

AMERSTAT[®] 272

MICROBIOCIDES FOR INDUSTRIAL USE ONLY

This product helps control the growth of bacterial and fungal slime in paper mills and cane and beet sugar mills.

This product is effective as a slimeicide for controlling the growth of slime in papermills. It is also effective as a preservative in aqueous systems including paint and coatings, adhesives and animal glues, inks, latex, mineral slurries, drilling muds, metalworking fluids and paper coatings. AMERSTAT[®] 272 microbiocide is an effective mildewicide in paints and coatings and in adhesives and animal glues.

DIRECTIONS FOR USE

GENERAL CLASSIFICATION:

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Refer to the AMERSTAT[®] 272 Product Data Sheet for use directions and other technical information.

STORAGE AND DISPOSAL

STORAGE: Do not contaminate water, food, or feed by storage or disposal. Store in a cool dry place. Avoid extreme heat or freezing. Keep container closed. Do not store in confined areas where vapors can concentrate.

DISPOSAL: Wastes (pesticide or rinsate) resulting from the use of this product that cannot be used or chemically reprocessed may be disposed of on site or at an approved waste disposal facility.

Triple rinse (or equivalent) all containers 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 may also be disposed of by incineration or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Manufactured in the United States
ES-4 R-7/84

ACTIVE INGREDIENTS

Sodium dimethyldithiocarbamate 15%
Disodium ethylene bisdithiocarbamate 15%

INERT INGREDIENTS 70%

KEEP OUT OF REACH OF CHILDREN WARNING

STATEMENT OF PRACTICAL TREATMENT

If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution or if these are not available, drink large quantities of water. Call a physician immediately.

If on skin, wash thoroughly with soap and water. Remove and wash contaminated clothing before reuse.

If in eyes, flush with plenty of water for at least 15 minutes. Call physician.

SEE SIDE PANEL FOR ADDITIONAL
PRECAUTIONARY STATEMENTS

EPA Reg. No. 1757-59-AA
EPA Est. No. 1757-NJ-1
1757-NJ-2
1757-TX-1



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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS
AND DOMESTIC ANIMALS

WARNING

Causes skin and eye irritation. Do not get in eyes, on skin, or on clothing. Harmful if swallowed or absorbed through skin. Avoid contamination of food.

Wear goggles, rubber gloves and protective clothing (long sleeve shirt, long pants and boots) when handling. Wash thoroughly after handling. See statement of practical treatment.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Do not discharge treated effluent into lakes, streams, ponds or public waters unless in accordance with an NPDES permit. For guidance contact your Regional Office of the EPA.

NET CONTENTS MARKED ON DRUM

ACCEPTED

OCT 29 1984

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 1757-59

IMPORTANT NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label under normal conditions of use. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES, WHETHER WRITTEN ORAL OR IMPLIED. THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN OTHER RESPECTS THAN AS EXPRESSLY SET FORTH HEREIN, ARE EXPRESSLY EXCLUDED AND DISCLAIMED.

AMERSTAT® 272 microbiocide is a water miscible microbial control agent possessing broad spectrum activity. It will control the growth of bacteria and fungi in the cane sugar and beet sugar processes. AMERSTAT® 272 is also effective in controlling the growth of slime in papermills. AMERSTAT® 272 is effective as a preservative in aqueous systems including paint and coatings, adhesives and animal glues, inks, latex, mineral slurries, drilling muds, metal working fluids and paper coatings. It is also an effective mildewicide in paints and coatings and in adhesives and animal glues.

TYPICAL PROPERTIES

Composition: A synergistic blend of sodium dimethyl-dithiocarbamate and disodium ethylene bisdithiocarbamate

Active Ingredients: 30.0 ± 0.5% minimum

Appearance: A clear yellow-green liquid

Specific Gravity: 1.13 - 1.17

Weight per US Gallon: 9.8 pounds

pH 10.5 - 12.5 (neat)

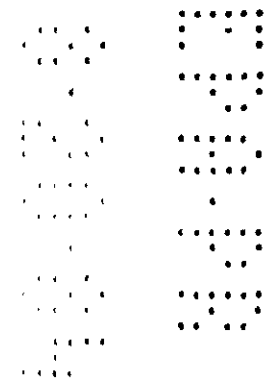
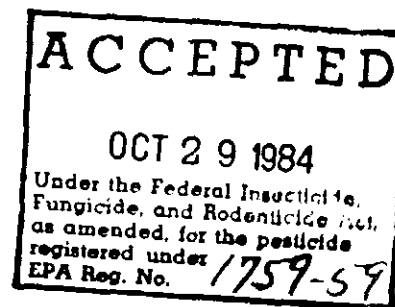
Solubility: Miscible with water in all proportions

