

464-704

06/14/2012

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



Office of Pesticide Programs

JUN 14 2012

The Dow Chemical Company
1803 Building
Midland, MI 48674

Attention: Rhonda Vance-Moeser
Senior Product Stewardship Specialist

Subject: UCARCIDE™ 50 Antimicrobial
EPA Registration No. 464-704
Notification Dated May 16, 2012

This will acknowledge receipt of your notification, submitted under the provisions of FIFRA Section 3(c)(9).

Proposed Notification

1. Add "Produced for" as an option when product produced by contract manufacturer
2. Add "Product not registered for this use in the State of California" as an indicator option on labels to indicate a use is not registered in the State of CA.

General Comment

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 added to the file.

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

Sincerely,

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



United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☒ Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number
464 - 704

2. EPA Product Manager
Marshall Swindell

3. Proposed Classification
☐ None ☐ 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, TX 79701

☐ 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

☐ Amendment - Explain below.

☐ Resubmission in response to Agency letter dated _____

☒ Notification - Explain below.

☐ Final printed labels in response to
Agency letter dated _____

☐ "Me Too" Application.

☐ Other - Explain below.

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

Notification to 1) Add "Produced for" as an option when product produced by contract manufacturer 2) Add "Product not registered for this use in the State of California" as an indicator option on labels to indicate a use is not registered in the State of CA. Required Notification statement and additional information can be found on the cover letter.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging

☐ Yes
☐ No

Unit Packaging

☐ Yes
☐ No

Water Soluble Packaging

☐ Yes
☐ No

2. Type of Container

☒ Metal
☐ Plastic
☐ Glass
☐ Paper
☐ 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

☐ Label

☐ Container

4. Size(s) Retail Container

5. Location of Label Directions

☐ On Label

☐ On Labeling accompanying product

6. Manner in Which Label is Affixed to Product

☐ Lithograph
☐ Paper glued
☐ Stenciled

☐ 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

PSS Regulatory Manager

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

Rhonda Vance-Moeser

Digitally signed by Rhonda Vance-Moeser
DN: cn=Rhonda Vance-Moeser, o=Dow, email=rgvmoeser@dow.com,
c=US
Date: 2012.05.16 10:27:42 -0400

3. Title

Product Stewardship Regulatory Manager

4. Typed Name

Rhonda Vance-Moeser

5. Date

May 16, 2012



3/7
The Dow Chemical Company
Midland, MI 48674
U.S.A.

May 16, 2012

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

Overnight Mail

RE: NOTIFICATION – UCARCIDE™ 50 Antimicrobial – EPA Reg. No. 464-704

Dear Mr. Swindell,

The Dow Chemical Company (Dow) hereby submits a Notification to the label of UCARCIDE 50 Antimicrobial, EPA Reg. No. 464-704. Specifically, we are requesting to:

- 1) Add "Produced for" as an option when product produced by contract manufacturer
- 2) Add "Product not registered for this use in the State of California" as an indicator option on labels to indicate a use is not registered in the State of California.

In order for the application to be processed the required Notification statement is included 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 for Pesticide Registration, Form 8570-1.
- 2) Required notification statement above.
- 3) Three copies of the product label; one with changes highlighted

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

Sincerely,

Rhonda Vance-Moeser

Rhonda Vance-Moeser
Product Stewardship Regulatory Manager
1691 N. Swede Road, Midland, MI 48674
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.

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:

Label option for nonrefillable containers of all sizes

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.

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

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.

