

464-704

12/23/2008

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



Office of Pesticide Programs

The Dow Chemical Company
1803 Building
Midland, Mi 48674

DEC 23 2008

Attention: Maureen Mikszal
Senior Regulatory Specialist

Subject: **UCARCIDE 50 Antimicrobial**
EPA Registration No. 464-704
Amendment Dated November 24, 2008

The amendment, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable.

- Minor Labeling Changes to the Directions For Use

A stamped copy of the "accepted" labeling is enclosed for your records.

If you have any questions concerning this letter, please contact Martha Terry at (703) 308-6217.

Sincerely

Marshall Swindell
Product Manager 33
Regulatory Management Branch 1
Antimicrobials Division (7510P)

Enclosure

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UCARCIDE™ 50 Antimicrobial

A highly effective Microbiocide for use in controlling Bacteria including Slime Forming Bacteria and Sulfate-Reducing Bacteria, Fungi (Yeast and Molds) and Algae in Air Washers and Industrial Scrubbing Systems, Recirculating Cooling and Process Water Systems including those that contain Reverse Osmosis Membranes and Service Water and Auxiliary Systems, Heat Transfer Systems, Wastewater Systems including Wastewater Sludge and Holding Tanks, Beet Sugar Mills and Beet Sugar Mill Process Water Systems, Paper Mills and Paper Mill Process Water Systems, Pigments and Filler Slurries for Paper and Paperboard, Water Based Coatings for Paper and Paperboard and Functional Fluids and Lubricants and Aqueous Metalworking Fluids and for use by Manufacturers as a Preservative in Industrial, Institutional and Consumer Processes and Products and for use in Preserving Aqueous-Based Solutions, Slurries and Emulsions and in Oil Well Drilling, Oil Field Processing Applications, Oil Field Water Systems, Oil and Gas Production and Transmission Pipelines and Systems, and Gas Storage Fields and Equipment such as Steam-Injection Water Holding Tanks, Flood Water, Fracturing Fluids, Injection Water, Holding Pond Water, Disposal-Well Water, Water Holding Tanks, Fuel Storage Tanks and related Refinery and Oil Field Closed, Industrial Recirculating Water Handling Systems and for use by Manufacturers and Formulators in Formulating Products for Oil Field Applications. Formulators using this product are responsible for providing data for the EPA Registration of their formulated product.

Active Ingredient: Glutaraldehyde 50%
Inert Ingredients: 50%
Total 100%

CAUTIONARY STATEMENTS DANGERS AND DOMESTIC ANIMALS DANGER REACH OF CHILDREN

Irritation to the eyes. Causes skin burns. Harmful if swallowed. Harmful if absorbed through skin. Prolonged contact may cause allergic reactions in some signs and symptoms in hyper-reactive individuals.

Do not swallow. Do not get in eyes, on clothing, or on skin. Wash thoroughly with soap and water after handling. Do not reuse and wash before reuse.

ENVIRONMENTAL HAZARDS

Do not discharge effluent containing this product into streams, rivers, oceans or other waters unless in accordance with National Pollutant Discharge Elimination System (NPDES) permit. This product has been notified in writing prior to discharge into any water body. For more information contact your local sewage treatment plant authority. For more information contact your State Board or Regional Office of the EPA.

STORAGE AND HANDLING

UCARCIDE is incompatible with many commonly used materials such as steel, galvanized iron, aluminum, tin, and zinc. UCARCIDE can be stored and handled in baked phenolic-lined steel, or reinforced epoxy-plastic equipment. This equipment should be maintained at (-21° C). Therefore, unless the storage tank is insulated and insulation may be required. If heating is needed, it should be avoided. For short storage times (up to 30 days) at up to 100° F (37.8° C) can be tolerated but the maximum storage temperature is about 80° F (26.7° C). UCARCIDE is suggested for transfer service. Spiral-wound gaskets and polymer is suitable for gaskets and packing. UCARCIDE vapors are irritating to the nose or eyes, special protection (MSHA/NIOSH approved air purifying respirator or vapor cartridge) may be required.

WARRANTY AND DISCLAIMER

UCARCIDE conforms to its chemical description as contained herein for the purposes stated on this label when used under normal conditions of use. THE FOLLOWING PARAGRAPHS ARE SELLER'S SOLE PROPERTY AND ARE MADE A PART OF THE PRODUCT AND ARE MADE A PART OF THE CONTRACT. EXCLUDE ANY IMPLIED WARRANTIES OF MERCHANTABILITY FOR A PARTICULAR PURPOSE AND ANY IMPLIED REPRESENTATIONS AND WARRANTIES.