Freeze Point: 10-12°F/-12.2 to -11.1°C

PACKAGING

Container: 55 gallon lined steel drums and bulk

Net Weight: 520 lbs/drum



All statements, information and data presented herein are believed to be accurate and reliable but are not to be taken as a guarantee, express warranty or implied warranty of merchantability or fitness for a particular purpose, or representation, express or implied, for which seller assumes legal responsibility and they are offered solely for your consideration, investigation and verification. Statements or suggestions concerning possible use of this product are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe on any patent.

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AMERSTAT® 272 should be fed continuously at the rate of 10-20 parts of product per million parts of cane ground per day. Ten ppm of product is the standard dosage. This may be raised up to a maximum of 20 ppm, if necessary. Conditions warranting some increase would be grinding of cane damaged through freezing, poor weather or delays between cutting and grinding. See feeding directions which follow.

Proper feed of AMERSTAT® 272 is best obtained through the use of a chemical feed pump such as the adjustable proportioning type; the variable speed, positive displacement type; or the reciprocating type. The required dosage will depend on the average daily rate of cane ground. The following chart shows the proper dosage in milliliters and ounces of AMERSTAT® 272 to be used per minute.

Rate of Feed of AMERSTAT® 272

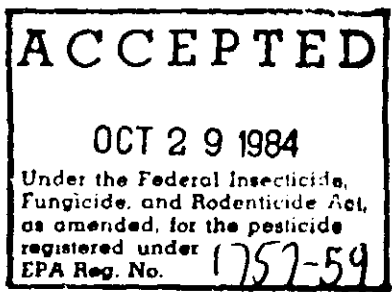
<u>Short Tons of Cane Ground Per Day</u>	<u>Rate of Feed - 10 ppm</u>		<u>Rate of Feed - 20 ppm</u>	
	<u>ml/min</u>	<u>oz/min</u>	<u>ml/min</u>	<u>oz/min</u>
1,000	5.4	0.187	10.7	0.374
2,000	10.7	0.374	21.4	0.748
3,000	16.1	0.561	32.2	1.122
4,000	21.4	0.748	42.9	1.496
5,000	26.8	0.935	53.7	1.870
6,000	32.2	1.122	64.4	2.244
7,000	37.5	1.309	75.0	2.618
8,000	42.9	1.496	85.8	2.992
9,000	48.3	1.683	96.6	3.366
10,000	53.7	1.870	107.4	3.740

Do not exceed feed rate of 4 gals. (39.2 pounds) of product per 1000 short tons of cane ground per twenty-four hours.

The use of AMERSTAT® 272 does not replace good housekeeping. This should include regular cleaning at least once per shift. Regular hosing of mills, bagacillo conveyors and screens with hot water and steam is essential for maintaining efficient control of microbiological slime and sucrose losses.

DOSAGE AND FEEDING - BEET SUGAR

AMERSTAT® 272 should be fed directly into the process. The point or points of addition will depend on mill design. Frequently, the dosage will be split between the fresh water entering the diffuser, into the pressed pulp water return line to the diffuser, or fed directly into a certain point in the diffuser depending on diffuser type. Your Drew representative will assist in designing a suitable feed system to attain maximum performance.



CANE SUGAR MILL AND BEET SUGAR PROCESSING APPLICATIONS

AMERSTAT® 272 will control the growth of bacteria and fungi and the associated inversion in cane sugar and beet sugar mills and will consequently reduce the amount of sucrose lost through inversion. The use of AMERSTAT® 272 will result in several valuable benefits to the mill.

- An increase in yield of sucrose due to the reduction of inversion losses.
- Reduction in slime or gummy substances (dextrans) produced by bacteria and fungi.
- Effective control of fermentation responsible for sour odors.
- Reduction in labor required to maintain mill cleanliness.
- Control of Leuconostoc bacteria which destroy sucrose and produce dextrans.

AMERSTAT® 272

- is not corrosive to sugar mill equipment.
- is not inactivated or adsorbed by bagasse or other organic matter in the juice.
- is a liquid and can be added directly from the drum through simple metering equipment.
- leaves no residue in the sugar or final molasses when applied at the rate of 20 ppm based on the weight of cane ground for beets sliced per day.
- has a low cost per ton for treatment and provides a substantial net savings through inversion control.