UCARCIDE™ 50 Antimicrobial

A highly effective Microbiocide for use in controlling bacteria including Slime Forming Bacteria and those that contain Reverse Osmosis Membranes and Service Water and Auxiliary Systems, Heat Transfer Water Systems, Pigments and Filler Slurries for Paper and Paperboard, Water Based Coatings for Pa Consumer Processes and Products and for use in Preserving Aqueous-Based Solutions, Slurries and Storage Fields and Equipment such as Steam-Injection Water Holding Tanks, Flood Water, Fracturing Water Handling Systems and for use by Manufacturers and Formulators in Formulating Products for Oil

Active Ingredient:

Glutaraldehyde _____ 50%

Inert Ingredient(s): _____ 50%

Total _____ 100%

**KEEP OUT OF REACH OF CHILDREN
DANGER**

FIRST AID

IF SWALLOWED:	<ul style="list-style-type: none">• Call a poison control center or a doctor for further treatment advice.• DO NOT INDUCE VOMITING.• Do not give anything to drink.
IF IN EYES:	<ul style="list-style-type: none">• 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:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15–20 minutes.• Call a poison control center or a doctor for further treatment advice.
IF INHALED:	<ul style="list-style-type: none">• 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.

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

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

E.P.A. Registration No. 464-704

E.P.A. Est. 10352-WV-002

Produced for: (Option when produced by contract manufacturer)



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.

**NET CONTENTS: 5 gallons
NET WEIGHT: 46 lb / 20.9 kg
LOT NO:**

**AIR WASHERS
SYSTEMS**

This product may UCARCIDE 50 A convenient poin continuously. Bad should be discont UCARCIDE 50 A reverse osmosis systems.

INTERMITTENT

Initial Dose: Wt Antimicrobial per in the system. Re Subsequent Dos Antimicrobial per water in the system CONTINUOUS F Initial Dose: Wt Antimicrobial per in the system. Subsequent Dos product) of UCAR Antimicrobial per 1

SERVICE WATE

UCARCIDE 50 A should be added t

HEAT TRANSFE

(Evaporative Con UCARCIDE 50 A should be added t from which the tre

INDUSTRIAL W/

(Wastewater syste UCARCIDE 50 Ar the digester. Add t or sludge or 399 n

BET SUGAR M

UCARCIDE 50 A pump, weir box, or INTERMITTENT Initial Dose: Wt 50 Antimicrobial p until control is achi Subsequent Dos Antimicrobial per l as necessary to m CONTINUOUS F Initial Dose: Wt UCARCIDE 50 Ar minute in the syste Subsequent Dos Antimicrobial per system, or as nece

PAPER MILLS A

UCARCIDE 50 A chest pump, save- Initial Dose: Wt paper (dry basis) treatment. Subsequent Dos paper (dry basis) t

PICKLETS AND

(For use in food Use from 0.1 to 0. ppm as product (b

WATER BASED

NOTE: For use in Use from 0.1 to 0. ppm as product (b

AQUEOUS MET/

UCARCIDE 50 A collection tank. Ac Initial Dose: Wt metalworking fluid Subsequent Dos gallons of metalw before treatment is

WATER BASED

(Brewery, Juice, D Avoid containi Thoroughly dean a your Dow represe of diluted lubricant

5/7

**HAZARDOUS STATEMENTS
FOR HUMAN AND DOMESTIC ANIMALS
DANGER**

REACH OF CHILDREN
Irritable eye damage. Causes skin
May be fatal if swallowed. Harmful if
ingested or frequently repeated skin contact
in some individuals. Causes asthmatic
or reactive individuals.

on clothing.
not swallow.
thing, and butyl or nitrile gloves.
and water after handling.
ing and wash before reuse.

MENTAL HAZARDS
Do not discharge effluent containing
slimes, ponds, estuaries, oceans or other
in accordance with the requirements of a National
Pollution Discharge System (NPDES) permit and the
discharge notification in writing prior to discharge. Do
not discharge this product to sewer systems
not designed for the local sewage treatment plant
contact your State Water Board or Regional

