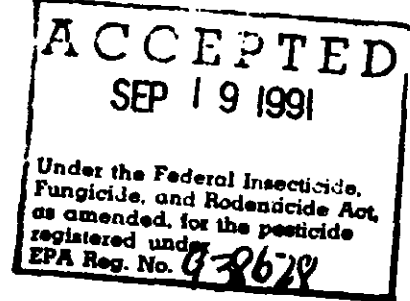


TECHNICAL DATA

**AMA-20
(ANTIMICROBIAL AGENT)**



DESCRIPTION:

AMA-20 is an effective, low cost, liquid antimicrobial agent.

COMPOSITION:

Active Ingredient:	
Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione	20%
Inert Ingredients:	80%
TOTAL	100%

TYPICAL PROPERTIES:

Appearance:	White creamy liquid	Solubility:	Complete at use concentration
Flash Point:	Over 200°F (TOC)	Viscosity:	1900 cps (Brookfield)
pH:	8.2		
Density:	8.8 lb/gal		

EFFICACY:

AMA-20 has been found to be an effective agent against many bacteria and fungi.

Following is a tabulation showing the ppm of AMA-20 required to give complete inhibition at 96 hours:

<u>MICROORGANISM</u>	<u>PPM</u>	<u>MICROORGANISM</u>	<u>PPM</u>
1. <i>Flavobacterium capsulatum</i>	167	5. <i>Aspergillus niger</i>	333
2. <i>Enterobacter aerogenes</i>	1000	6. <i>Penicillium expansum</i>	500
3. <i>Bacillus subtilis</i>	333	7. <i>Fusarium oxysporum</i>	1000
4. <i>Pseudomonas fluorescens</i>	1000		
<u>COMBINATION OF BACTERIA</u>	<u>PPM</u>	<u>COMBINATION OF FUNGI</u>	<u>PPM</u>
1,2&4 (Bacterial Combination)	1000	5,6&7 (Fungal Combination)	500
<u>SULFATE-REDUCING BACTERIA</u>			
<i>Desulfovibrio desulfuricans</i>	120-130		

DIRECTIONS FOR USE:

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

FOR THE PRESERVATION OF CLAY SLURRIES, ADHESIVES, COATINGS AND HIGH VISCOSITY SUSPENSIONS: For preservation of slurries and high viscosity suspensions, AMA-20 should be added at a point in the processing system where there will be sufficient time and agitation for good mixing and dispersion. Add AMA-20 at use levels of 0.04-0.11%, by weight, based on the total formulation in slurries of starch, clay, calcium carbonate or titanium dioxide; paper coatings; high viscosity suspensions (e.g. polymers; silica-polymer combinations); polyvinyl alcohol/polyvinyl acetate based adhesives; starch based adhesives; dextrin based adhesives. The exact amount of material to be added for the preservation of any conditions. Dosage rates should be determined by actual tests.

PAPER MILL SLIME CONTROL; FOR THE CONTROL OF SLIME-FORMING AND/OR SPOILAGE BACTERIA: AMA-20 is added at a point in the system (raw stock chest; beater and/or refiner chest or machine chest - wire pit) 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 5 to 20 fluid ounces of AMA-20 per ton of paper produced.

INTERMITTENT FEED METHOD: Apply 12 to 20 fluid ounces of AMA-20 per ton (dry basis) of pulp or paper for 2 hours every 8 hours. Badly fouled process systems must be cleaned before initial treatment.

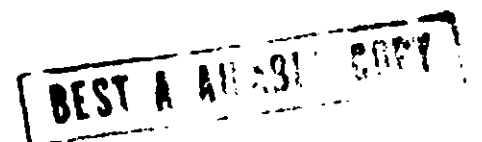
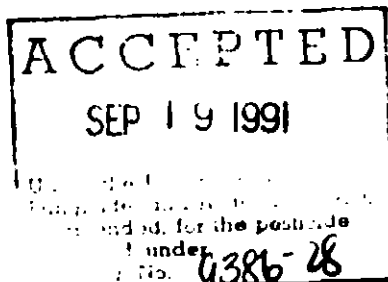
CONTINUOUS FEED METHOD: Apply 5 to 15 fluid ounces of AMA-20 per ton (dry basis) of pulp or paper produced on a continuous basis. Badly fouled process systems must be cleaned before initial treatment.

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

RECIRCULATING COOLING WATER SYSTEMS; FOR THE CONTROL OF ALGAE, FUNGI, AND SLIME FORMING BACTERIA: Dosages for industrial recirculating cooling water systems will depend on the conditions of the system prior to treatment initiation. Systems which are heavily contaminated should be cleaned first. Apply AMA-20 to the cleaned system or when growth is first noticed according to the following schedule.

