



WATER MANAGEMENT CHEMICALS

HERCULES® 5233

MICROBIOCIDAL COMPOUND

Cooling Water Treatment

**FOR
INDUSTRIAL
USE ONLY**

ACTIVE INGREDIENTS:

5-Chloro-2-methyl-4-isothiazolin-3-one 1.92%

2-Methyl-4-isothiazolin-3-one 0.58%

INERT INGREDIENTS: 97.50%

TOTAL 100.0%

DANGER: Keep Out of Reach of Children
Read Side Panel for Additional Precautionary Statements

EPA Est. No.
EPA Reg. No.

GROSS WT
NET WT
GAL

HER 20151 10-82 5 15824H

DISTRIBUTED BY
HERCULES INCORPORATED
WILMINGTON, DELAWARE 19899, U.S.A.

PAU

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

DANGER

CORROSIVE. CAUSES EYE DAMAGE AND SKIN BURNS. MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF INHALED. MAY BE FATAL IF SWALLOWED OR ABSORBED THROUGH THE SKIN.

Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Avoid breathing vapor or mist. Avoid contamination of food. Do not take internally. Wash thoroughly after handling.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. Do not discharge into lakes, streams, ponds, or public waters unless in accordance with an NPDES permit. For guidance, contact your Regional Office of the EPA. Do not contaminate water by cleaning of equipment or disposal of waste. Apply this pesticide only as specified on this label.

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, or gelatin solution. If these are not available, drink large quantities of water. Avoid alcohol. Call a physician.

IF INHALED: Remove immediately to fresh air. If not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Call a physician.

IF ON SKIN: Wash thoroughly with soap and water. Remove and wash contaminated clothing before reuse.

IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Call a physician.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression, and convulsions may be needed.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use, storage, or handling of this product in a manner other than as directed by label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

**DIRECTIONS FOR USE
GENERAL CLASSIFICATION**

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

INDUSTRIAL RECIRCULATING WATER COOLING TOWERS

For the control of bacteria, algae, and fungi, add Hercules 5233 to the tower basin, distribution box, or some other point to ensure uniform mixing.

INITIAL DOSE: When the system is noticeably fouled, apply 180 to 520 ppm Hercules 5233 (1.5 to 4.3 pounds or 22 to 63 fluid ounces of Hercules 5233 per 1,000 gallons of water in the system). Repeat until control is achieved.

SUBSEQUENT DOSE: When microbial control is evident, add 80 to 120 ppm Hercules 5233 (0.67 to 1.0 pound or 9.8 to 14.6 fluid ounces of Hercules 5233 per 1,000 gallons of water in the system) weekly or as needed to maintain control. Badly fouled systems must be cleaned before treatment is begun.

AIR WASHER SYSTEMS

Add to the air washer sump or chill water sump to ensure uniform mixing, 80 to 520 ppm Hercules 5233 (0.67 to 4.3 pounds or 9.8 to 63 fluid ounces of Hercules 5233 per 1,000 gallons of water in the system), depending on the severity of contamination, to control bacteria, fungi, and algae, which cause fouling in industrial air washer systems.

INTERMITTENT OR SLUG METHOD

INITIAL DOSE: When the system is noticeably fouled, apply 180 to 520 ppm Hercules 5233 (1.5 to 4.3 pounds or 22 to 63 fluid ounces of Hercules 5233 per 1,000 gallons of water in the system). Repeat until control is achieved.

SUBSEQUENT DOSE: When microbial control is evident, add 80 to 120 ppm Hercules 5233 (0.67 to 1.0 pound or 9.8 to 14.6 fluid ounces of Hercules 5233 per 1,000 gallons of water) weekly or as needed to maintain control.

CONTINUOUS-FEED METHOD

INITIAL DOSE: When the system is just noticeably fouled, apply 180 to 520 ppm Hercules 5233 (1.5 to 4.3 pounds or 22 to 63 fluid ounces of Hercules 5233 per 1,000 gallons of water in the system).

SUBSEQUENT DOSE: Maintain this treatment level by adding a continuous feed of 80 to 120 ppm Hercules 5233 (0.67 to 1.0 pound or 9.8 to 14.6 fluid ounces of Hercules 5233 per 1,000 gallons of makeup water). Badly fouled systems must be cleaned before initial treatment.

NOTE: For use only in industrial air-washing systems mist-eliminating components.

Hercules 5233 weighs 8.4 pounds per gallon.

**ADDITIONAL USES:
METALWORKING FLUIDS**

Hercules 5233 is recommended for the control of aqueous-use dilutions of emulsifiable (soluble) system metalworking fluids. Use dilutions of these fluids, including the concentrates 1:20 to 1:80 with water.

