

464-689

03/02/2012

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

The Dow Chemical Company
1691 N Swede Road, Larkin Laboratory
Midland, MI 48674

MAR 2 2012

Attention Rhonda Vance-Moeser
Regulatory Manager

Subject UCARSAN Sanitizer 420
EPA Reg No 464-689
Amendment Application Date November 3, 2012
EPA Received Date November 4, 2012

The following amendment, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable

- Label Amendment to modify the use rate in Oil & Gas Production & Transmission Pipelines"
- Add the "Industrial Recirculating Cooling Water" use to the registered product

Submit and/or cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) and section 4(a) when the Agency requires all registrants of similar products to submit such data

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

A stamped copy of the accepted labeling is enclosed Submit three copies of your final printed labeling to the Agency before distributing or selling the product bearing the revised labeling If you have any questions concerning this letter, please contact Demson Fuller at (703) 308-8062

Sincerely,

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

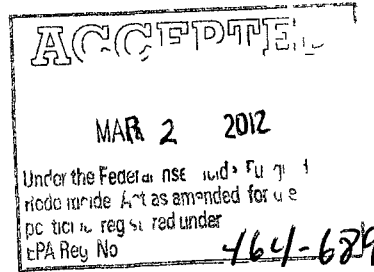
UCARSAN SANITIZER 420 Final Draft Master Label
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UCARSAN™ SANITIZER 420

Active Ingredient Glutaraldehyde	20%
Inert Ingredients	80%
Total	100%

EPA Reg No 464-689

EPA Est No XXXXX



KEEP OUT OF REACH OF CHILDREN

DANGER

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

Corrosive • Causes irreversible eye damage • Causes skin irritation • Harmful if inhaled
Harmful 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 • Wash thoroughly with soap and water after handling •
Remove contaminated clothing and wash before reuse

Personal Protective Equipment

Applicators and other handlers must wear goggles or face shield, long-sleeve shirt, long pants,
shoes, socks, chemical-resistant gloves (such as butyl rubber) and chemical resistant apron

User Safety Requirements

Follow manufacturers' instructions for cleaning & maintaining PPE If no such instructions exist
for washables, use detergent and hot water Keep and wash PPE separately from other laundry

User Safety Recommendations

Users must wash hands before eating, drinking, chewing gum, or using the toilet

Users must remove clothing immediately if pesticide gets inside Then wash thoroughly
and put on clean clothing Users must remove PPE immediately after handling and before
eating, drinking, chewing gum, using tobacco, or using the toilet Wash the outside of gloves
before removing As soon as possible, wash thoroughly and change into clean clothing

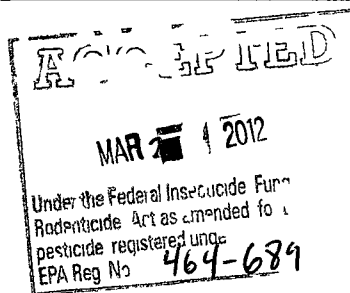
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ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish, aquatic invertebrates, oysters and shrimp 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

FIRST AID

IF SWALLOWED	<ul style="list-style-type: none"> • If the person is fully alert and cooperative, have the person rinse mouth with plenty of water have the patient drink 4 to 10 ounces (120-300 mL) of water or milk • Do not induce vomiting Do not attempt mouth rinse if the person has respiratory distress, altered mental status, or nausea and vomiting • Call a physician and/or transport to emergency facility immediately See Note to Physician
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 doctor for 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
HOT LINE NUMBER	
IN CASE OF AN EMERGENCY endangering life or property involving this product, call collect (989) 636-4400	
NOTE TO PHYSICIAN Aspiration may cause lung damage Probable mucosal damage may contraindicate the use of gastric lavage Have the product container or label with you when calling a poison control center or a doctor, or going for treatment	



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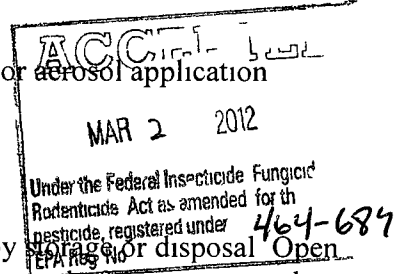
STORAGE AND HANDLING