FOR MORE INFORMATION OR USING THIS PRODUCT, SEE THE SIDE PANEL AND READ CURRENT MATERIAL SAFETY DATA SHEET.

USE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Pesticide wastes are toxic. Improper disposal of spray mixture or rinsate is a violation of Federal law. Do not dispose of by use according to label instructions, or your Environmental Control Agency, or the nearest EPA Regional Office for guidance. **Metal Containers or Plastic Containers:** Triple rinse for recycling or reconditioning, or puncture and crush for other procedures approved by state and local authorities. May be incinerated, or, if allowed by state and local authorities, burned, stay out of smoke. **Metal Containers:** Do not cut or weld on or near metal containers.

NOTICE ACCEPTED
Do Not Store with
with Food, EPA Letter Dated:
Drugs, or Clothing
DEC 23 2008

KEEP OUT OF REACH OF CHILDREN DANGER FIRST AID

If swallowed:

- Call a poison control center or a doctor immediately for treatment advice.
- DO NOT INDUCE VOMITING.
- Do not give anything to drink.

If in eyes:

- Wash immediately and continuously with flowing water for at least 30 minutes.
- Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist.
- Call a poison control center or a doctor immediately for treatment advice.

If on skin or clothing:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or a doctor for treatment advice.

If inhaled:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or a doctor for further treatment advice.

NOTE TO PHYSICIAN: Aspiration may cause lung damage. Probable mucosal damage may contraindicate the use of gastric lavage.

Have the MSDS and, if available, the product container or label with you when calling a poison control center or a doctor, or going for treatment.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

Produced for:



The Dow Chemical Company
Midland, Michigan 48674 U.S.A.
(989)636-4400

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EPA Reg. No. 464-704
EPA Est. No. 10352-WV-2 (A); 464-WV-1 (B)
(A) 5 gallon pails in pallets; all drums, bulk
(B) Sample, 5 gallon pails less than full pallet

(I 12/08)
PE1208

Net Contents: 5, 55 gallons or Bulk

CONTAINER SIZE	CONTAINER SIZE	CONTAINER SIZE	SHIPPING NAME	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CONTAINS GLUTARALDEHYDE)	
TOTE	5 GALLONS	55 GALLONS		ID NUMBER UN3265	PGII
2,446 POUNDS NET WEIGHT	46 POUNDS NET WEIGHT	500 POUNDS NET WEIGHT	HAZARD CLASS 8		

IN CASE OF AN EMERGENCY endangering life or property involving this product, call collect (989)-636-4400.

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide, registered under EPA Reg. No. 464-704

DIRECTION OF USE

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

AIR WASHERS AND INDUSTRIAL SCRUBBING SYSTEMS/ RECIRCULATING COOLING AND PROCESS WATER SYSTEMS

This product may be used only in industrial air washers and air washer systems which have mist-eliminating components.

UCARCIDE™ 50 Antimicrobial should be added at the application rates described below to a water treatment system at a convenient point of uniform mixing such as the basin area. Addition may be made intermittently (SLUG DOSE) or continuously. Badly fouled systems can be shock treated with UCARCIDE™ 50 Antimicrobial. Under these conditions, blowdown should be discontinued for up to 24 hours.

UCARCIDE™ 50 Antimicrobial can be used in industrial process water systems that contain ultra filtration units and non-medical reverse osmosis membranes (where approved for compatibility by the membrane manufacturer) and associated distribution systems.

INTERMITTENT (SLUG DOSE) METHOD

Initial Dose: When the system is noticeably fouled, apply 11.3 to 22.7 fluid ounces (100 to 200 ppm product) of UCARCIDE™ 50 Antimicrobial per 1,000 gallons of water in the system, or 89 to 177 mL of UCARCIDE™ 50 Antimicrobial per 1,000 liters of water in the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 4.5 to 11.3 fluid ounces (40 to 100 ppm) of UCARCIDE™ 50 Antimicrobial per 1,000 gallons of water in the system weekly, or 35 to 89 mL of UCARCIDE™ 50 Antimicrobial 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.

CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably fouled, apply 11.3 to 22.7 fluid ounces (100 to 200 ppm product) of UCARCIDE™ 50 Antimicrobial per 1,000 gallons of water in the system, or 89 to 177 mL of UCARCIDE™ 50 Antimicrobial per 1,000 liters of water in the system.

