

464-704

10/8/2009

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

OCT -8 2009



United States
Environmental Protection
Agency

Office of Pesticide Programs

The Dow Chemical Company
574 Building, Office 2044
Midland, MI 48674

Attention: Rhonda Vance-Moeser
Senior Regulatory Specialist

Subject: UCARCIDE™ 50 Antimicrobial
EPA Registration No. 464-704
Notification Dated September 14, 2009

This will acknowledge receipt of your notification to revise the container disposal statement on the label in response to PR Notice 2007-4, submitted under the provisions of FIFRA Section 3(c)(9). Based on a review of the submitted material, the following comments apply.

The Notification is in compliance with PR Notice 98-10 and is acceptable. This information has been made a part of your file.

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

Sincerely

A handwritten signature in black ink that reads "Martha Terry" with a stylized flourish at the end.

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

	United States Environmental Protection Agency Washington, DC 20460	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number
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Application for Pesticide - Section I

1. Company/Product Number 464-704	2. EPA Product Manager Marshall Swindell	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) The Dow Chemical Company /UCARCIDE™ 50 Antimicrobial	PM# 33	
5. Name and Address of Applicant (Include ZIP Code) The Dow Chemical Company 1803 Building Midland, MI 48674 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: <input checked="" type="checkbox"/> EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.



Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification to update label in response to PR Notice 2007-4. Enclosed cover letter reflects the required Notification statement.

Section - III

1. Material This Product Will Be Packaged In:						2. Type of Container		
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container	<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____	
* Certification must be submitted								
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container			4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product			
6. Manner in Which Label is Affixed to Product				<input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input type="checkbox"/> Other _____		

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Rhonda Vance-Moeser	Title Sr. Regulatory Specialist	Telephone No. (Include Area Code) (989) 636-1884
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Sr. Regulatory Specialist	
4. Typed Name Rhonda Vance-Moeser	5. Date 	



The Dow Chemical Company
Midland, Michigan 48667

September 14, 2009

Overnight Mail

Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U. S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, Virginia 22202-4501

**RE: NOTIFICATION – EPA REG. NO. 464 –704
UCARCIDE™ 50 Antimicrobial**

To Whom It May Concern:

The Dow Chemical Company (Dow) hereby submits a Notification application to revise the container disposal statement on the label in response to PR Notice 2007-4. In order for the application to be processed the required Notification statement is below.

“This Notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject enforcement action and penalties under section 12 and 14 of FIFRA”

Enclosed are the following documents to support this Notification

- 1) Completed application, Pesticide Registration, Form 8570-1.
- 2) One marked copy of the label indicating the change highlighted in yellow.
- 3) Two copies of final label.

Please contact me if you have any questions or need additional information.

Sincerely,

Rhonda Vance-Moeser

RM

Rhonda Vance-Moeser
Senior Regulatory Specialist
574 Building, Office 2044
Midland, MI 48667
Phone: (989) 636-1884
e-mail: rgvmoeser@dow.com

Enclosures

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

KEEP OUT OF REACH OF CHILDREN

Corrosive. Causes irreversible eye damage. Causes skin burns. Harmful if inhaled. May be fatal if swallowed. Harmful if absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Causes asthmatic signs and symptoms in hyper-reactive individuals.

- Do not get in eyes, on skin, on clothing.
- Avoid breathing vapor. Do not swallow.
- Wear goggles, protective clothing, and butyl or nitrile gloves.
- Wash thoroughly with soap and water after handling.
- Remove contaminated clothing and wash before reuse.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

STORAGE AND HANDLING

UCARCIDE™ 50 Antimicrobial is incompatible with many commonly used materials of construction such as steel, galvanized iron, aluminum, tin, and zinc. UCARCIDE™ 50 Antimicrobial can be stored and handled in baked phenolic-lined steel, polyethylene, stainless steel, or reinforced epoxy-plastic equipment. This product freezes at about -6° F (-21° C). Therefore, unless the storage tank is inside or underground, heating and insulation may be required. If heating is needed, exposure to high temperatures should be avoided. For short storage times (up to about 1 month), temperatures of up to 100° F (37.8° C) can be tolerated but the preferred maximum storage temperature is about 80° F (26.7° C).

A stainless steel centrifugal pump is suggested for transfer service. Spiral-wound stainless steel with TEFLON® Polymer is suitable for gaskets and packing.

Handle in a well-ventilated area. If vapors are irritating to the nose or eyes, special ventilation or respiratory protection (MSHA/NIOSH approved air purifying respirator equipped with an organic vapor cartridge) may be required.

LIMITED WARRANTY AND DISCLAIMER

Seller warrants that the product conforms to its chemical description as contained on this label and is reasonably fit for the purposes stated on this label when used in accordance with directions under normal conditions of use. THE WARRANTIES MADE IN THIS PARAGRAPH ARE SELLER'S SOLE WARRANTIES WITH RESPECT TO THE PRODUCT AND ARE MADE EXPRESSLY IN LIEU OF AND EXCLUDE ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER EXPRESS OR IMPLIED REPRESENTATIONS AND WARRANTIES.