FDA DATA

AMERSTAT® 272 complies with Title 21, Code of Federal Regulations Section 173.320 (Chemicals for controlling microorganisms in cane-sugar and beet-sugar mills) of the Food Additive regulations and may be used under conditions specified in the regulations.

DOSAGE AND FEEDING - CANE SUGAR

AMERSTAT® 272 microbiocide is a liquid which should be fed directly into the cane juice so that the treated juice circulates to all parts of the mill tandem. The point or points of addition will depend on mill design. Frequently, the dosage will be split between the crusher juice which is circulated back to the crusher or first mill. Do not add this product to the maceration water. Your Drew district representative will determine the most advantageous points of application.

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The following chart has been prepared to assist in determining the correct dosage of AMERSTATE® 272 in milliliters and ounces per minute:

Tons of Beets Sliced/Day	Rate of Feed - 10 ppm		Rate of Feed - 20 ppm	
	ml/min	Oz/min.	ml/min	Oz/min.
1,000	5.4	0.187	10.7	0.374
2,000	10.7	0.374	21.4	0.748
3,000	16.1	0.561	32.2	1.122
4,000	21.4	0.748	42.9	1.496
5,000	26.8	0.935	53.7	1.870
6,000	32.2	1.122	64.4	2.244
7,000	37.5	1.309	75.0	2.618
8,000	42.9	1.496	85.8	2.992
9,000	48.3	1.683	96.6	3.366
10,000	52.7	1.870	107.4	3.740

Do not exceed a feed rate of 4 gallons (39.2 pounds) of product per 1,000 tons of beets sliced per twenty-four (24) hours.

AMERSTAT® 272 should be fed continuously at a rate of 10-20 parts of product per million parts of beets sliced per day. In general, a feed rate of 10 ppm will provide adequate control; however, the feed rate may be increased to a maximum of 20 ppm when slicing beets deteriorated by freezing or lengthy storage.

Proper feed of AMERSTAT® 272 is best obtained through the use of a chemical feed pump such as the adjustable proportioning type, the variable feed, positive displacement type or the reciprocating type. The required dosage will depend on the average daily rate of beets sliced.

PAPERMILL SLIMICIDE, PRESERVATIVE AND MILDEWICIDE APPLICATIONS

The dosage of AMERSTAT® 272 for any given application will depend on a number of factors such as the type of system being treated, the nature and extent of microbiological contamination, the degree of control required, temperature and pH. AMERSTAT® 272 should be added at a point in the system where sufficient agitation will insure good dispersion. Where necessary, your Drew representative will arrange for microbiological and chemical analyses to resolve specific contamination problems.

DOSAGE AND FEEDING - PAPERMILL SLIMICIDE

AMERSTAT® 272 is effective in controlling the growth of slime-producing microorganisms which may adversely affect the production of paper and paperboard by causing breaks or spots. Dosage will vary from 0.5 to 2.0 pounds of AMERSTAT® 272 per ton of dry paper or paperboard products. Dosage depends on the type of stock, complexity of the system, quality of raw water and type and degree of contamination. AMERSTAT® 272 may be drip fed continuously from the drum or fed by any suitable chemical feed system. Feed points may include the hydropulper, machine chest or broke system.

DOSAGE AND FEEDING - PRESERVATIVE APPLICATIONS

Many aqueous systems require protection against microbial degradation which may result in changes in physical properties or performance characteristics such as pH drift, viscosity and color variations and foul odor emissions. AMERSTAT® 272 will effectively protect paints and coatings, adhesives and animal glues, latex, inks, paper coatings and mineral slurries when used at a dosage level of 0.05-1.00%. Cutting fluids and other metal-working fluids are generally protected with 0.1-0.5%.

AMERSTAT® 272 is also an effective preservative useful in controlling bacterial and fungal growths in drilling muds, gypsum muds, packer fluids and underground flood water. Treatment levels are 0.005-1.0% by weight per barrel of mud or packer fluid, and 10-500 ppm in underground flood water.

With and preservative application, AMERSTAT® 272 should be added as early as possible to the system and should be added where there is good agitation. Good housekeeping and protection of raw materials will aid in the effectiveness of the preservative.

DOSAGE AND FEEDING - MILDEWICIDE APPLICATIONS

Paints and other coatings and adhesives and animal glues are also subject to biodegradation after the material has been applied and allowed to cure. This growth may result in discoloration and deterioration of the film. AMERSTAT® 272 at a dosage of 0.1-1% will protect these films from attack by mildew.

E.P.A. Reg. No. 1757-59