E AND HANDLING
Incompatible with many commonly
used materials such as steel, galvanized iron,
CARCIDE 50 Antimicrobial can be stored
in plastic-lined steel, polyethylene, stainless
steel plastic equipment. This product freezes at
-100°F, unless the storage tank is inside or
insulation may be required. If heating is
required, temperatures should be avoided. For short
term (1 month), temperatures of up to 100°F
are permitted but the preferred maximum storage
temperature is 26.7°C.
A pump is suggested for transfer
of this product using TEFLON® Polymer is
recommended.
If vapors are irritating to the nose or
throat, respiratory protection (MSHA/NIOSH
approved respirator equipped with an organic vapor

USE AND DISPOSAL
Do not contaminate water, food or feed by
dumping is prohibited. Pesticide wastes
of excess pesticide, spray mixture or
empty container. If these wastes cannot be
disposed of in accordance with label instructions, contact your State
Pesticide Control Agency, or the Hazardous
Waste Management and Emergency Response
Office for the nearest EPA Regional Office for

Do not use containers of all sizes
Do not reuse or refill this container. Triple or
quadruple (or equivalent) promptly after
emptying or reconditioning, or puncture and
incinerate, or other procedures approved by

Do not use refillable containers of all sizes
This container with pesticide only. Do not
use for any other purpose. Cleaning of the container
is the responsibility of the person disposing of
the container. Before final disposal, empty contents into
a triple rinse. Pour or pump rinseate into
a triple rinse collection system. Then offer for
puncture and dispose of in a sanitary
manner or by other procedures allowed by state

**FOR USING THIS PRODUCT, SEE
THE CURRENT MATERIAL
SAFETY DATA SHEET.**

WARRANTY AND DISCLAIMER
This product conforms to its chemical description
and is reasonably fit for the purposes
intended in accordance with directions under
this label. THE WARRANTIES MADE IN THIS
LABEL ARE THE SOLE WARRANTIES WITH RESPECT
TO THE PRODUCT ARE MADE EXPRESSLY IN LIEU OF AND
IN EXCLUSION OF ALL WARRANTIES OF MERCHANTABILITY
AND ALL OTHER WARRANTIES AND REPRESENTATIONS.

UCARCIDE™ 50 Antimicrobial

A highly effective Microbiocide for use in controlling bacteria including Slime Forming Bacteria and Sulfate-Reducing Bacteria, Fungi (Y) those that contain Reverse Osmosis Membranes and Service Water and Auxiliary Systems, Heat Transfer Systems, Wastewater Systems Incl Water Systems, Pigments and Filler Slurries for Paper and Paperboard, Water Based Coatings for Paper and Paperboard and Functiona Consumer Processes and Products and for use in Preserving Aqueous-Based Solutions, Slurries and Emulsions and in Oil Well Drilling Storage Fields and Equipment such as Steam-Injection Water Holding Tanks, Flood Water, Fracturing Fluids, Injection Water, Holding Po Water Handling Systems and for use by Manufacturers and Formulators in Formulating Products for Oil Field Applications. Formulators us

Active Ingredient:

Glutaraldehyde	50%
Inert Ingredient(s):	50%
Total	100%

KEEP OUT OF REACH OF CHILDREN DANGER

FIRST AID

IF SWALLOWED:	<ul style="list-style-type: none">• Call a poison control center or a doctor for further treatment advice.• DO NOT INDUCE VOMITING.• Do not give anything to drink.
IF IN EYES:	<ul style="list-style-type: none">• 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:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15–20 minutes.• Call a poison control center or a doctor for further treatment advice.
IF INHALED:	<ul style="list-style-type: none">• 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.

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

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

E.P.A. Registration No. 434-704
E.P.A. Est. 10352-WW-002

Produced for: (Option when produced by contract manufacturer)



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.

**NET CONTENTS: 5 gallons
NET WEIGHT: 46 lb / 20.9 kg
LOT NO:**

AIR WASHERS AND INDUSTRIAL SCRUBBING SYSTEMS

This product may be used only in industrial air washers and air washers. UCARCIDE 50 Antimicrobial should be added at the applicable convenient point of uniform mixing such as the basin area continuously. Badly fouled systems can be shock treated with UCARCIDE 50 Antimicrobial for up to 24 hours.