UCARSAN Sanitizer 420 is incompatible with many commonly used materials of construction such as steel, galvanized iron, aluminum, tin, and zinc UCARSAN Sanitizer 420 can be stored and handled in baked phenolic-lined steel, polyethylene, stainless steel, or reinforced epoxy-plastic equipment This product freezes at about 16 F (-9°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

The product in its undiluted form must not be used in a spray, or aerosol application



STORAGE AND DISPOSAL

Pesticide Disposal Do not contaminate water, food or feed by storage or disposal 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

Option to use for labels on nonrefillable rigid containers of all sizes

Nonrefillable container Do not reuse or refill this container Triple rinse 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 by other procedures approved by state and local authorities

Option to use for labels on refillable rigid tote containers

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 sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities

DIRECTIONS FOR USE

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

WATER FLOODS

Not registered for this use in the State of California

UCARSAN Sanitizer 420 should be added to a water flood system at a point of uniform mixing

Initial Treatment When the system is noticeably contaminated, add 250 to 12,500 ppm UCARSAN Sanitizer 420 to the system (0.23 to 11.9 gallons UCARSAN 420 Sanitizer per 1,000 gallons flood water) Repeat until control is achieved

Subsequent Dose When microbial control is evident, add 50 to 12,500 ppm UCARSAN Sanitizer 420 (0.05 to 11.9 gallons UCARSAN Sanitizer 420 per 1,000 gallons flood water) to the system weekly, or as needed to maintain control

FRAC FLUIDS

Not registered for this use in the State of California

UCARSAN Sanitizer 420 reduces bacterial contamination and degradation of fracturing fluids and gels used in oil and gas well stimulations. Add UCARSAN Sanitizer 420 to the frac water storage tanks or directly into the well head injection pipeline as the water is being pumped down-hole

Dose Range UCARSAN Sanitizer 420 should be added at a rate of 250 to 12,500 ppm (2.3 – 119 gals per 10,000 gallons) depending on the degree of bacterial fouling in the source water

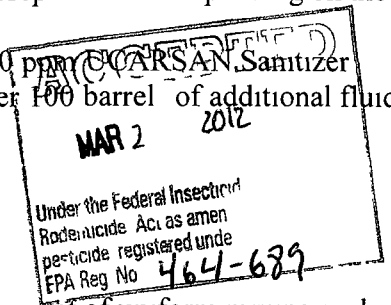
DRILLING, COMPLETION, AND WORKOVER FLUIDS

Not registered for this use in the State of California

UCARSAN Sanitizer 420 should be added to a drilling fluid system at a point of uniform mixing such as the circulating mud tank

Initial Treatment Add 125 to 2,500 ppm UCARSAN Sanitizer 420 (0.5 to 10 gallons UCARSAN 420 Sanitizer per 100 barrels of fluid) to a freshly prepared fluid depending on the severity of contamination

Maintenance Dosage Maintain a concentration of 125 to 2,500 ppm UCARSAN Sanitizer 420 by adding 0.5 to 10 gallons of UCARSAN Sanitizer 420 per 100 barrel of additional fluid, or as needed, depending on the severity of contamination



PACKER FLUIDS

Not registered for this use in the State of California

UCARSAN Sanitizer 420 should be added to a packer fluid at a point of uniform mixing such as a circulating holding tank. Add 125 to 1500 ppm UCARSAN Sanitizer 420 (0.5 to 6 gallons UCARSAN Sanitizer 420 per 100 barrels of fluid) to a freshly prepared fluid depending on the severity of contamination. Seal the treated packer fluid in the wall between the casing and production tube

OIL AND GAS PRODUCTION AND TRANSMISSION PIPELINES AND SYSTEMS
Not registered for this use in the State of California

UCARSAN Sanitizer 420 should be added to an oil/gas production or transmission pipeline via direct injection. The application should be conducted to ensure maximum distribution of the UCARSAN Sanitizer 420 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 UCARSAN Sanitizer 420 with an appropriate solvent immediately before use. The product should be dosed into the system at 1000 to 12,500 ppm based on the water volume in the pipeline. Injections to the system should be weekly, or as needed to maintain control.

