

464-692

1/18/2007

Page 1 of 7



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

JAN 18 2007

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Ms. Maureen Miksztal
Senior Regulatory Specialist for,
The Dow Chemical Company
171 River Road
Piscataway, NJ 08854

Subject: UCARCIDE 45 Antimicrobial
EPA Registration Number 464-692
Your Notification Dated December 28th, 2006
EPA Received Date January 4th, 2007

The notification referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, FIFRA, as amended, to add the phrase, "produced for", to the product labeling, is acceptable.

The notification has been made part of the file.

If you have any questions concerning this letter, please contact Karen M. Leavy at (703)-308-6237.

Sincerely,

A handwritten signature in cursive script that reads "M Swindell".

Marshall Swindell
Product Manager 33
Regulatory Management Branch I
Antimicrobial Division(7510P)

2 8 7



United States
Environmental Protection Agency
Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 464-692	2. EPA Product Manager M. Swindell	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) UCARCIDE 45 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: 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.)

The Dow Chemical Company is submitting a notification to the label to clarify that Dow is not the producer. The text, "produced for:" has been added to the label. This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40CFR 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 a violation of 18U.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 40CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under section 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input checked="" type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 5 and 55 gallon and bulk		5. Location of Label Directions <input checked="" type="checkbox"/>	
6. Manner in Which Label is Affixed to Product <input checked="" 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 Maureen Miksztal	Title Senior Regulatory Specialist	Telephone No. (Include Area Code) 732-563-5536
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<p align="center">Certification</p> <p>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.</p>			<p>6. Date Application Received (Stamped)</p>
2. Signature 	3. Title Senior Regulatory Specialist		
4. Typed Name Maureen Miksztal	5. Date 12/22/06		

33

3 7 7



December 28, 2006

The Dow Chemical Company
171 River Road
Parsippany, NJ 08854
USA

Overnight Delivery

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

Subject: UCARCIDE™ 45 Antimicrobial, EPA Reg. No. 464-692
Notification of Minor Label Change

Dear Sir/Madam:

Per PR Notice 98-10, The Dow Chemical Company is submitting a notification to the registration for UCARCIDE™ 45 Antimicrobial, EPA Reg. No. 464-692. This notification includes a minor change to the UCARCIDE™ 45 Antimicrobial, EPA Reg. No. 464-693 labeling. Please find enclosed the following documentation in support of this application:

- Application Form, EPA Form 8570-1
- Draft label with highlighted changes

Please contact me at 732-563-5586 with questions or comments regarding this submission. Thank you for your assistance.

Sincerely,

Maureen Mikszal
Senior Regulatory Specialist

cc: Mr. Marshall Swindell, PM-33

Enclosure

4 7 7

**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™ 45 Antimicrobial is incompatible with many commonly used materials of construction such as steel, galvanized iron, aluminum, tin, and zinc. UCARCIDE™ 45 Antimicrobial can be stored and handled in baked phenolic-lined steel, polyethylene, stainless steel, or reinforced epoxy-plastic equipment. This product freezes at about 1°F (-17°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 TEF-ON® 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.
CONTAINER DISPOSAL: Metal Containers or Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or other procedures approved by state and local authorities. Plastic Containers: May be incinerated, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Metal Containers: Must not be incinerated. Do not cut or weld on or near metal containers.

UCARCIDE™ 45 Antimicrobia

A highly effective Microbiocide for use in controlling Bacteria including Slime F and Sulfate-Reducing Bacteria, Fungi (Yeast and Molds) and Algae in Air washes Scrubbing Systems, Recirculating Cooling and Process Water Systems including Reverse Osmosis Membranes and Service Water and Auxiliary System Mills and Beet Sugar Mill Process Water Systems and in Paper Mills and Paper ter Systems, Pigments and Filler Slurries for Paper and Paperboard, Water Based Paper and Paperboard and in Functional Fluids and Lubricants and Aqueous Media and for use by Manufacturers as a Preservative in Industrial, Institutional Processes and Products and for use in Preserving Aqueous-Based Solution Emulsions and a Molluscicide for use in controlling Macrofouling in Service Water Systems and Recirculating Cooling and Process Water Systems and in Oil Well Processing Applications, Oil Field Water Systems, Gas Production and Transport and Systems, and Gas Storage Fields and Equipment; such as Steam-Injection Tanks, Flood Water, Injection Water, Holding Pond Water, Disposal-Well Water Tanks, Fuel Storage Tanks and related Refinery and Oil Field Closed, Industrial Water Handling Systems.

