UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

April 23, 2015

Marcia Croce
Regulatory Affairs Specialist
Lanxess
111 RIDC West Park Drive
Pittsburg, PA 15275

Subject: Label Amendment – Adding oil and gas applications; updating PPE
Product Name: N-2001 Antimicrobial
EPA Registration Number: 39967-115
Application Date: March 18, 2015
Decision Number: 496653

Dear Ms. Croce:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

with FIFRA section 6. If you have any questions, please contact Elizabeth Watkins by phone at 703-347-0241, or via email at Watkins.Elizabeth@epa.gov.

Sincerely,

Elizabeth K Watkins for

John Hebert, Chief
Regulatory Management Branch I
Antimicrobials Division (7510P)
Office of Pesticide Programs

Enclosure

N-2001 ANTIMICROBIAL

FOR THE CONTROL OF ALGAE, BACTERIA, FUNGI, AND MOLLUSKS IN A WIDE RANGE OF COMMERCIAL AND INDUSTRIAL PROCESSES, WATER FLOOD INJECTION WATERS, FRACKING FLUIDS, DRILLING AND WORKOVER FLUIDS AND MATERIAL PRESERVATIONS AND MATERIAL PRESERVATIONS

Active Ingredient:

Dodecylguanidine hydrochloride 35.0%
Inert Ingredients 65.0%
TOTAL..... 100.0%

DANGER

KEEP OUT OF REACH OF CHILDREN

EPA Reg. No. 39967-115

EPA Est. No.

LOT NO.:

NET WEIGHT:

ACCEPTED
04/23/2015
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under
EPA Reg. No. 39967-115

LANXESS
Energizing Chemistry

LANXESS Corporation
111 RIDC Park West Drive
Pittsburgh, PA 15275-1112

Label Text Date: 2/3/15

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER. Keep out of reach of children. Flammable liquid and vapor. Corrosive. Causes eye and skin damage. Harmful if swallowed. Do not get into eyes, on skin or on clothing. May be fatal if inhaled. Do not breathe vapor or spray mist. Wear a mask or pesticide respirator joint approved by the Mine Safety and Health Administration and the National Institute of Occupational Safety and Health. Wear protective eyewear (goggles, face shield, or safety glasses), protective clothing and rubber gloves. Wash thoroughly after handling with soap and water, and before eating, drinking or using tobacco. Remove contaminated clothing and wash clothing before reuse.

FIRST AID

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor 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 doctor for treatment advice.

IF SWALLOWED: Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor.

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

NOTE to Physician: Probable mucosal damage may contraindicate the use of gastric lavage. Measure against circulatory shock respiratory depression, and convulsion may be needed. Have the product container or label with you when calling a poison control center or doctor.

HOT LINE: FOR EMERGENCY INFORMATION ON N-2001 ANTIMICROBIAL, CALL 1-800-410-3063, MONDAY THROUGH FRIDAY, 9 AM TO 5 PM. AFTER 5 PM CALL YOUR POISON CONTROL CENTER. For transportation emergencies, call Chemtrec at 1-800-424-9300.

Personal Protective Equipment
All handlers must wear:
-Protective eyewear (goggles, face shield or safety glasses)
-Respirator with an organic-vapor removing cartridge with a prefilter approved for pesticide (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter.
-Coveralls over long-sleeved shirt, long pants,
-Socks and chemical-resistant footwear, and
-Chemical resistant gloves (Barrier laminate, Butyl rubber, Nitrile rubber, Neoprene rubber, Polyvinyl Chloride or Viton, selection category C)
When mixing, loading, and cleaning equipment wear a chemical resistant apron. For overhead exposure wear chemical resistant head gear.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this production's concentrate. Do not reuse them.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. 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. Do not contaminate water by cleaning of equipment or disposal of waste. Apply this pesticide only as specified on this label.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. N-2001 Antimicrobial is approved by the FDA (21 CFR 176.170 and 176.300) for use in the manufacturer of paper and paperboard that contacts food and for slimicides. Other than the two uses for pulp and paper mill systems, and food packaging, do not use for any material preservation applications involving direct or indirect food or drinking water containers.

FOR DETAILED DIRECTIONS FOR USE, PLEASE REFER TO THE LANXESS CORPORATION LABEL SUPPLEMENT. Read these entire Directions before using N-2001 Antimicrobial.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal. Do not use or store near heat or open flame. **PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. 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 the label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA regional Office for guidance. **Nonrefillable Container: Do not refill or reuse container.** Triple rinse as follows: Empty remaining contents into application equipment or mix tank. Tip container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn container over onto its other end and tip it back and forth several times. Empty the rinsate into the application equipment or mix tank or store rinsate for late use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning. If not available, puncture and dispose in a sanitary landfill.