GAS STORAGE WELLS AND SYSTEMS
Not registered for this use in the State of California

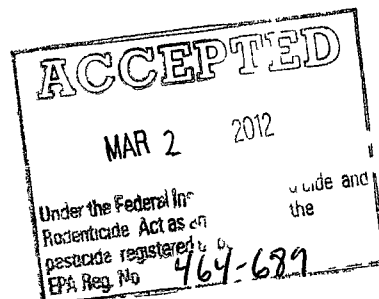
Individual injection wells should be treated with a sufficient quantity of UCARSAN Sanitizer 420 to produce a concentration of 1,250 to 12,500 ppm UCARSAN Sanitizer 420 when diluted by the water present in the formation. Injection should take place before gas is injected (during the summer). Injections should be repeated yearly, or as needed to maintain control. Individual drips should be treated with a sufficient quantity of UCARSAN 420 Sanitizer to produce a concentration of 500 to 5,000 ppm UCARSAN Sanitizer 420 when diluted by the water present in the drip. Injections should be repeated yearly, or as needed to maintain control.

HYDROTESTING
Not registered for this use in the State of California

Water used to hydrotest pipelines or vessels should contain 250 to 10,000 ppm UCARSAN Sanitizer 420 (0.23 to 9.5 gallons UCARSAN 420 Sanitizer per 1,000 gallons water), depending on water quality and length of time the equipment will remain idle.

PIPELINE PIGGING AND SCRAPING OPERATIONS
Not registered for this use in the State of California

Add UCARSAN Sanitizer 420 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 UCARSAN Sanitizer 420 should be added to produce a concentration of 0.25 to 2.5% (0.24 to 2.4 gallons UCARSAN Sanitizer 420 per 100 gallons water), depending on the length of the pipeline and the severity of biofouling.



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INDUSTRIAL RECIRCULATING COOLING WATER
Not registered for this use in the State of California

Add AQUICAR™ 720 WATER TREATMENT MICROBIOCIDE to the basin (or any other point of uniform mixing) Additions should be made with a metering pump, it may be continuous or intermittent, depending on the severity of the contamination when treatment is begun, and the retention time of the system Optimum performance with this product is attained by continuous or intermittent treatment If “shock” treatment is used, the blowdown should be discontinued for 24-48 hours

FOR CONTROL OF BACTERIA

BADLY FOULED SYSTEMS must be cleaned before treatment is begun

Add 34 to 84 fluid oz/1000 gallon or 263 mL to 658 mL/m³ of product in water in the system, depending on the severity of contamination

INTERMITTENT OR SLUG METHOD

Initial Dose When the system is noticeably fouled, Add 34 to 84 fluid oz/1000 gallon or 263 mL to 658 mL/m³ of product to the water in the system Repeat until control is achieved

Subsequent Dose Once the microbial control is evident add 24 to 34 fluid oz/1000 gallon or 184 mL to 263 mL/m³ of product in the system every 4 days, or as needed to maintain control

CONTINUOUS FEED METHOD

Initial Dose When the system is noticeably fouled, add 34 to 84 fluid oz/1000 gallon or 263 mL to 658 mL/m³ of product to the water in the system

Subsequent Dose Maintain this level by pumping a continuous feed of 7 to 34 fluid oz/1000 gallon or 53 mL to 263 mL/m³ of product to the water in the system per day

FOR CONTROL OF FUNGI AND ALGAE

BADLY FOULED SYSTEMS must be cleaned before treatment is begun

Add 50 to 340 fluid oz/1000 gallon or 400 mL to 2 65 L/m³ of product to the water in the system depending on the severity of contamination

INTERMITTENT OR SLUG METHOD

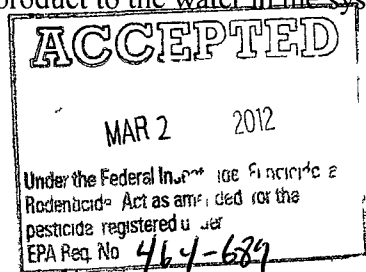
Initial Dose When the system is noticeably fouled, add 50 to 340 fluid oz/1000 gallon or 400 mL to 2 65 L/m³ of product to the water in the system Repeat until control is achieved

Subsequent Dose When microbial control is evident, add 50 to 340 fluid oz/1000 gallon or 400 mL to 2 65 L/m³ of product to the water in the system daily, or as needed to maintain control