Active Ingredient: Glutaraldehyde 45%
Inert Ingredients: 55%
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.
 - Call a poison control center or a doctor for further treatment advice.

NOTE TO PHYSICIAN: Aspiration may cause lung damage. Probable mucosal damage may be caused by gastric lavage.

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

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA Reg. No. 464-692
EPA Est. No. 10352-W
(A) 5 gallon pails in pallet
(B) Single 5 gallon pails

PRODUCED FOR



THE DOW CHEMICAL COMPANY
Midland, Michigan 48674 U.S.A
1-800-258-CHEM

*Trademark of THE DOW CHEMICAL COMPANY

Net Contents: 5, 30, 55 gallons or Bulk

CONTAINER SIZE TOTE	CONTAINER SIZE 55 GALLONS	CONTAINER SIZE 30 GALLONS	CONTAINER SIZE 5 GALLONS	SHIPPING NAME	CORROSIVE LIQUID, ACIDIC (CONTAINS GLUTARALDEHYDE)
2,425 POUNDS	504 POUNDS	279 POUNDS	46 POUNDS	HAZARD CLASS 8	ID NUMBER UN 3265
NET WEIGHT	NET WEIGHT	NET WEIGHT	NET WEIGHT		

IN CASE OF AN EMERGENCY endangering life or property involving this collect 989-636-4400.

NOTICE

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



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CAUTIONARY STATEMENTS
TO HUMANS AND DOMESTIC ANIMALS
DANGER

OUT OF REACH OF CHILDREN

Irritable eye damage. Causes skin burns. Harmful if inhaled. Harmful if absorbed through skin. Irritated skin contact may cause allergic reactions in some individuals. Signs and symptoms in hyper-reactive individuals.

Wash clothing. Do not swallow. Wash clothing, and butyl or nitrile gloves. Wash hands and water after handling. Wash clothing and wash before reuse.

ENVIRONMENTAL HAZARDS

Do not discharge effluent containing this product into lakes, streams, rivers, or waters unless in accordance with the requirements of a National Sanitation (NPDES) permit and the permitting authority has been notified. Do not discharge effluent containing this product to sewer systems without the local sewage treatment plant authority. For guidance contact your local Office of the EPA.

STORAGE AND HANDLING

is incompatible with many commonly used materials of construction including aluminum, tin, and zinc. UCARCIDE™ 45 Antimicrobial can be stored in enameled steel, polyethylene, stainless steel, or reinforced epoxy-freezes at about 1°F (-17°C). Therefore, unless the storage tank is insulated and insulation may be required. If heating is needed, exposure to fire is prohibited. For short storage times (up to about 1 month), temperatures are tolerated but the preferred maximum storage temperature is about 60°F.

Use of plastic is suggested for transfer service. Spiral-wound stainless steel with gaskets and packing.

If vapors are irritating to the nose or eyes, special ventilation or OSHA approved air purifying respirator equipped with an organic

WARRANTY AND DISCLAIMER

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

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

CLEANUP AND DISPOSAL

Contaminate water, food or feed by storage or disposal. Open flames are toxic. Improper disposal of excess pesticide, spray material, or empty containers is prohibited by federal law. If these wastes cannot be disposed of by use of the methods described hereon, contact your State Pesticide or your Environmental Control Agency, or the nearest EPA Regional Office for guidance. Containers or Plastic Containers: Triple rinse (or equivalent). Rinse water should be collected and disposed of in a sanitary landfill, or other local authorities. Plastic Containers: May be incinerated, or, if incinerated, they should be burned. Metal Containers: May be recycled or welded on or near metal containers.

For more information or Store Information, call 1-800-258-4400, or see the back of this label. Pesticides, Drugs,

UCARCIDE™ 45 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 and in Paper Mills and Paper Mill Process Water Systems, Pigments and Filler Slurries for Paper and Paperboard, Water Based Coatings for Paper and Paperboard and in 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 a Molluscicide for use in controlling Macrofouling in Service Water and Auxiliary Systems and Recirculating Cooling and Process Water Systems and in Oil Well Drilling, Oil Field Processing Applications, Oil Field Water Systems, Gas Production and Transmission Pipelines and Systems, and Gas Storage Fields and Equipment; such as Steam-Injection Water Holding Tanks, Flood Water, 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.