UCARCIDE 50 Antimicrobial can be used in industrial process water reverse osmosis membranes (where approved for compatibility systems).

INTERMITTENT (SLUG DOSE) METHOD

Initial Dose: When the system is noticeably fouled, apply 11.3 tc Antimicrobial per 1,000 gallons of water in the system, or 89 to 17 in the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 4 Antimicrobial per 1,000 gallons of water in the system weekly, or 3 water in the system weekly, or as needed to maintain control. Badly fouled systems can be shock treated with UCARCIDE 50 Antimicrobial for up to 24 hours.

CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably fouled, apply 11.3 tc Antimicrobial per 1,000 gallons of water in the system, or 89 to 17 in the system.

Subsequent Dose: Maintain this treatment level by starting a product of UCARCIDE 50 Antimicrobial per 1,000 gallons of water Antimicrobial per 1,000 liters of water in the system per day. Badly fouled systems can be shock treated with UCARCIDE 50 Antimicrobial for up to 24 hours.

SERVICE WATER AND AUXILIARY SYSTEMS

UCARCIDE 50 Antimicrobial should be used at the same application rate should be added to the system at a point that will allow for uniform circulation.

HEAT TRANSFER SYSTEMS

(Evaporative Condensers, Dairy Sweetwater Systems, Hydrostatic UCARCIDE 50 Antimicrobial should be used at the same application rate should be added to the system at a point of uniform mixing such as 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 at a rate of 0.4 to 2.0 gallons (450 to 2,250 ppm product) of UCARCIDE 50 Antimicrobial per 1,000 gallons of water or sludge or 399 mL to 1,994 mL of UCARCIDE 50 Antimicrobial per 1,000 gallons of water or sludge.

BEET SUGAR MILLS AND BEET SUGAR MILL PROCESS WATER UCARCIDE 50 Antimicrobial should be added to the system at a rate of 0.4 to 2.0 gallons (450 to 2,250 ppm product) of UCARCIDE 50 Antimicrobial per 1,000 gallons of water or sludge or 399 mL to 1,994 mL of UCARCIDE 50 Antimicrobial per 1,000 gallons of water or sludge.

INTERMITTENT (SLUG DOSE) METHOD

Initial Dose: When the system is noticeably contaminated, add 5 Antimicrobial per ton or 177 to 422 mL of UCARCIDE 50 Antimicrobial until control is achieved.

Subsequent Dose: When microbial control is evident, add Antimicrobial per ton or 27 to 270 mL of UCARCIDE 50 Antimicrobial as necessary to maintain control. The total should not exceed 106 Antimicrobial per ton.

CONTINUOUS FEED METHOD

Initial Dose: When the system is noticeably contaminated, add UCARCIDE 50 Antimicrobial per ton or 177 to 422 mL/minute of minute in the system via automatic pump of suitable construction.

Subsequent Dose: When microbial control is evident, add 0.8 Antimicrobial per ton or 27 to 270 mL/minute of UCARCIDE 50 system, or as necessary to maintain control. The total should not exceed 106 Antimicrobial per ton.

PAPER MILLS AND PAPER MILL PROCESS WATER SYSTEMS

UCARCIDE 50 Antimicrobial should be added to the paper making chest pump, save-all tank, or white-water tank.

Initial Dose: When the system is noticeably contaminated, add paper (dry basis) as a slug dose. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 0.8 paper (dry basis) as a slug dose as necessary to maintain control.

PIGMENTS AND FILLER SLURRIES FOR PAPER AND PAPERBOARD

Use from 0.1 to 0.6 lbs. of UCARCIDE 50 Antimicrobial per 1,000 ppm 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 ppm product (based on slurry solids) in the mixed slurry.

AQUEOUS METALWORKING FLUIDS

UCARCIDE 50 Antimicrobial should be added to a metalworking collection tank. Additions may be made intermittently (SLUG DOSE).