CONTINUOUS FEED METHOD

Initial Dose When the system is noticeably fouled, add 50 to 340 fluid oz/1000 gallon or 400 mL to 2 65L/m³ of product to the water in the system

Subsequent Dose Maintain this treatment level by pumping a continuous feed of 50 to 340 fluid oz/1000 gallon or 400 mL to 2 65L/m³) of product to the water in the system per day



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**SANITIZING NON-FOOD CONTACT SURFACES, FARM, ANIMAL, AND
POULTRY HOUSING FACILITIES AND EQUIPMENT**

DO NOT USE THIS PRODUCT ON FOOD OR FEED

UCARSAN Sanitizer 420 is suitable for use on a wide variety of surfaces including stainless steel, aluminum, painted concrete, plastic and glazed tile

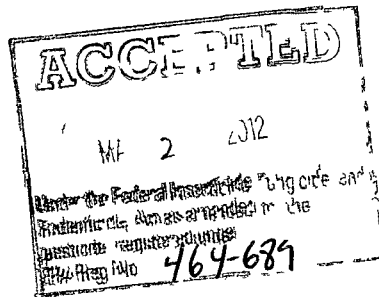
Sanitization

For sanitization against the following pathogens

Clostridium perfringens Enterobacter aerogenes Escherichia coli Haemophilus parasuis Klebsiella pneumoniae Mycoplasma gallisepticum Mycoplasmasynoviae Pasteurella multocida Salmonella enteritidis Salmonellapullorum Salmonella typhi Staphylococcus aureus and Streptococcussus and viruses Avian infectious bronchitis virus Avian influenza(H6N2 and H5N1) Avian laryngotracheitis Avian reovirus Avianrotavirus Canine parvovirus Infectious bursal disease Marek'sdisease virus Pseudorabies virus Transmissible gastroenteritis virus Hog Cholera virus Porcine reproductive respiratory syndrome SARS-associated coronavirus Porcine circovirus and New Castle disease virus

Solution preparation and application guidance

- 1 Remove filth and soil deposits from surfaces prior to treatment Pre-clean surfaces with a suitable detergent and rinse with water
- 2 Thoroughly saturate all surfaces using a mop or by spraying with a solution prepared by mixing 0.61 to 1.5 fluid ounces of UCARSAN Sanitizer 420 per gallon of water to produce a solution containing 0.1 to 0.25% active ingredient
- 3 Immerse all halters, ropes, and other types of equipment used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and manure
- 4 Allow to stand for at least five minutes, or until thoroughly dried For application against *Avian Reovirus Avian Rotavirus Canine parvovirus Pseudorabies Transmissible gastroenteritis virus* and *Avian infectious bronchitis virus* allow to stand for at least 10 minutes For application against *Porcine circovirus (PCV)*, allow to stand for at least 30 minutes
- 5 Ventilate thoroughly before reuse
- 6 Fresh solution should be prepared daily or more often if the solution becomes diluted or soiled



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Farm Equipment and Animal Housing Buildings

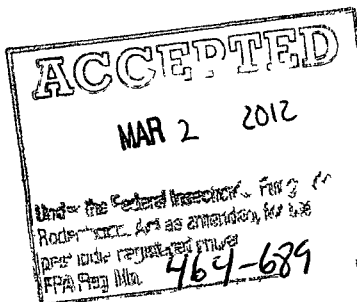
(poultry & turkey grow-out houses, laying houses, swine production and housing, barns and large animal buildings)

Before applying UCARSAN Sanitizer 420

- 1 Remove all poultry and other animals and feed from the premises Remove all portable equipment and empty all feeders and water troughs If not removed, all treated feeders and waterers must be thoroughly rinsed with potable water prior to re-use
- 2 Remove all litter and manure from floors and other surfaces
- 3 Using suitable commercially available equipment, saturate all surfaces with diluted UCARSAN Sanitizer 420 (See solution preparation and application guidance above)
- 4 Allow to stand for at least 5 minutes, or for longer depending on the organisms being treated (See solution preparation and application guidance above)
- 5 Ventilate enclosed spaces
- 6 Do not repopulate with poultry or other animals, or use equipment until treatment has been absorbed or dried