Active Ingredient: Glutaraldehyde 45%
Inert Ingredients: 55%
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.

EPA Reg. No. 464-692
EPA Est. No. 10352-WV-2 (A); 464-WV-1 (B)
(A) 5 gallon pails in pallets; all drums; bulk
(B) Single 5 gallon pails only.

PRODUCED FOR



THE DOW CHEMICAL COMPANY
Midland, Michigan 48674 U.S.A.
1-800-258-CHEM
*Trademark of THE DOW CHEMICAL COMPANY

Net Contents: 5, 30, 55 gallons or Bulk

L90226 (1 06/04)
Made In USA
PE0704

CONTAINER SIZE	CONTAINER SIZE	CONTAINER SIZE	CONTAINER SIZE	SHIPPING NAME	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CONTAINS GLUTARALDEHYDE)	
TOTE	55 GALLONS	30 GALLONS	5 GALLONS			
2,425 POUNDS	504 POUNDS	279 POUNDS	46 POUNDS	HAZARD CLASS	ID NUMBER	PG II
NET WEIGHT	NET WEIGHT	NET WEIGHT	NET WEIGHT		UN 3265	

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

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

UCARCIDE™ 45 Antimicrobial

Microbiocide for use in controlling Bacteria including Slime Forming Bacteria, Gram Negative Bacteria, Fungi (Yeast and Molds) and Algae in Air Washers and Industrial Water Systems, Recirculating Cooling and Process Water Systems including those that use Reverse Osmosis Membranes and Service Water and Auxiliary Systems, Heat Transfer Systems including Wastewater Sludge and Holding Tanks, Beet Sugar Mill Process Water Systems and in Paper Mills and Paper Mill Process Water Systems and Filler Slurries for Paper and Paperboard, Water Based Coatings for Paper and in Functional Fluids and Lubricants and Aqueous Metalworking Fluids and for use in Preserving Aqueous-Based Solutions, Slurries and Emulsions and as a Disinfectant for use in controlling Macrofouling in Service Water and Auxiliary Cooling and Process Water Systems and in Oil Well Drilling, Oil Field Production, Oil Field Water Systems, Gas Production and Transmission Pipelines, Gas Storage Fields and Equipment; such as Steam-Injection Water Holding Tanks, Injection Water, Holding Pond Water, Disposal-Well Water, Water Holding Tanks and related Refinery and Oil Field Closed, Industrial Recirculating Systems.

Active Ingredient: Glutaraldehyde 45%
Inert Ingredients: 55%
Total 100%

**KEEP OUT OF REACH OF CHILDREN
DANGER**

FIRST AID

IF SWALLOWED: Call a doctor immediately for treatment advice. Do not induce vomiting. Do not drink.

IF IN EYES: Rinse continuously with flowing water for at least 30 minutes. Stop rinsing after the first 5 minutes and continue washing. Obtain prompt medical consultation from an ophthalmologist. Call a doctor immediately for treatment advice.

IF ON SKIN: Wash thoroughly with plenty of water for 15-20 minutes. Call a doctor for treatment advice.

IF INHALED: If breathing is difficult, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. Call a doctor for further treatment advice.

ADDITIONAL INFORMATION: Aspiration may cause lung damage. Probable mucosal damage may contraindicate the use of emetics.

If available, the product container or label with you when calling a poison control center or a hospital.

SEE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

EPA Reg. No. 464-692
EPA Est. No. 10352-WV-2 (A) ;464-WV-1 (B)
(A) 5 gallon pails in pallets; all drums; bulk
(B) Single 5 gallon pails only.

PRODUCED FOR:

THE DOW CHEMICAL COMPANY
Midland, Michigan 48674 U.S.A
1-800-258-CHEM
*Trademark of THE DOW CHEMICAL COMPANY

5 gallons or Bulk L90226 (1 06/04)
Made In USA
PE0704

NET WEIGHT	CONTAINER SIZE	CONTAINER SIZE	SHIPPING NAME	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CONTAINS GLUTARALDEHYDE)	
279 POUNDS	30 GALLONS	5 GALLONS		ID NUMBER UN 3265	PG II
NET WEIGHT			HAZARD CLASS		

EMERGENCY endangering life or property involving this product, call 1-800-258-CHEM.