Subsequent Dose: Maintain this treatment level by starting a continuous feed of 2.3 to 11.3 fluid ounces (20 to 100 ppm product) of UCARCIDE™ 50 Antimicrobial per 1,000 gallons of water in the system per day or 17.7 to 88.6 mL of UCARCIDE™ 50 Antimicrobial per 1,000 liters of water in the system per day. Badly fouled systems must be cleaned before treatment is begun.

SERVICE WATER AND AUXILIARY SYSTEMS

UCARCIDE™ 50 Antimicrobial should be used at the same application rates, and in the same manner as described above. It should be added to the system at a point that will allow for uniform mixing throughout the system.

HEAT TRANSFER SYSTEMS

(Evaporative Condensers, Dairy Sweetwater Systems, Hydrostatic Sterilizers and Retorts, and Pasteurizers and Warmers)

UCARCIDE™ 50 Antimicrobial should be used at the same application rates, and in the same manner as described above. It should be added to the system at a point of uniform mixing such as a basin area, sump area or other reservoir or collecting area from which the treated water will be circulated uniformly throughout the system.

INDUSTRIAL WASTEWATER SYSTEMS

(Wastewater Systems, Wastewater Sludge and Wastewater Holding Tanks)

UCARCIDE™ 50 Antimicrobial should be added to a wastewater system or sludge at a convenient point of uniform mixing such as the digester. Add 0.4 to 2.0 gallons (450 to 2,250 ppm product) of UCARCIDE™ 50 Antimicrobial per 1,000 gallons of wastewater or sludge or 399 mL to 1,994 mL of UCARCIDE™ 50 Antimicrobial per 1,000 liters of wastewater or sludge.

BEET SUGAR MILLS AND BEET SUGAR MILL PROCESS WATER SYSTEMS

UCARCIDE™ 50 Antimicrobial should be added to the system at a point of uniform mixing such as the diffuser, transport water pump, weir box, or diffuser feed water pump. Additions may be made intermittently (SLUG DOSE) or continuously.

INTERMITTENT (SLUG DOSE) METHOD

Initial Dose: When the system is noticeably contaminated, add 5.4 to 13.6 fluid ounces (200 to 500 ppm product) of UCARCIDE™ 50 Antimicrobial per ton or 177 to 422 mL of UCARCIDE™ 50 Antimicrobial per metric ton of sliced beets as a slug dose. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 0.8 to 8.2 fluid ounces (30 to 300 ppm) of UCARCIDE™ 50 Antimicrobial per ton or 27 to 270 mL of UCARCIDE™ 50 Antimicrobial per metric ton of sliced beets in the system as a slug dose as necessary to maintain control. The total should not exceed 106 gallons per 1,000 tons of beets sliced per day.

CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably contaminated, add 5.4 to 13.6 fluid ounces/minute (200 to 500 ppm product) of UCARCIDE™ 50 Antimicrobial per ton or 177 to 422 mL/minute of UCARCIDE™ 50 Antimicrobial per metric ton of beets sliced per minute in the system via automatic pump of suitable construction.

Subsequent Dose: When microbial control is evident, add 0.8 to 8.2 fluid ounces/minute (30 to 300 ppm) of UCARCIDE™ 50 Antimicrobial per ton or 27 to 270 mL/minute of UCARCIDE™ 50 Antimicrobial per metric ton of beets sliced per minute in the system, or as necessary to maintain control. The total should not exceed 106 gallons per 1,000 tons of beets sliced per day.

PAPER MILLS AND PAPER MILL PROCESS WATER SYSTEMS

UCARCIDE™ 50 Antimicrobial should be added to the paper making system at a point of uniform mixing such as the beaters, broke chest pump, save-all tank, or white-water tank.

Initial Dose: When the system is noticeably contaminated, add 0.5 to 3.0 lbs of UCARCIDE™ 50 Antimicrobial per ton of pulp or paper (dry basis) as a slug dose. Repeat until control is achieved. Heavily fouled systems should be boiled out prior to initial treatment.

Subsequent Dose: When microbial control is evident, add 0.3 to 2.0 lbs of UCARCIDE™ 50 Antimicrobial per ton of pulp or paper (dry basis) as a slug dose as necessary to maintain control.