Initial Dose: When the system is noticeably fouled apply 11.3 tc Antimicrobial per 1,000 gallons of water in the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 4 tc Antimicrobial per 1,000 gallons of water in the system weekly, or as needed 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 your Dow representative to provide 1.1 to 6.8 fluid ounces (50 to 200 mL) of diluted lubricant.

CHANGE

RCIDE™ 50 Antimicrobial

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 Reverse Osmosis Membranes and Service Water and Auxiliary Systems, Heat Transfer Systems, Wastewater Systems Including Wastewater Sludge and Holding Tanks, Beet Sugar Mill 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 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 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 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 E

Client: _____

Formaldehyde	50%
Conc. (s):	50%
Total	100%

KEEP OUT OF REACH OF CHILDREN DANGER

FIRST AID
<ul style="list-style-type: none">• Call a poison control center or a doctor for further treatment advice.• DO NOT INDUCE VOMITING.• Do not give anything to drink.
<ul style="list-style-type: none">• 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.
<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15–20 minutes.• Call a poison control center or a doctor for further treatment advice.
<ul style="list-style-type: none">• 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.
Physician: Aspiration may cause lung damage. Probable mucosal irritation indicate the use of gastric lavage.
and, if available, the product container or label with you when control center or a doctor, or going for treatment.
EMERGENCY endangering life or property involving this product, 1-800-336-4400.

SEE LABEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

E.P.A. Registration No. 464-704
E.P.A. Est. 10352-WV-002

When produced by contract manufacturer)

Dow Chemical Company
180674 U.S.A.

The Dow Chemical Company ("Dow") or an affiliated company of Dow

CONTENTS: 5 gallons
WEIGHT: 46 lb / 20.9 kg
NO:

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a

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. UCARCID 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 UCARCID 50 Antimicrobial. Under these conditions, blowdown should be discontinued for up to 24 hours.

UCARCID 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 UCARCID 50 Antimicrobial per 1,000 gallons of water in the system, or 89 to 177 mL of UCARCID 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 UCARCID 50 Antimicrobial per 1,000 gallons of water in the system weekly, or 35 to 89 mL of UCARCID 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 UCARCID 50 Antimicrobial per 1,000 gallons of water in the system, or 89 to 177 mL of UCARCID 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 UCARCID 50 Antimicrobial per 1,000 gallons of water in the system per day or 17.7 to 88.6 mL of UCARCID 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

UCARCID 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) UCARCID 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) UCARCID 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 UCARCID 50 Antimicrobial per 1,000 gallons of wastewater or sludge or 399 mL to 1,994 mL of UCARCID 50 Antimicrobial per 1,000 liters of wastewater or sludge.

BEET SUGAR MILLS AND BEET SUGAR MILL PROCESS WATER SYSTEMS

UCARCID 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 UCARCID 50 Antimicrobial per ton or 177 to 422 mL of UCARCID 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 UCARCID 50 Antimicrobial per ton or 27 to 270 mL of UCARCID 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 UCARCID 50 Antimicrobial per ton or 177 to 442 mL/minute of UCARCID 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 UCARCID 50 Antimicrobial per ton or 27 to 270 mL/minute of UCARCID 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

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

AQUEOUS METALWORKING FLUIDS

UCARCID 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 1.0 to 5.4 gallons of UCARCID 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 UCARCID 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 UCARCID 50 Antimicrobial per 100 gallons of diluted lubricant.