LANXESS

Energizing Chemistry

Product Information

N-2001 ANTIMICROBIAL

EPA Registration Number 39967-115

N-2001 ANTIMICROBIAL

FOR THE CONTROL OF ALGAE, BACTERIA, FUNGI, AND MOLLUSKS IN A WIDE RANGE OF INDUSTRIAL PROCESS WATERS, WATER FLOOD INJECTION WATERS, FRACKING FLUIDS, DRILLING AND WORKOVER FLUIDS AND MATERIAL PRESERVATIONS

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. N-2001 Antimicrobial is approved by the FDA (21 CFR 176.170 and 176.300) for use in the manufacturer of paper and paperboard that contacts food and for slimicides. Other than the two uses for pulp and paper mill systems, and food packaging, do not use for any material preservation applications involving director indirect food or drinking water containers.

INDUSTRIAL PROCESSES AND WATER SYSTEMS

AIR WASHING SYSTEMS: For use only in Industrial Air Washer Systems that maintain effective mist eliminating components. Badly fouled systems must be cleaned before treatment is begun. **SLUG OR INTERMITTENT METHOD:** Initial dose: When system is noticeably fouled apply 6.3 to 12.5 oz./1000 gal (50 to 100 ppm). Repeat until control is achieved. Subsequent dose: When control is evident, apply 3.1 to 6.3 oz/1000 gal (25-50 ppm) every three days or as needed.
CONTINUOUS METHOD: Initial dose: When system is noticeably fouled, apply 6.3 oz/1000 gal (50) per day. Subsequent dose: Maintain initial rate by continuously feeding 3.1 to 6.3 oz/1000 gal (25-50 ppm) per day.

AUXILIARY AND STANDBY COMMERCIAL AND INDUSTRIAL SYSTEMS: For use only in Auxiliary and Standby Commercial and Industrial Systems that maintain effective mist eliminating components. Badly fouled systems must be cleaned before treatment is begun. **SLUG OR INTERMITTENT METHOD:** Initial dose: When system is noticeably fouled apply 6.3 to 12.5 oz/1000 gal (50 to 100 ppm). Repeat until control is achieved. Subsequent dose: When control is evident, apply 3.1 to6.3 oz/1000 gal (25-50 ppm) every three days or as needed. **CONTINUOUS METHOD:** Initial dose: When system is noticeably fouled, apply 6.3oz/1000 gal (50 ppm) per day. Subsequent dose: Maintain initial rate by continuously feeding 3.1 to 6.3 oz/1000 gal (25-50 ppm) per day.

BREWERY PASTEURIZER WATER: For use only in Brewery Pasteurizer Water that maintain effective mist eliminating components. Badly fouled systems must be cleaned before treatment is begun. **SLUG OR INTERMITTENT METHOD: Initial dose:** When system is noticeably fouled apply 6.3 to 12.5 oz/1000 gal (50 to 100 ppm). Repeat until control is achieved. **Subsequent dose:** When control is evident, apply 3.1 to 6.3 oz/1000 gal (25-50 ppm) every three days or as needed.
CONTINUOUS METHOD: Initial dose: When system is noticeably fouled, apply 6.3 oz/1000 gal (50 ppm) per day. **Subsequent dose:** Maintain initial rate by continuously feeding 3.1 to 6.3 oz/1000 gal (25-50 ppm) per day.

INDUSTRIAL RECIRCULATING WATER COOLING TOWERS: For use only in Industrial Recirculating Water Cooling Towers that maintain effective mist eliminating components. Badly fouled systems must be cleaned before treatment is begun. **SLUG OR INTERMITTENT METHOD: Initial dose:** When system is noticeably fouled apply 6.3 to 12.5 oz/1000 gal (50 to 100 ppm). Repeat until control is achieved. **Subsequent dose:** When control is evident, apply 3.1 to 6.3 oz/1000 gal (25-50 ppm) every three days or as needed.
CONTINUOUS METHOD: Initial dose: When system is noticeably fouled, apply 6.3 oz/1000 gal (50 ppm) per day. **Subsequent dose:** Maintain initial rate by continuously feeding 3.1 to 6.3 oz/1000 gal (25-50

ppm) per day.