INITIAL DOSAGE: Apply 3.25-6.5 fluid ounces (30-60 ppm) of AMA-20 per each 1000 gallons of water in the system. This dose may be as a continuous treatment or applied once, twice, or three times weekly or as required to control the growth of slime-forming organisms.

SUBSEQUENT DOSAGE: When microbial control is evident add 0.5 to 3.25 fluid ounces (5-30 ppm) of AMA-20 per 1000 gallons of water in the system as a continuous treatment daily or every 3 days or as required to maintain control.



OIL FIELD 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-20 needed to produce a concentration of 2080 ppm (0.73 lb/bl) of Vinings' AMA-20 in the drilling mud circulating system. For example, 75 gallons of Vinings' AMA-20 per 1000 barrels of drilling fluid will produce the proper concentration.

For best results, add Vinings' AMA-20 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-20 to maintain the proper concentration. Because of the wide variation in drilling mud composition and bacterial contamination, greater or lesser amounts of the AMA-20 may be prescribed.

OIL FIELD 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-20 needed to produce a concentration of approximately 2500 ppm Vinings' AMA-20. For example, 2.1 gallons of Vinings' AMA-20 per each 1000 gallons of total volume will produce this dilution.

350 ppm Vinings' AMA-20, added each week, is recommended to maintain bacterial control. This may be accomplished by adding 0.30 gallons of Vinings' AMA-20 to each 1000 gallons of total volume. Because of the wide variation in waters found in the oil field, greater or lesser amounts of AMA-20 may be required in a particular location.

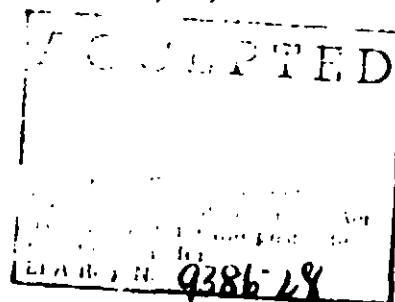
STORAGE AND DISPOSAL:

STORAGE: Protect from freezing and temperatures in excess of 140°F. Keep container closed when not in use. If contents are spilled or leaked due to container damage, collect liquid with absorbent material and dispose of in accordance with local, state and federal pesticide disposal regulations.

PESTICIDE DISPOSAL: Pesticide wastes are hazardous. Do not contaminate water, food, or feed by storage or disposal. Improper disposal of excess pesticide, spray mixture, or residue is a violation of federal law. Dispose of excess or waste pesticide by use or 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 - Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

10/1/88



TECHNICAL ASSISTANCE:

Our technical staff is available to assist in the application of Vinings' products. You may request assistance through your sales representative or by contacting Vinings Industries at 800-347-1542.

PRECAUTIONARY STATEMENTS:

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. KEEP OUT OF REACH OF CHILDREN. Causes eye and skin irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Wear goggles or face shield and rubber gloves when handling. Harmful if swallowed or absorbed through skin.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish. Do not apply (or use) in estuarine oil fields where drilling fluids (muds) are discharged in the surface water. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or public waters unless this product is specifically identified and addressed in an NPDES permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment authority. For guidance contact your State Water Board or Regional Office of the Environmental Protection Agency.

STATEMENT OF PRACTICAL TREATMENT

If on skin: Wash with plenty of soap and water. Get medical attention if irritation persists.
If in eyes: Flush with plenty of water. Get medical attention.
If swallowed: Call a physician. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

SHIPPING POINT:
Marietta, Georgia
Washougal, Washington

PACKAGING:
55 gallon drums
350 gallon portabins
Bulk

ACCEPTED
SEP 19 1991

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 9286-28

TECHNICAL DATA

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BEST AVAILABLE COPY

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20%

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TOTAL

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ACCEPTED
SEP 19 1991
U.S. Environmental Protection Agency
Office of Pesticide Programs
Registration Division
EPA Reg. No. 9381-28

WARNING - KEEP OUT OF REACH OF CHILDREN

AMA-20

ANTIMICROBIAL AGENT

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PAPER

MILL SLIME CONTROL: FOR THE CONTROL OF SLIME-FORMING

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Inert Ingredients:

TOTAL 100

(FOR INDUSTRIAL USE ONLY)

KEEP OUT OF REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT

In case of contact, immediately flush eyes or skin with plenty of water for 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing.

If swallowed, drink promptly a large quantity of milk, egg whites, gelatin. If these are not available, drink large quantities of water. Avoid alcohol. Seek medical attention immediately.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate lavage.

EPA REGISTRATION No. 9386-28

EPA ESTABLISHMENT No.

**MANUFACTURED BY
VININGS INDUSTRIES,
MARIETTA, GEORGIA 30067**

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