PIGMENTS AND FILLER SLURRIES FOR PAPER AND PAPERBOARD

(For use in food and non-food contact pigments and filler slurries)

Use from 0.1 to 0.6 lbs. of UCARCIDE™ 50 Antimicrobial per 1,000 lbs. of dry powder to produce a concentration from 100 to 600 ppm as product (based on slurry solids) in the mixed slurry.

WATER BASED COATINGS FOR PAPER AND PAPERBOARD

NOTE: For use in non-food contact coatings only.

Use from 0.1 to 0.6 lbs. of UCARCIDE™ 50 Antimicrobial per 1,000 lbs. of dry powder to produce a concentration from 100 to 600 ppm as product (based on slurry solids) in the mixed slurry.

AQUEOUS METALWORKING FLUIDS

UCARCIDE™ 50 Antimicrobial should be added to a metalworking fluid system at a point of uniform mixing such as the fluid collection tank. Additions may be made intermittently (SLUG DOSE) at intervals of one week or less.

Initial Dose: When the system is noticeably fouled apply 1.8 to 5.4 gallons of UCARCIDE™ 50 Antimicrobial per 10,000 gallons of metalworking fluid to the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 0.7 to 3.6 gallons of UCARCIDE™ 50 Antimicrobial per 10,000 gallons of metalworking fluid to the system weekly, or as needed to maintain control. Badly fouled systems should be cleaned before treatment is begun.

WATER BASED CONVEYOR LUBRICANTS

(Brewery, Juice, Dairy Beverage, and Food Processing Systems)

Avoid contamination of food in application of product.

Thoroughly clean all tracks and conveyors to remove gross soil. Rinse well. Use an automatic feed system as recommended by your Dow representative to provide 1.1 to 6.8 fluid ounces (50 to 300 ppm active) of UCARCIDE™ 50 Antimicrobial per 100 gallons of diluted lubricant.

GENERAL PRESERVATIVE USE

UCARCIDE™ 50 Antimicrobial is recommended for use in aqueous or water containing products and systems, including industrial, institutional and consumer in-can processes and products, to control the growth of bacteria and fungi. For effective preservation, add UCARCIDE™ 50 Antimicrobial to the product formulation at a rate of 0.02% to 0.20% (200 to 2,000 ppm) based on the water content of the product (0.2 to 2.0 lbs UCARCIDE™ 50 Antimicrobial per 1,000 lbs water content). Mix uniformly.

PRESERVATIVE FOR CONCENTRATES

For use in concentrates where effective preservation is needed after dilution, add UCARCIDE™ 50 Antimicrobial to the product formulation at a rate such that the diluted end-use product will contain 0.02% to 0.20% UCARCIDE™ 50 Antimicrobial. At no time during the preservation process should the level of UCARCIDE™ 50 Antimicrobial exceed 2.0%.

REVERSE OSMOSIS MEMBRANES

For effective preservation of reverse osmosis elements (where approved for compatibility by membrane manufacturer), immerse elements in a tank containing 0.2% to 2.0% UCARCIDE™ 50 Antimicrobial. UCARCIDE™ 50 Antimicrobial can also be added to in-line recirculating systems for preservation of installed out-of-service reverse osmosis equipment (where approved for compatibility by membrane manufacturer). Add 0.2% to 2.0% UCARCIDE™ 50 Antimicrobial to the tank in the circulating system. Maintain the concentration of UCARCIDE™ 50 Antimicrobial by periodic addition to counteract any system leakage.

CONCRETE ADMIXTURES

For effective preservation of concrete admixtures, add UCARCIDE™ 50 Antimicrobial to the product formulation at a rate of 2,000 to 8,000 ppm based on the weight of the admixture (2.0 to 8.0 lbs UCARCIDE™ 50 Antimicrobial per 1,000 lbs. concrete admixture). Mix uniformly.

WATER FLOODS

UCARCIDE™ 50 Antimicrobial should be added to a water flood system at a point of uniform mixing.

Initial Treatment: When the system is noticeably contaminated, add 100 to 5,000 ppm UCARCIDE™ 50 Antimicrobial to the system (0.09 to 4.4 gallons UCARCIDE™ 50 Antimicrobial per 1,000 gallons flood water). Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 20 to 5,000 ppm UCARCIDE™ 50 Antimicrobial (0.02 to 4.4 gallons UCARCIDE™ 50 Antimicrobial per 1,000 gallons flood water) to the system weekly, or as needed to maintain control.