**BEFORE HANDLING OR USING THIS PRODUCT, SEE
YOUR EMPLOYER AND READ CURRENT MATERIAL
SAFETY DATA SHEET.**

STORAGE AND DISPOSAL

PESTICIDE DISPOSAL: Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or your Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Label option for nonrefillable containers of all sizes
CONTAINER DISPOSAL: Nonrefillable Container. Do not reuse or refill this container. Triple or pressure rinse container (or equivalent) promptly after emptying. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or other procedures approved by state and local authorities.

Option to use for labels on refillable containers of all sizes
Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning of the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean container before final disposal, empty contents into application equipment and triple rinse. Pour or pump rinsate into application equipment or rinsate collection system. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

UCARCIDE™

Ani

A highly effective Microbiocide for use in controlling Bacteria including Sulfate-Reducing Bacteria, Fungi (Yeast and Molds) and Algae in Air Water Systems, Recirculating Cooling and Process Water Systems including Osmosis Membranes and Service Water and Auxiliary Systems, Heat Exchanger Systems including Wastewater Sludge and Holding Tanks, Beet Sugar Mill Water Systems, Paper Mills and Paper Mill Process Water Systems, Food and Paper and Paperboard, Water Based Coatings for Paper and Paperboard Lubricants and Aqueous Metalworking Fluids and for use by Manufacturing, Institutional and Consumer Processes and Products and for Based Solutions, Slurries and Emulsions and in Oil Well Drilling, Oil Field Water Systems, Oil and Gas Production and Transmission Pipelines, Fields and Equipment such as Steam-Injection Water Holding Tanks, Injection Water, Holding Pond Water, Disposal-Well Water, Water Holding related Refinery and Oil Field Closed, Industrial Recirculating Water Holding Manufacturers and Formulators in Formulating Products for Oil Field Applications. This product are responsible for providing data for the EPA Registration of

Active Ingredient: Glutaraldehyde 51
Inert Ingredients: 5
Total 10

**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 professional help 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 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 of gastric lavage.

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

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONS

Produced for:



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

®TM Trademark of The Dow Chemical Company
("Dow") or an affiliated company of Dow
Made in U.S.A.

EPA Reg
EPA Est
(A) 5 gal
(B) Sampl

Net Contents: 5, 55 gallons or Bulk

CONTAINER SIZE	CONTAINER SIZE	CONTAINER SIZE	SHIPPING NAME	CC
TOTE	5 GALLONS	55 GALLONS		
2,446 POUNDS NET WEIGHT	46 POUNDS NET WEIGHT	500 POUNDS NET WEIGHT	HAZARD CLASS 8	ID

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



UCARCIDE™ 50 Antimicrobial

It is a violation of Federal Law to use this product in a manner not labeled for.

AIR WASHERS AND INDUSTRIAL SCRUBBING RECIRCULATING COOLING AND PROCESS WATER SYSTEMS

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

UCARCIDE™ 50 Antimicrobial should be added at the application point of a water treatment system at a convenient point of uniform mixing. Additions may be made intermittently (SLUG DOSE) or continuous systems can be shock treated with UCARCIDE™ 50 Antimicrobial. Blowdown should be discontinued for up to 24 hours.

UCARCIDE™ 50 Antimicrobial can be used in industrial pre-treatment ultra filtration units and non-medical reverse osmosis systems for compatibility by the membrane manufacturer and assure uniform mixing.

INTERMITTENT (SLUG DOSE) METHOD

Initial Dose: When the system is noticeably fouled, apply 1.0 to 2.0 ppm (product) of UCARCIDE™ 50 Antimicrobial per 1,000 gallons of water, or 89 to 177 mL of UCARCIDE™ 50 Antimicrobial per 1,000 gallons of water. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 0.5 to 1.0 ppm (product) of UCARCIDE™ 50 Antimicrobial per 1,000 gallons weekly, or 35 to 69 mL of UCARCIDE™ 50 Antimicrobial per 1,000 gallons weekly, or as needed to maintain control.

CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably fouled, apply 1.0 to 2.0 ppm (product) of UCARCIDE™ 50 Antimicrobial per 1,000 gallons of water, or 89 to 177 mL of UCARCIDE™ 50 Antimicrobial per 1,000 gallons of water. Repeat until control is achieved.

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

SERVICE WATER AND AUXILIARY WATER SYSTEMS

UCARCIDE™ 50 Antimicrobial should be used at the same manner as described above. It should be added to the system for uniform mixing throughout the system.

HEAT TREATMENT SYSTEMS

(Evaporative Condensers, Dairy Sweetwater Systems and Retorts, and Pasteurizers and Warms).