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™ 45 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™ 45 Antimicrobial. Under these conditions, blowdown should be discontinued for up to 24 hours. UCARCIDE™ 45 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 12.7 to 25.4 fluid ounces of UCARCIDE™ 45 Antimicrobial per 1,000 gallons of water in the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 5.1 to 12.7 fluid ounces of UCARCIDE™ 45 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 12.7 to 25.4 fluid ounces of UCARCIDE™ 45 Antimicrobial per 1,000 gallons of water in the system.

Subsequent Dose: Maintain this treatment level by starting a continuous feed of 2.5 to 12.7 fluid ounces of UCARCIDE™ 45 Antimicrobial per 1,000 gallons of water in the system per day

Badly fouled systems must be cleaned before treatment is begun

SERVICE WATER AND AUXILIARY SYSTEMS

UCARCIDE™ 45 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 and Once-Through Cooling Water Systems)

UCARCIDE™ 45 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™ 45 Antimicrobial should be added to a wastewater system or sludge at a convenient point of uniform mixing such as the digester. Add 0.45 to 2.2 gallons (500 to 2,500 ppm UCARCIDE™ 45 Antimicrobial) per 1,000 gallons of wastewater or sludge.

MACROFOULING CONTROL

*Not for use in state of California

UCARCIDE™ 45 Antimicrobial should be added continuously to maintain a level of 20 ppm active ingredient in the system for a period of at least 96 hours

Initial Dose: When macrofouling is present in the system, apply 5.8 fluid ounces of UCARCIDE™ 45 Antimicrobial per 1,000 gallons of water in the system. Continue to add as needed to maintain the 20 ppm active ingredient level for a period of at least 96 hours.

BET SUGAR MILLS AND BEET SUGAR MILL PROCESS WATER SYSTEMS

UCARCIDE™ 45 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 6.1 to 15.2 fluid ounces (222 to 560 ppm product) of UCARCIDE™ 45 Antimicrobial per ton or 200 to 500 mL of UCARCIDE™ 45 Antimicrobial per metric ton of sliced beets as a slug dose. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 0.9 to 9.1 fluid ounces (33 to 330 ppm) of UCARCIDE™ 45 Antimicrobial per ton or 30 to 300 mL of UCARCIDE™ 45 Antimicrobial per metric ton of sliced beets in the system as a slug dose as necessary to maintain control. The total should not exceed 118 gallons per 1,000 tons of beets sliced per day.

CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably contaminated, add 6.1 to 15.2 fluid ounces/minute (222 to 560 ppm product) of UCARCIDE™ 45 Antimicrobial per ton or 200 to 500 mL/minute of UCARCIDE™ 45 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 0.9 to 9.1 fluid ounces/minute (33 to 330 ppm) of UCARCIDE™ 45 Antimicrobial per ton or 30 to 300 mL/minute of UCARCIDE™ 45 Antimicrobial per metric ton of beets sliced per minute in the system, or as necessary to maintain control. The total should not exceed 118 gallons per 1,000 tons of beets sliced per day.

PAPER MILLS AND PAPER MILL PROCESS WATER SYSTEMS

UCARCIDE™ 45 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 0.6 to 3.3 lbs of UCARCIDE™ 45 Antimicrobial per ton of pulp or paper (dry basis) as a slug dose. Repeat until control is achieved. Heavily fouled systems should be bled off prior to initial treatment.

Subsequent Dose: When microbial control is evident, add 0.3 to 2.2 lbs of UCARCIDE™ 45 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 non-food contact pigments and filler slurries)
Use from 0.11 to 0.7 lbs. of UCARCIDE™ 45 Antimicrobial per 1,000 lbs. of dry powder to produce a concentration from 111 to 667 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 0.11 to 0.7 lbs. of UCARCIDE™ 45 Antimicrobial per 1,000 lbs. of dry powder to produce a concentration from 111 to 667 ppm as product (based on slurry solids) in the mixed slurry.

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DIRECTIONS FOR USE

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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

UCARCIDETM 45 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 UCARCIDETM 45 Antimicrobial. Under these conditions, blowdown should be discontinued for up to 24 hours.

