHOD:** Apply 2 to 4 fluid ounces (dry basis) of pulp or paper produced on a continuous basis. System must be cleaned before initial treatment.

Consult your Vinings representative for technical advice.

**RECIRCULATING COOLING WATER SYSTEMS: FOR CONTROL OF SLIME-FORMING BACTERIA** (cooling towers, evaporators, etc.)

Use of 1.6 to 7.9 fluid ounces per 1000 gallons of water as a continuous treatment, one to three times a week for control.

When the system is just noticeably fouled, use 5.8 to 12.5 fluid ounces (4.5 to 9.8 ppm) actual of AMA-10 as a continuous treatment to obtain control. Badly fouled systems must be cleaned before treatment.

Apply at a point in the system where uniform mixing and even flow is maintained, such as the cooling tower basin or sump.

**OILFIELD DRILLING MUDS AND WORKOVER FLUIDS: FOR CONTROL OF SLIME-FORMING BACTERIA:**

Determine the total volume of the circulating fluid. Calculate the number of gallons of Vinings AMA-10 needed to produce a concentration of 1.500 ppm (1.75 to 10 bbl of Vinings AMA-10 in the drilling fluid). For example, 211 gallons of Vinings AMA-10 per 1000 barrels of drilling fluid concentration.

For best results add Vinings AMA-10 in a thin stream to the circulating fluid.

As the total volume increases due to greater well depth, use this amount to maintain the proper concentration.

**OILFIELD WATER TREATMENT AND WATER TREATMENT: FOR CONTROL OF SLIME-FORMING AND/OR SPOILAGE BACTERIA:**

Determine the total volume of water to be treated. Using this volume, calculate the number of gallons of Vinings AMA-10 needed to produce a concentration of 1.500 ppm. For example, 0.75 gallons of Vinings AMA-10 per 1000 gallons of water to be treated.

50 ppm of Vinings AMA-10 added each week is recommended. This may be accomplished by adding 0.50 gallons of Vinings AMA-10 to the total volume.

8.3 lbs. per gallon

**VININGS CHEMICAL COMPANY**

ATLANTA, GEORGIA 30303

**GS**  
*Chemical Company*

ATLANTA, GEORGIA

# AMA-10

(Microbial Agent)

(FOR INDUSTRIAL USE ONLY)

anate)	10%
	90%
<b>Total</b>	<b>100%</b>

EPA REGISTRATION NO. 9386-4  
EPA ESTABLISHMENT NO. 9386-GA-1

PANEL FOR PRECAUTIONARY STATEMENTS

Manufactured By

**GS CHEMICAL COMPANY**

RIETTA, GEORGIA 30066

## DIRECTIONS FOR USE

**IT IS A VIOLATION OF FEDERAL LAW TO USE THE PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.**

**PAPER MILL SLIME CONTROL; FOR THE CONTROL OF SLIME-FORMING AND/OR SPOILAGE BACTERIA:** AMA-10 is added at a point in the system (raw stock chest, heater and/or refiner chest or machine chest-wirepit) where it will be uniformly mixed. Application may be continuous or intermittent for a certain number of hours, day or per shift, depending upon system characteristics. Add 2 to 5 fluid ounces of AMA-10 per ton of paperboard produced.

**INTERMITTENT FEED METHOD:** Apply 2 to 5 fluid ounces of AMA-10 per ton (dry basis) of pulp or paper produced every 8 hours. Badly fouled process systems must be cleaned before initial treatment.

**CONTINUOUS FEED METHOD:** Apply 2 to 4 fluid ounces of AMA-10 per ton (dry basis) of pulp or paper production on a continuous basis. Badly fouled process systems must be cleaned before initial treatment.

Consult your Vinings representative for technical advice concerning certain site problems.

**RECIRCULATING COOLING WATER SYSTEM; FOR CONTROL OF SLIME-FORMING BACTERIA** (cooling towers, evaporative condensers) Bacterial control: Use 1.6 to 7.9 fluid ounces per 1000 gallons water (1.25 to 6.20 ppm) actual of AMA-10 as a continuous treatment, one to three times a week or as required to maintain control.

When the system is just not heavily fouled, use 5.8 to 12.5 fluid ounces per 1000 gallons water (4.5 to 9.8 ppm) actual of AMA-10 as a continuous treatment daily or as required to obtain control. Badly fouled systems must be cleaned before treatment is begun.

Apply at a point in the system where uniform mixing and even distribution will occur, such as the cooling tower basin or sump.

**OILFIELD DRILLING MUDS AND WORKOVER OR COMPLETION FLUIDS; FOR CONTROL OF SLIME-FORMING AND/OR SPOILAGE BACTERIA:** Determine the total volume of the circulating system.

Calculate the number of gallons of Vinings AMA-10 needed to produce a concentration of 1000 ppm (1.76 mg/l) of Vinings AMA-10 in the drilling mud circulating system. For example, 211 gallons of Vinings AMA-10 per 1000 barrels of drilling fluid will produce the proper concentration.

Inject this quantity of Vinings AMA-10 in a thin stream to the mud pit while the drilling fluid is circulating.

As the total volume increases (due to greater well depth), add additional Vinings AMA-10 to maintain the 1000 ppm concentration.

**OILFIELD WATER TREATMENT AND WATER FLOODS; FOR CONTROL OF SLIME-FORMING AND/OR SPOILAGE BACTERIA:** Calculate the total volume of water to be treated. Using this volume, calculate the number of gallons of Vinings AMA-10 needed to produce a concentration of approximately 750 ppm Vinings AMA-10. For example, 276 gallons of Vinings AMA-10 per each 1000 gallons of total volume will produce this dosage.

Inject Vinings AMA-10 at a treatment well. Continue to add Vinings AMA-10 to each 1000 gallons of total volume to maintain bacterial control.

8.3 lbs per gallon

**VININGS CHEMICAL COMPANY**

ATLANTA, GEORGIA 30339