OIL FIELD WATER SYSTEMS(Including water flood injection water and frac fluids): Badly fouled systems should be cleaned prior to treatment. Addition may be made at the free water knockouts before or after the injection pumps and injection well headers.
SLUG OR INTERMITTENT METHOD: Initial dose: When system is noticeably fouled apply 6.3 to 12.5 oz/1000 gal (50 to 100 ppm). Repeat until control is achieved for 2 to 8 hours per day once per week or daily as needed. Subsequent dose: When control is evident, apply 3.1 to 6.3 oz/1000 gal (25-50 ppm) every three days or as needed. **CONTINUOUS METHOD: Initial dose:** When system is noticeably fouled, apply 6.3 oz/1000 gal (50 ppm) per day. Subsequent dose: Maintain initial rate by continuously feeding 3.1 to 6.3 oz/1000 gal (25-50 ppm) per day.

a)WATER FLOOD INJECTION WATER
Initial Treatment: When the system is noticeably contaminated, add 50-100 ppm N-2001 Antimicrobial to the system (0.05 to 0.10 gallons N-2001 Antimicrobial per 1,000 gallons flood water). Repeat until control is achieved.
Subsequent Dose: When microbial control is evident, add 25 -100 ppm N-2001 Antimicrobial (0.025 to 0.10 gallons N-2001 Antimicrobial per 1,000 gallons flood water) to the system weekly, or as needed to maintain

b)FRAC FLUIDS
Add N-2001 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: N-2001 Antimicrobial should be added at a rate of 25 to 100 ppm (0.025 – 0.10 gallons per 1,000 gallons) depending on the degree of bacterial
fouling in the source water.

PULP AND PAPER MILL SYSTEMS: N-2001 Antimicrobial should be added to a paper making system at a point of uniform mixing such as the beaters, broke chest pump, save-all tank, or white tank. **Initial Dose:** When the system is noticeably contaminated, add 0.007-0.57 lbs of N-2001 Antimicrobial per ton of pulp or paper (dry basis) (1.2 – 100 ppm active) 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 0.007 – 0.57 lbs of –N-2001 Antimicrobial per ton of pulp or paper (dry basis) (1.2 – 100 ppm active) as a slug dose as necessary to maintain control.

OIL RECOVERY DRILLING FLUIDS: Add directly to the packer fluid, completion fluids, workover fluids or drilling mud. The dosage rate will depend upon the severity of the contamination. **SLUG OR INTERMITTENT METHOD: Initial dose:** when system is noticeably fouled apply 6.3 to 12.5 oz/1000 gal (50 to 100 ppm) intermittently for 2 to 8 hours per week or daily as needed. Repeat until control is achieved. **Subsequent dose:** When control is established, apply 3.1 to 6.3 oz/1000 gal (25 to 50 ppm) every three days or as needed to maintain control.

a)DRILLING, COMPLETION AND WORKOVER FLUIDS
N-2001 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 100 ppm N-2001 Antimicrobial (0.158 to 0.315 gallons N-2001 Antimicrobial per 100 barrels of fluid) to a freshly prepared fluid depending on the severity of contamination.
Maintenance dosage: Maintain a concentration of 25 to 100 ppm of N-2001 Antimicrobial by adding 0.0.079 to 0.315 gallons of N-2001 Antimicrobial per 100 barrels of additional fluid, or as needed, depending on the severity of the contamination.

MATERIAL PRESERVATION

PULP AND PAPER MILL PROCESSING CHEMICALS, ADHESIVES, AND COATINGS: Add N-2001 Antimicrobial directly to the material to be preserved prior to manufacturing into the finished product, (i.e., pulp, broke, polymers, defoamers, alum, emulsions, adhesives, papermill coatings, pigment

slurries, and paper products. The dosage rate will depend upon the material to be preserved and the storage time. The usual addition should be 1.3 to 3.8 oz/1000 gal (10 to 30 ppm). Under extreme conditions of spoilage, the dosage rate should be increased to 1.6 to 10.0 oz/1000 gal (12.5 to 80 ppm). The dosage rates are based on a maximum storage time of 2 weeks. For storage time greater than 2 weeks the maximum concentration should be increased to 6.3 to 12.5 oz/1000 gal (50 to 100 ppm). Do not use for adhesives or coatings that involve direct or indirect food, or human drinking water contact application. Dosage Rate per 1000 gallons of material:

Adhesives:	1.3 - 3.8 oz (10-30 ppm)
Alum:	1.3 - 3.8 oz (10-30 ppm)
Broke:	1.3 - 3.8 oz (10-30 ppm)
Defoamers:	1.3 - 3.8 oz (10-30 ppm)
Emulsions:	1.3 - 3.8 oz (10-30 ppm)
Paper products:	1.3 - 3.8 oz (10-30 ppm)
Papermill coatings:	1.3 - 3.8 oz (10-30 ppm)
Pigment slurries:	1.3 - 3.8oz (10-30 ppm)
Polymers:	1.3 - 3.8 oz (10-30 ppm)
Pulp:	1.3 - 3.8oz (10-30 ppm)