GENERAL PRECAUTIONS
UCARCID 50 Antimicrobial should be used in accordance with the label directions for use. Do not use on the water con

PRESERVATIVES
For use in conc formulation at a 1 At no time dur

REVERSE OSMOSIS
For effective pre elements in a ta in-line recircula compatibility by system. Mainta

CONCRETE AD MIXTURE
For effective pre to 8,000 ppm b admixture. Mix

WATER FLOOUCARCID 50
Initial Treatme system (0.09 to Subsequent D UCARCID 50

FRAC FLUIDS
Product not re UCARCID 50 well stimulator pipeline as the v Dose Range: 1 depending on ti

DRILLING, CC UCARCID 50
Initial treatme barrels of fluid) Maintenance of UCARCID 50

PACKER FLUID UCARCID 50
tank. Add 50 to to a freshly pre casing and pro

OIL PRODUCT UCARCID 50
Product not n UCARCID 50 should be con surface by ad system. Critie application, it i use. The conc volume of wa GAS PRODUC UCARCID 50 should be con surface by ad system. Critie application, it i use. The conc volume of v

GAS STORAGE
Individual injec of 500 to 5000 before gas is i Individual drips 2000 ppm UC/ as needed to n

HYDROTEST
Water used to UCARCID 50 ide.

PIPELINE PIG
Add UCARCID a minimum a produce a con length of the pi



obial

CHANGES HIGHLIGHTED

7/7

fate-Reducing Bacteria, Fungi (Yeast and Molds) and Algae in Air Washers and Industrial Scrubbing Systems, Recirculating Cooling and Process Water Systems Including stems, Wastewater Systems Including Wastewater Sludge and Holding Tanks, Beet Sugar Mills and Beet Sugar Mill Process Water Systems, Paper Mills and Paper Mill Process and Paperboard and Functional Fluids and Lubricants and Aqueous Metalworking Fluids and for use by Manufacturers as a Preservative in Industrial, Institutional and nulsions and in Oil Well Drilling, Oil Field Processing Applications, Oil Field Water Systems, Oil and Gas Production and Transmission Pipelines and Systems, and Gas ids, Injection Water, Holding Pond Water, Disposal-Well Water, Water Holding Tanks, Fuel Storage Tanks and related Refinery and Oil Field Closed, Industrial Recirculating ld Applications. Formulators using this product are responsible for providing data for the EPA Registration of their formulated product.

DIRECTIONS FOR USE

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

D INDUSTRIAL SCRUBBING SYSTEMS/RECIRCULATING COOLING AND PROCESS WATER

sed only in industrial air washers and air washer systems which have mist-eliminating components. microbial should be added at the application rates described below to a water treatment system at a uniform mixing such as the basin area. Addition may be made intermittently (SLUG DOSE) or uled systems can be shock treated with UCARCIDE 50 Antimicrobial. Under these conditions, blowdown } for up to 24 hours.icrobial can be used in industrial process water systems that contain ultra filtration units and non-medical nbranes (where approved for compatibility by the membrane manufacturer) and associated distribution

UG DOSE) METHOD

he system is noticeably fouled, apply 11.3 to 22.7 fluid ounces (100 to 200 ppm product) of UCARCIDE 50 0 gallons of water in the system, or 89 to 177 mL of UCARCIDE 50 Antimicrobial per 1,000 liters of water until control is achieved.

When microbial control is evident, add 4.5 to 11.3 fluid ounces (40 to 100 ppm) of UCARCIDE 50 0 gallons of water in the system weekly, or 35 to 89 mL of UCARCIDE 50 Antimicrobial per 1,000 gallons of sky, or as needed to maintain control. Badly fouled systems must be cleaned before treatment is begun.

ETHOD

he system is noticeably fouled, apply 11.3 to 22.7 fluid ounces (100 to 200 ppm product) of UCARCIDE 50 0 gallons of water in the system, or 89 to 177 mL of UCARCIDE 50 Antimicrobial per 1,000 liters of water

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

ND AUXILIARY SYSTEMS

icrobial should be used at the same application rates, and in the same manner as described above. It y system at a point that will allow for uniform mixing throughout the system.

YSTEMS

ers, Dairy Sweetwater Systems, Hydrostatic Sterilizers And Retorts, And Pasteurizers And Warmers) microbial should be used at the same application rates, and in the same manner as described above. It a system at a point of uniform mixing such as a basin area, sump area, or other reservoir or collecting area water will be circulated uniformly throughout the system.