Hatchers, Setters, and Chick Processing Facilities

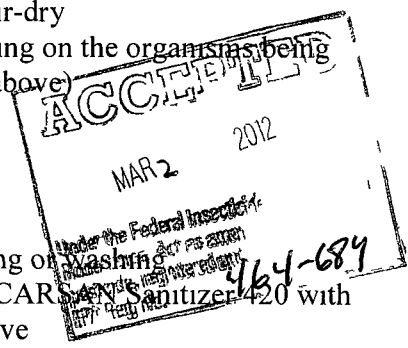
- 1 General sanitizing of environmental surfaces prior to introduction of eggs Remove all animals from the area Clean out feathers, fluff, or other debris Thoroughly saturate all surfaces with a solution prepared by mixing the appropriate amount (See solution preparation and application guidance above) of UCARSAN Sanitizer 420 with water Allow to stand for at least 5 minutes, or longer, depending on the organisms being treated (See solution preparation and application guidance above)
- 2 Ventilate thoroughly before reuse
- 3 For treatment of air and surfaces in high humidity hatchers and setters with water spray cooling Prepare a solution by mixing the appropriate amount of UCARSAN Sanitizer 420 with water (See solution preparation and application guidance above) Fog or atomize this solution into setters or hatchers, using appropriate application equipment Fogging of poultry houses should only be done in such a way that the operator is outside the poultry house when applying the fog
- 4 **Wait at least 3 hours before re-entry after application**
- 5 For treatment of air and surfaces in low humidity hatchers with chilled coil cooling Prepare a solution by mixing the appropriate amount of UCARSAN Sanitizer 420 with water (See solution preparation and application guidance above) Fog or atomize this product using appropriate application equipment Fogging of poultry houses should only be done in such a way that the operator is outside the poultry house when applying the fog
- 6 **Wait at least 3 hours before re-entry after application**



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Trays, Racks, Carts, Chick Boxes, Cages, and other Hard Surfaces

- 1 Remove all filth and heavy debris from surfaces by scraping or washing
- 2 Prepare a solution by mixing the appropriate amount (See solution preparation and application guidance above) of UCARSAN Sanitizer 420 with water
- 3 Apply by spraying or immersion, and allow to drain and air-dry
- 4 Allow to stand for at least 5 minutes, or for longer depending on the organisms being treated (See solution preparation and application guidance above)



Trucks and other Vehicles

- 1 Remove all filth and heavy debris from surfaces by scraping or washing
- 2 Prepare a solution by mixing the appropriate amount of UCARSAN Sanitizer 420 with water See solution preparation and application guidance above
- 3 Apply by spraying or immersion, and allow to air-dry
- 4 Allow to stand for at least 5 minutes, or longer depending on the organisms being treated

SANITIZING NON-FOOD CONTACT SURFACES, INDUSTRIAL EQUIPMENT AND BUILDINGS

- 1 Before applying UCARSAN Sanitizer 420, remove heavy filth and soil deposits from surfaces using a suitable cleaner
- 2 Dilute to 0.10% to 0.25% active ingredient by mixing 0.61 to 1.5 fluid ounces of UCARSAN Sanitizer 420 per gallon of water
- 3 Using suitable commercially available equipment, saturate all surfaces with diluted UCARSAN Sanitizer 420 Allow to set for at least 5 minutes, or longer time depending on the organisms being treated See solution preparation and application guidance above
- 4 Ventilate enclosed spaces
- 6 Do not repopulate with poultry or other animals, or use equipment until treatment has been absorbed or dried

**EGG SANITIZATION
(For Treating Hatching Eggs Only)**

Prepare a solution by mixing 0.64 ounces of UCARSAN Sanitizer 420 with one gallon of water Place in a bath at 105° to 115°F (40° to 45°C) Place freshly laid eggs in plastic trays and dip briefly (10 to 15seconds), then allow to drain and air dry

Notice Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY

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NET Contents/Net Weight

Container Size	Container Size	Container Size	Container Size
260 8 gallons	55 gallon	5 gallon	1 gallon
Net Weight	Net Weight	Net Weight	Net Weight
2,290 Pounds	470 Pounds	43 Pounds	8 6 Pounds

LOT No _____

Produced For *(used when product manufactured by contract manufacturer)*

Dow Diamond TM
THE DOW CHEMICAL COMPANY
Midland, Michigan 48674
989-636-4400

TM Trademark of The Dow Chemical Company (Dow) or an affiliated company of Dow