To maintain a nonfouled system, add 200 ppm (24 fluid ounces of Hercules 5233 per 1,000 gallons of emulsion every 4 ppm (24 to 81 fluid ounces or 1.88 to 5.8 pounds) every noticeably fouled system, use an initial dosage of 400 to 600 ppm (48 to 72 fluid ounces or 3.36 to 5.8 pounds) and follow with subsequent dosing depending on the length of the treatment intervals.

OILFIELD INJECTION WATERS

For the control of slime-forming bacteria and sulfate reducing field waters, slug-treat with 31 to 100 ppm Hercules 5233, depending on the severity of contamination.

INITIAL DOSE: Add 100 to 100 ppm Hercules 5233 (4.0 to 70 pounds) of Hercules 5233 per 1,000 barrels of water at where it will be uniformly mixed. Repeat treatment after until control is achieved.

SUBSEQUENT DOSE: Add 31 to 100 ppm Hercules 5233 or 11 to 35 pounds Hercules 5233 per 1,000 barrels of water as needed to maintain control.

PAPERMILL APPLICATION

To ensure uniform mixing, Hercules 5233 should be added dropwise to the section of the papermaking system at a level of ingredients, based on total waterflow at maximum dilution. The dose will depend on the extent of slime present and the type of product. A dose of 1.4 ppm active (58 ppm product basis), the amount will range from 1.88 pounds to 56.0 pounds of product added, based on a pulp consistency ranging from 1 to 2% water ranging from 90 to 50%.

STORAGE AND DISPOSAL

STORAGE: Do not contaminate water, food, or feed. Open dumping is prohibited. If plastic, do not reuse empty containers.

DISPOSAL: Pesticide or rinsate that cannot be used should be disposed of in a landfill approved for hazardous waste. Do not place away from water supplies. Triple-rinse all containers and, for metal containers, offer for recycling. If plastic containers, dispose of in an incinerator, or disposed of in a landfill approved for hazardous waste. Consult Federal, state, and local authorities for approved procedures.

NOTE: For use only in industrial air-washing systems that maintain effective mist-eliminating components.

Hercules 5233 weighs 8.4 pounds per gallon.

**ADDITIONAL USES:
METALWORKING FLUIDS**

Hercules 5233 is recommended for the control of fungi and bacteria in aqueous-use dilutions of emulsifiable (soluble) synthetic and semisynthetic metalworking fluids. Use dilutions of these fluids are usually prepared by diluting the concentrates 1:20 to 1:80 with water.

To maintain a nonfouled system, add 200 ppm (24 fluid ounces or 1.68 pounds) of Hercules 5233 per 1,000 gallons of emulsion every 4 weeks, or 200 to 672 ppm (24 to 81 fluid ounces or 1.68 to 5.6 pounds) every 8 to 12 weeks. For a noticeably fouled system, use an initial dosage of 400 to 672 ppm (48 to 81 fluid ounces or 3.36 to 5.6 pounds) and follow with subsequent maintenance doses, depending on the length of the treatment intervals.

OILFIELD INJECTION WATERS

For the control of slime-forming bacteria and sulfate-reducing bacteria in oil field waters, slug-treat with 31 to 198 ppm Hercules 5233, depending on the severity of contamination.

INITIAL DOSE: Add 100 to 198 ppm Hercules 5233 (4.0 to 8.0 gallons or 35 to 70 pounds) of Hercules 5233 per 1,000 barrels of water at a point in the system where it will be uniformly mixed. Repeat treatment after 3 days or as needed until control is achieved.

SUBSEQUENT DOSE: Add 31 to 100 ppm Hercules 5233 (1.3 to 4.0 gallons or 11 to 35 pounds Hercules 5233 per 1,000 barrels of water) every 7 days or as needed to maintain control.