EWATER SYSTEMS

wastewater sludge and wastewater holding tanks) microbial should be added to a wastewater system or sludge at a convenient point of uniform mixing such as 2.0 gallons (450 to 2,250 ppm product) of UCARCIDE 50 Antimicrobial per 1,000 gallons of wastewater 1,994 mL of UCARCIDE 50 Antimicrobial per 1,000 liters of wastewater or sludge.

AND BEET SUGAR MILL PROCESS WATER SYSTEMS

icrobial should be added to the system at a point of uniform mixing such as the diffuser, transport water user feed water pump. Additions may be made intermittently (SLUG DOSE) or continuously

UG DOSE) METHOD

he system is noticeably contaminated, add 5.4 to 13.6 fluid ounces (200 to 500 ppm product) of UCARCIDE 50 n or 177 to 422 mL of UCARCIDE 50 Antimicrobial per metric ton of sliced beets as a slug dose. Repeat 1.

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

ETHOD

he system is noticeably contaminated, add 5.4 to 13.6 fluid ounces/minute (200 to 500 ppm product) oficrobial per ton or 177 to 442 mL/minute of UCARCIDE 50 Antimicrobial per metric ton of beets sliced per a automatic pump of suitable construction.

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

PAPER MILL PROCESS WATER SYSTEMS

icrobial should be added to the paper making system at a point of uniform mixing such as the beaters, broke nk, or white-water tank.

he system is noticeable contaminated, add 0.5 to 3.0 lbs of UCARCIDE 50 Antimicrobial per ton of pulp or slug dose. Repeat until control is achieved. Heavily fouled systems should be boiled out prior to initial

When microbial control is evident, add 0.3 to 2.0 lbs of UCARCIDE 50 Antimicrobial per ton of pulp or slug dose as necessary to maintain control.

ER SLURRIES FOR PAPER AND PAPERBOARD

non-food contact pigments and filler slurries) . of UCARCIDE 50 Antimicrobial per 1,600 lbs. of dry powder to produce a concentration from 100 to 600 l on slurry solids in the mixed slurry.

TINGS FOR PAPER AND PAPERBOARD

food contact coatings only. . of UCARCIDE 50 Antimicrobial per 1,000 lbs. of dry powder to produce a concentration from 100 to 600 l on slurry solids in the mixed slurry.

ORKING FLUIDS

icrobial should be added to a metalworking fluid system at a point of uniform mixing such as the fluid ns may be made intermittently (SLUG DOSE) at intervals of one week or less.

e system is noticeably fouled apply 1.6 to 5.4 gallons of UCARCIDE 50 Antimicrobial per 10,000 gallons of e system. Repeat until control is achieved.

When microbial control is evident, add 0.7 to 3.6 gallons of UCARCIDE 50 Antimicrobial per 10,000 g fluid to the system weekly, or as needed to maintain control. Badly fouled systems should be cleaned un.

IVEYOR LUBRICANTS

Beverage, and Food Processing Systems) i of food in application of product. ks and conveyors to remove gross soil. Rinse well. Use an automatic feed system as recommended by e to provide 1.1 to 6.8 fluid ounces (50 to 300 ppm active) of UCARCIDE 50 Antimicrobial per 100 gallons

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%.

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

Product not registered for this use in the State of California.

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 PRODUCTION AND TRANSMISSION PIPELINES AND SYSTEMS

Product not registered for this use in the State of California (Option)

UCARCIDE 50 Antimicrobial should be added to an oil 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 5,000 ppm based on the volume of water in the pipeline. Injections to the system should be weekly, or as needed to maintain control.

GAS PRODUCTION AND TRANSMISSION PIPELINES AND SYSTEMS

UCARCIDE 50 Antimicrobial should be added to a gas production or transmission pipeline 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 5,000 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 a 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.



NOTICE

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