UCARCIDETM 45 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 12.7 to 25.4 fluid ounces of UCARCIDETM 45 Antimicrobial per 1,000 gallons of water in the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 5.1 to 12.7 fluid ounces of UCARCIDETM 45 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 12.7 to 25.4 fluid ounces of UCARCIDETM 45 Antimicrobial per 1,000 gallons of water in the system.

Subsequent Dose: Maintain this treatment level by starting a continuous feed of 2.5 to 12.7 fluid ounces of UCARCIDETM 45 Antimicrobial per 1,000 gallons of water in the system per day.

Badly fouled systems must be cleaned before treatment is begun.

SERVICE WATER AND AUXILIARY SYSTEMS

UCARCIDETM 45 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 and Once-Through Cooling Water Systems)

UCARCIDETM 45 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)

UCARCIDETM 45 Antimicrobial should be added to a wastewater system or sludge at a convenient point of uniform mixing such as the digester. Add 0.45 to 2.2 gallons (500 to 2,500 ppm UCARCIDETM 45 Antimicrobial) per 1,000 gallons of wastewater or sludge.

MACROFOULING CONTROL

*Not for use in state of California

UCARCIDETM 45 Antimicrobial should be added continuously to maintain a level of 20 ppm active ingredient in the system for a period of at least 96 hours.

Initial Dose: When macrofouling is present in the system, apply 5.6 fluid ounces of UCARCIDETM 45 Antimicrobial per 1,000 gallons of water in the system. Continue to add as needed to maintain the 20 ppm active ingredient level for a period of at least 96 hours.

BET SUGAR MILLS AND BET SUGAR MILL PROCESS WATER SYSTEMS

UCARCIDETM 45 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 6.1 to 15.2 fluid ounces (222 to 560 ppm product) of UCARCIDETM 45 Antimicrobial per ton or 200 to 500 mL of UCARCIDETM 45 Antimicrobial per metric ton of sliced beets as a slug dose. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 0.9 to 9.1 fluid ounces (33 to 330 ppm) of UCARCIDETM 45 Antimicrobial per ton or 30 to 300 mL of UCARCIDETM 45 Antimicrobial per metric ton of sliced beets in the system as a slug dose as necessary to maintain control. The total should not exceed 118 gallons per 1,000 tons of beets sliced per day.

CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably contaminated, add 6.1 to 15.2 fluid ounces/minute (222 to 560 ppm product) of UCARCIDETM 45 Antimicrobial per ton or 200 to 500 mL/minute of UCARCIDETM 45 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 0.9 to 9.1 fluid ounces/minute (33 to 330 ppm) of UCARCIDETM 45 Antimicrobial per ton or 30 to 300 mL/minute of UCARCIDETM 45 Antimicrobial per metric ton of beets sliced per minute in the system, or as necessary to maintain control. The total should not exceed 118 gallons per 1,000 tons of beets sliced per day.

PAPER MILLS AND PAPER MILL PROCESS WATER SYSTEMS

UCARCIDETM 45 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 0.6 to 3.3 lbs of UCARCIDETM 45 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 2.2 lbs of UCARCIDETM 45 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 oil and non-food contact pigments and filler slurries)

Use from 0.11 to 0.7 lbs. of UCARCIDETM 45 Antimicrobial per 1,000 lbs. of dry powder to produce a concentration from 111 to 687 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 0.11 to 0.7 lbs. of UCARCIDETM 45 Antimicrobial per 1,000 lbs. of dry powder to produce a concentration from 111 to 687 ppm as product (based on slurry solids) in the mixed slurry.

AQUEOUS METALWORKING FLUIDS

UCARCIDETM 45 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 2 to 6 gallons of UCARCIDETM 45 Antimicrobial per 10,000 gallons of metalworking fluid to the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 0.8 to 4 gallons of UCARCIDETM 45 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 1.3 to 7.6 fluid ounces (50 to 300 ppm active) of UCARCIDETM 45 Antimicrobial per 100 gallons of diluted lubricant.

GENERAL PRESERVATIVE USE

UCARCIDETM 45 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 UCARCIDETM 45 Antimicrobial to the product formulation at a rate of 0.022% to 0.22% (222.5 to 2,222.5 ppm) based on the water content of the product (0.22 to 2.2 lbs UCARCIDETM 45 Antimicrobial per 1,000 lbs water content). Mix uniformly.