FRAC FLUIDS

UCARCIDE™ 50 Antimicrobial reduces bacterial contamination and degradation of fracturing fluids and gels used in oil and gas well stimulations. Add UCARCIDE™ 50 Antimicrobial to the frac water storage tanks or directly into the well head injection pipeline as the water is being pumped down-hole.

Dose Range: UCARCIDE™ 50 Antimicrobial should be added at a rate of 100 to 5000 ppm (0.9 - 44.3 gals per 10,000 gallons) depending on the degree of bacterial fouling in the source water.

DRILLING, COMPLETION, AND WORKOVER FLUIDS

UCARCIDE™ 50 Antimicrobial should be added to a drilling fluid system at a point of uniform mixing such as the circulating mud tank.

Initial Treatment: Add 50 to 1,000 ppm UCARCIDE™ 50 Antimicrobial (0.2 to 3.7 gallons UCARCIDE™ 50 Antimicrobial per 100 barrels of fluid) to a freshly prepared fluid depending on the severity of contamination.

Maintenance Dosage: Maintain a concentration of 50 to 1,000 ppm UCARCIDE™ 50 Antimicrobial by adding 0.2 to 3.7 gallons of UCARCIDE™ 50 Antimicrobial per 100 barrels of additional fluid, or as needed, depending on the severity of contamination.

PACKER FLUIDS

UCARCIDE™ 50 Antimicrobial should be added to a packer fluid at a point of uniform mixing such as a circulating holding tank. Add 50 to 600 ppm UCARCIDE™ 50 Antimicrobial (0.2 to 2.2 gallons UCARCIDE™ 50 Antimicrobial per 100 barrels of fluid) to a freshly prepared fluid depending on the severity of contamination. Seal the treated packer fluid in the wall between the casing and production tube.

OIL AND GAS PRODUCTION AND TRANSMISSION PIPELINES AND SYSTEMS

UCARCIDE™ 50 Antimicrobial should be added to an oil/gas production or transmission line via direct injection. The application should be conducted to ensure maximum distribution of UCARCIDE™ 50 Antimicrobial throughout the entire internal pipeline surface by adding a sufficient amount of biocide to detect/measure a residual concentration at the back end of the pipeline system. Criteria for success of the treatment will be a reduction in bacterial counts and/or reduced corrosion rates. To facilitate application, it may be desirable to dilute the UCARCIDE™ 50 Antimicrobial with an appropriate solvent immediately before use. The concentration in the solvent should not fall below an active concentration range of 500 to 5000 ppm based on the volume of water in the pipeline. Injections to the system should be weekly, or as needed to maintain control.

GAS STORAGE WELLS AND SYSTEMS

Individual injection wells should be treated with sufficient quantity of UCARCIDE™ 50 Antimicrobial to produce a concentration of 500 to 5,000 ppm UCARCIDE™ 50 Antimicrobial when diluted by the water present in the formation. Injection should take place before gas is injected (during the summer). Injections should be repeated yearly, or as needed to maintain control. Individual drips should be treated with a sufficient quantity of UCARCIDE™ 50 Antimicrobial to produce a concentration of 200 to 2,000 ppm UCARCIDE™ 50 Antimicrobial when diluted by the water present in the drip. Injections should be repeated yearly, or as needed to maintain control.

HYDROTESTING

Water used to hydrotest pipelines or vessels should contain 100 to 1,000 ppm UCARCIDE™ 50 Antimicrobial (0.09 to 3.5 gallons UCARCIDE™ 50 Antimicrobial per 1,000 gallons water), depending on water quality and length of time the equipment will remain idle.

PIPELINE PIGGING AND SCRAPING OPERATIONS

Add UCARCIDE™ 50 Antimicrobial to a slug of water immediately following the scraper (ideally this water volume can be kept to a minimum and contained between the scraper and a trailing pig). Sufficient UCARCIDE™ 50 Antimicrobial should be added to produce a concentration of 0.1 to 1% (0.09 to 0.9 gallon UCARCIDE™ 50 Antimicrobial per 100 gallons water), depending on the length of the pipeline and the severity of biofouling.

Obial
Forming Bacteria and Industrial Scrubbing that contain Reverse Systems, Wastewater Beet Sugar Mill Process and Filler Slurries for Functional Fluids and as a Preservative in Preserving Aqueous Processing Applications, Oil Steam, and Gas Storage Water, Fracturing Fluids, Fuel Storage Tanks and Systems and for use by Formulators using Formulated product.

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STATEMENTS
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(12/08)
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