ADHESIVE SYSTEMS (NON-PAPER): N-2001 Antimicrobial is used in the preservation of non-paper related aqueous systems. Laboratory testing shows N-2001 Antimicrobial to be effective in the range of 0.025 to 0.1% (250 to 1000 ppm). The exact amount for the preservative of any given formulation will depend on the components, storage time, temperature, etc., and can be determined by the actual testing based on formula weight. Dosage Rate per 1000 gallons of material:

Glues:	2.0 – 8.01 lbs (250-1000 ppm)
Automobile adhesives tapes:	2.0 – 8.01 lbs (250-1000 ppm)

PASTES: N-2001 Antimicrobial is used in the preservation of non-paper related aqueous systems. Laboratory testing shows N-2001 Antimicrobial to be effective in the range of 0.025 to 0.1% (250 to 1000 ppm). The exact amount for the preservative of any given formulation will depend on the components, storage time, temperature, etc., and can be determined by the actual testing based on formula weight. Dosage Rate per 1000 gallons of material:

Wallpaper:	2.0 –8.01 lbs (250-1000 ppm)
Wood glue:	2.0 – 8.01 lbs (250-1000 ppm)
Nonfood packaging adhesives:	2.0– 8.01 lbs (250-1000 ppm)

PAINTS, COATINGS, AND STAINS: N-2001 Antimicrobial is used in the preservation of non-paper related aqueous systems. Laboratory testing shows N-2001 Antimicrobial to be effective in the range of 0.025 to 0.1% (250 to 1000 ppm). The exact amount for the preservative of any given formulation will depend on the components, storage time, temperature, etc., and can be determined by the actual testing based on formula weight. Dosage Rate per 1000 gallons of material:

Paints and coatings (between manufacture and formation):	2.0 – 8.01lbs (250-1000 ppm)
Coatings systems (paints and coatings as finished products):	2.0 – 8.01 lbs (250-1000 ppm) Titanium dioxide and calcium carbonates
(precursors to paint and coating products):	2.0 – 8.01 lbs (250-1000 ppm)

PIGMENTS, DYES, AND FILLER SUSPENSION: N-2001 Antimicrobial is used in the preservation of non-paper related aqueous systems. Laboratory testing shows N-2001 Antimicrobial to be effective in the range of 0.025 to 0.1% (250 to 1000 ppm). The exact amount for the preservative of any given formulation will depend on the components, storage time, temperature, etc., and can be determined by the actual testing based on formula weight. Dosage Rate per 1000 gallons of material:

Pigments slurries (paint dyes for non-clothing such as industrial fibers):	2.0 – 8.01 lbs (250-1000 ppm)

POLYMER DISPERSION AND EMULSIONS: N-2001 Antimicrobial is used in the preservation of non-paper related aqueous systems. Laboratory testing shows N-2001 Antimicrobial to be effective in the range of 0.025 to 0.1% (250 to 1000 ppm). The exact amount for the preservative of any given formulation will depend on the components, storage time, temperature, etc., and can be determined by the actual testing based on formula weight. Dosage Rate per 1000 gallons of material:

Contact polymer systems:	2.0 – 8.01 lbs (250-1000 ppm)
Latex emulsions systems:	2.0 – 8.01 lbs (250-1000 ppm)

FOOD PACKAGING: For paper and paperboard intended for use in contact with food, the rate of application of this product must be adjusted so that the amount of active ingredient (dodecylguanidine hydrochloride) retained does not exceed 0.4 percent by weight of the paper or paperboard. This product is effective in controlling microorganisms, such as bacteria, fungi, and yeasts, which cause deterioration of paper and paperboard products or articles molded from paper pulp. It may be added to the pulp stock in the beater or applied to the formed sheet by size press or roll coater, or as a uniform spray. If the product is used as a beater additive, the degree of retention of the active ingredient will depend upon the nature of the other additives in the system. Technical service is available from the manufacturer of this product to assist customers in making the proper and most efficient use of the product.

REMARKS

If you need assistance or information, please call your nearest LANXESS representative, or our Pittsburgh office at 800-LANXESS.

IN CASE OF EMERGENCY, CALL: CHEMTREC 1-800-424-9300
INTERNATIONAL (703)-527-3887

HAVE THE PRODUCT CONTAINER OF LABEL WITH YOU WHEN CALLING A POISON CONTROL CENTER OR DOCTOR OR GOING FOR TREATMENT.

LANXESS Corporation
111 RIDC Park West Drive
Pittsburgh, PA 15275
412-809-1000

The conditions of your use and application of our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. This application-specific analysis at least must include testing to determine suitability from a technical as well as health, safety and environmental standpoint. Such testing has not necessarily been done by LANXESS Corporation. All information is given without warranty or guarantee. It is expressly understood and agreed that the customer assumes and hereby expressly releases LANXESS from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance and information. Any statement or recommendation not contained herein is unauthorized and shall not bind LANXESS. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact granted under the claims of any patent.

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