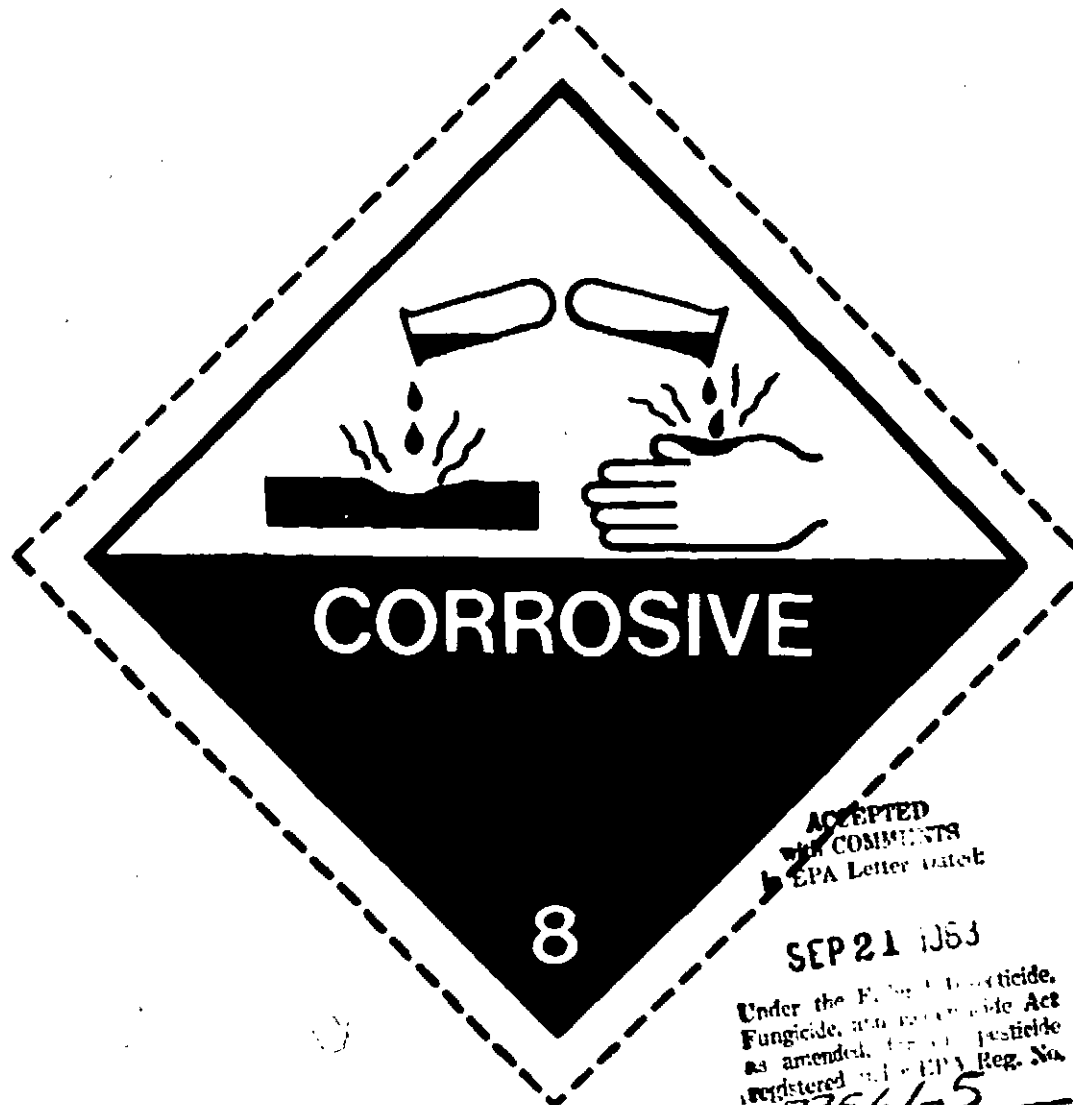
PAPERMILL APPLICATION

To ensure uniform mixing, Hercules 5233 should be added to the beater or hydropulper section of the papermaking system at a level of 1.4 to 5.6 ppm active ingredients, based on total waterflow at maximum dilution. The amount to be used will depend on the extent of slime present and the papermill system. For a dose of 1.4 ppm active (56 ppm product basis), the amount of Hercules 5233 will range from 1.68 pounds to 56.0 pounds of product per ton of paper produced, based on a pulp consistency ranging from 1 to 6.5% and a reuse of water ranging from 90 to 95%.

STORAGE AND DISPOSAL

STORAGE: Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. If plastic, do not reuse empty container.

DISPOSAL: Pesticide or waste that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticides or buried in a safe place away from water supplies. Triple-rinse (or equivalent) all containers and, for metal containers, offer for recycling or reconditioning (for plastic containers, dispose of in an incinerator), or dispose of in a landfill approved for pesticide containers. Consult Federal, state, or local disposal authorities for approved procedures.



DOT Proper Shipping Name:

CORROSIVE LIQUID, N.O.S.

(5-Chloro-2-methyl-4-isothiazolin-3-one)

UN 1760

In event of emergency,

CALL TOLL FREE: 800-424-9300 (CHEMTREC)

d. We recommend that you verify your EPA Establishment No. with your Regional EPA office located in Philadelphia, Pennsylvania, for the appropriate EPA Establishment Number. An application form is enclosed for your convenience.

e. Revise the statement "Distributed by" to read "Manufactured by," since you are the basic registrant.

f. For consistency, revise the total number of ingredients to read 180.504.

g. Revise your front panel description "Cooling Water Treatment" to read "For use in industrial recirculating water cooling towers, air washer systems, metal working fluids, oil field injection waters and papermills."

3. The revised Confidential Statement of Formula Submitted April 5, 1983, is acceptable and has been placed in your file.

4. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 Enclosure for a further description of final printed labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

James H. Lee
for

John H. Lee
Product Manager (31)
Disinfectants Branch
Registration Division (TS-767C)

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