UCARCIDE™ 50 Antimicrobial should be used at the same manner as described above. It should be added to the mixing such as a basin area, sump area or other reservoir or the treated water will be circulated uniformly throughout the system.

INDUSTRIAL WASTEWATER SYSTEMS

(Wastewater Systems, Wastewater Sludge and Waste Water Treatment Systems). UCARCIDE™ 50 Antimicrobial should be added to a wastewater treatment system at a convenient point of uniform mixing such as the digester. Add 2,250 ppm (product) of UCARCIDE™ 50 Antimicrobial per 1,000 gallons of wastewater or 399 mL of UCARCIDE™ 50 Antimicrobial per 1,000 gallons of wastewater or sludge.

BEET SUGAR MILLS AND BEET SUGAR MILL PROCESS WATER SYSTEMS

UCARCIDE™ 50 Antimicrobial should be added to the system such as the diffuser, transport water pump, weir box, or diffuser. Additions may be made intermittently (SLUG DOSE) or continuous systems can be shock treated with UCARCIDE™ 50 Antimicrobial.

INTERMITTENT (SLUG DOSE) METHOD

Initial Dose: When the system is noticeably contaminated, (200 to 500 ppm product) of UCARCIDE™ 50 Antimicrobial per metric ton of sliced beets control is achieved.

Subsequent Dose: When microbial control is evident, add 0.5 to 1.0 ppm (product) of UCARCIDE™ 50 Antimicrobial per metric ton of sliced beets; dose as necessary to maintain control. The total should not exceed 1.0 ppm per day.

CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably contaminated, add 4.4 to 8.8 mL/minute (200 to 500 ppm product) of UCARCIDE™ 50 Antimicrobial per metric ton of sliced beets in the system via automatic pump of suitable construction.

Subsequent Dose: When microbial control is evident, add 0.5 to 1.0 ppm (product) of UCARCIDE™ 50 Antimicrobial per metric ton of sliced beets; dose as necessary to maintain control. The total should not exceed 1.0 ppm per day.

PAPER MILLS AND PAPER MILL PROCESS WATER SYSTEMS

UCARCIDE™ 50 Antimicrobial should be added to the paper mill process water at a convenient point of uniform mixing such as the beaters, broke chest pump, save all, or headbox.

Initial Dose: When the system is noticeably contaminated, add 1.0 to 2.0 ppm (product) of UCARCIDE™ 50 Antimicrobial per ton of pulp or paper (dry weight) until control is achieved. Heavily fouled systems should be boiled before treatment.

Subsequent Dose: When microbial control is evident, add 0.5 to 1.0 ppm (product) of UCARCIDE™ 50 Antimicrobial per ton of pulp or paper (dry weight) necessary to maintain control.

PIGMENTS AND FILLER SLURRIES FOR PAPER AND PAPERBOARD

(For use in food and non-food contact coatings). UCARCIDE™ 50 Antimicrobial should be added to a metalworking fluid at a convenient point of uniform mixing such as the fluid collection tank. Additions (SLUG DOSE) at intervals of one week or less.

WATER BASED COATINGS FOR PAPER AND PAPERBOARD

NOTE: For use in non-food contact coatings. UCARCIDE™ 50 Antimicrobial should be added to a metalworking fluid at a convenient point of uniform mixing such as the fluid collection tank. Additions (SLUG DOSE) at intervals of one week or less.

Initial Dose: When the system is noticeably fouled apply 1.0 to 2.0 ppm (product) of UCARCIDE™ 50 Antimicrobial per 10,000 gallons of metalworking fluid. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 0.5 to 1.0 ppm (product) of UCARCIDE™ 50 Antimicrobial per 10,000 gallons of metalworking fluid weekly, or as needed to maintain control. Badly fouled system treatment is begun.

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%

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

®™ Trademark of The Dow Chemical Company
("Dow") or an affiliated company of Dow
Made in U.S.A.

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

(1/2/08)
PE:1203

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	HAZARD CLASS 8	ID NUMBER UN3265	PGII
2,446 POUNDS NET WEIGHT	46 POUNDS NET WEIGHT	500 POUNDS NET WEIGHT			

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



NOTICE
Do Not Ship or Store
with Food, Feeds,
Drugs, or Clothing

65669N-01/06/2009

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INSTRUCTIONS FOR 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 105 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 105 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 50C 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 5000 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 2000 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 4,000 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.

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Microbial

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

REN

Medical consultation,

preferably

may contraindicate the use

consultation center or a

STATEMENTS

34-704
(352-WV-2 (A); 464-WV-1 (B))
is in pallets; all drums, bulk
contain pallets less than full pallet

(12/08)
PF1208

WATER LIQUID, ACIDIC,
GANIC, N.O.S.
GLUTARALDEHYDE;

ER PGII

this product, call

ICE
Ship or Store
Food, Feeds,
or Clothing