PRESERVATIVE FOR CONCENTRATES

For use in concentrates where effective preservation is needed after dilution, add UCARCIDETM 45 Antimicrobial to the product formulation at a rate such that the diluted end-use product will contain 0.022% to 0.22% UCARCIDETM 45 Antimicrobial.

At no time during the preservation process should the level of UCARCIDETM 45 Antimicrobial exceed 2.2%.

REVERSE OSMOSIS MEMBRANES

For effective preservation of reverse osmosis elements (where approved for compatibility by membrane manufacturer), immerse elements in a tank containing 0.22% to 2.2% UCARCIDETM 45 Antimicrobial.

UCARCIDETM 45 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 0.22% to 2.2% UCARCIDETM 45 Antimicrobial to the tank in the circulating system. Maintain the concentration of UCARCIDETM 45 Antimicrobial by periodic addition to counteract any system leakage.

CONCRETE ADMIXTURES

For effective preservation of concrete admixtures, add UCARCIDETM 45 Antimicrobial to the product formulation at a rate of 2,222 to 8,889 ppm based on the weight of the admixture (2.2 to 8.9 lbs UCARCIDETM 45 Antimicrobial per 1,000 lbs. concrete admixture). Mix uniformly.

WATER FLOODS

UCARCIDETM 45 Antimicrobial should be added to a water flood system at a point of uniform mixing.

Initial Treatment: When the system is noticeably contaminated, add 110 to 5,500 ppm UCARCIDETM 45 Antimicrobial to the system (0.1 to 4.9 gallons UCARCIDETM 45 Antimicrobial per 1,000 gallons flood water). Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 22 to 5,500 ppm UCARCIDETM 45 Antimicrobial (0.02 to 4.9 gallons UCARCIDETM 45 Antimicrobial per 1,000 gallons flood water) to the system weekly, or as needed to maintain control.

DRILLING, COMPLETION, AND WORKOVER FLUIDS

UCARCIDETM 45 Antimicrobial should be added to a drilling fluid system at a point of uniform mixing such as the circulating mud tank.

Initial Treatment: Add 55 to 1,100 ppm UCARCIDETM 45 Antimicrobial (0.21 to 4.1 gallons UCARCIDETM 150 Antimicrobial per 100 barrels of fluid) to a freshly prepared fluid depending on the severity of contamination.

Maintenance Dosage: Maintain a concentration of 55 to 1,100 ppm UCARCIDETM 45 Antimicrobial by adding 0.21 to 4.1 gallons of UCARCIDETM 45 Antimicrobial per 100 barrels of additional fluid, or as needed, depending on the severity of contamination.

PACKER FLUIDS

UCARCIDETM 45 Antimicrobial should be added to a packer fluid at a point of uniform mixing such as a circulating holding tank. Add 55 to 686 ppm UCARCIDETM 45 Antimicrobial (0.21 to 2.5 gallons UCARCIDETM 45 Antimicrobial per 100 barrels of fluid) to a freshly prepared fluid depending on the severity of contamination. Seal the treated packer fluid in the well between the casing and production tube.

GAS PRODUCTION AND TRANSMISSION PIPE SYSTEMS

UCARCIDETM 45 Antimicrobial should be added to a gas production or transmission pipeline via direct injection. The application should be conducted to ensure maximum distribution of the UCARCIDETM 45 Antimicrobial through the entire internal surface of the pipeline. To facilitate application, it may be desirable to dilute the UCARCIDETM 45 Antimicrobial with an appropriate solvent immediately before use. 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 a sufficient quantity of UCARCIDETM 45 Antimicrobial to produce a concentration of 556 to 5,556 ppm UCARCIDETM 45 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 UCARCIDETM 45 Antimicrobial to produce a concentration of 222 to 2,222 ppm UCARCIDETM 45 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 111 to 4,444 ppm UCARCIDETM 45 Antimicrobial (0.1 to 3.9 gallons UCARCIDETM 45 Antimicrobial per 1,000 gallons water), depending on water quality and length of the pipeline. Equipment will remain idle.

PIPELINE PIGGING AND SCRAPING OPERATIONS

Add UCARCIDETM 45 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 UCARCIDETM 45 Antimicrobial should be added to produce a concentration of 0.11 to 1.1% (0.1 to 1.0 gallon UCARCIDETM 45 Antimicrobial per 100 gallons water), depending on the length of the pipeline and the severity of biofouling.

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