Antimicrobial N-20

Controls bacteria, fungi, and yeasts in Industrial Process and Water Systems including: paper mills, and industrial cooling water systems; controls slime forming in air washer systems. Controls the growth of microorganisms in preservation applications including; adhesives, glues and tackifier preservation; construction products and household products; metal working fluids containing water; enhanced oil recovery; paints coatings and stains; pigments, dyes and filler suspensions; polymer dispersions and emulsions; Pulp & Paper Mills; Equipment Cleaning.

KEEP OUT OF REACH OF CHILDREN

DANGER

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals
Corrosive. Causes irreversible eye damage or skin burns. Do not get in eyes, on skin, or on clothing. May cause loss of vision. Fatal if absorbed through skin. May be fatal if swallowed. Harmful if inhaled. Avoid breathing vapor. Wear goggles of face shield (safety glasses). Wear protective clothing (long-sleeve shirt and long pants, socks plus shoes and chemical resistant gloves such as waterproof gloves). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove contaminated clothing and wash before reuse.

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.

IN CASE OF A TRANSPORTATION EMERGENCY CALL CHEMTREC 1-800-424-9300. NOTICE: DO NOT SHIP OR STORE WITH FOOD, FEEDS, DRUGS OR CLOTHING.

EPA Reg. No.: 39967-103

EPA Est. No.: 111 RIDC Park West Drive • Pittsburgh, PA 15275-1112

Lot No.: 15275-1112

ACTIVE INGREDIENT:
2,2-Dibromo-3-nitrilopropionamide ............. ...20.0%

INERT INGREDIENTS: 
80.0%

TOTAL 100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER

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 immediately 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. Do not give anything by mouth to an unconscious person.

IF INHALED: Move person to fresh air. If not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth. Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor.

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

STORAGE AND DISPOSAL

PESTICIDE STORAGE: Do not contaminate water, food or feed by storage or disposal.

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. STORAGE: To maintain product quality, store at temperatures below 60° C. Keep container tightly closed when not in use. CONTAINER DISPOSAL: Nonrefillable container: Do not reuse or refill this container. Triple rinse as follows: Empty remaining contents into application equipment or mix tank. Tip container on its side and roll back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip back and forth several times. Turn container over onto its other end and tip it back and forth several times. Empty rinsate into application equipment or mix tank or store rinsate into the application equipment or mix tank or store for later 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 Corporation
111 RIDC Park West Drive • Pittsburgh, PA 15275-1112
Antimicrobial N- 20

EPA Registration Number 39967-103
CAS Number: 55965-84-9
Antimicrobial N-20

Controls bacteria, fungi, and yeasts in Industrial Process and Water Systems including: paper mills, and industrial cooling water systems; controls slime forming in air washer systems. Controls the growth of microorganisms in preservation applications including; adhesives, glues and tackifier preservation; construction products and household products; metal working fluids containing water; enhanced oil recovery; paints coatings and stains; pigments, dyes and filler suspensions; polymer dispersions and emulsions; Pulp & Paper Mills; Equipment Cleaning.

DIRECTIONS FOR USE
It is a violation of federal law to use this product in a manner inconsistent with its labeling.
NOTE: ADD ANTIMICROBIAL N-20 SEPARATELY TO THE SYSTEM. DO NOT MIX IT WITH OTHER ADDITIVES, IN ORDER TO AVOID DECOMPOSITION OF ANTIMICROBIAL N-20 DUE TO THE HIGH pH OF MANY ADDITIVE FORMULANTS.

INDUSTRIAL PROCESS AND WATER SYSTEMS

INDUSTRIAL RECYCLATING WATER COOLING TOWERS
Add Antimicrobial N-20 to the basin (or any other point of uniform mixing). Additions must be made with a metering pump; it may be continuous 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 must be discontinued for 24-48 hours.

FOR CONTROL OF BACTERIA: Add 0.00095-0.0095 gallon Antimicrobial N-20 per 1,000 gallon of water in system, depending on severity of contamination.
Intermittent or Slug Method: Initial Dose: When system is noticeably fouled, add 0.0048-0.0095 gallon Antimicrobial N-20 per 1,000 gallon of water in the system every 4 days, or as needed to maintain control. Subsequent Dose: When microbial control is evident add 0.0024-0.0095 gallon Antimicrobial N-20 per 1,000 gallon of water in the system every 4 days, 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, add 0.0048-0.0095 gallon Antimicrobial N-20 per 1,000 gallon of water to the system. Subsequent Dose: Maintain this level by pumping a continuous feed of 0.00095-0.0048 gallon Antimicrobial N-20 per 1,000 gallon of water to the system per day. Badly fouled Systems must be cleaned before treatment is begun.

FOR CONTROL OF FUNGI AND ALGAE
Add 0.029-0.095 gallon Antimicrobial N-20 per 1,000 gallon of water in system, depending on severity of contamination.
Intermittent or Slug Method: Initial Dose: When system is noticeably fouled, add 0.0048-0.0095 gallon Antimicrobial N-20 per 1,000 gallon of water in the system every 4 days, or as needed to maintain control. Subsequent Dose: When microbial control is evident add 0.0024-0.0095 gallon Antimicrobial N-20 per 1,000 gallon of water in the system every 4 days, 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, add 0.048-0.095 gallon Antimicrobial N-20 per 1,000 gallon of water to the system. Subsequent Dose: Maintain this level by pumping a continuous feed of 0.029-0.095 gallon Antimicrobial N-20 per 1,000 gallon of water to the system per day. Badly fouled Systems must be cleaned before treatment is begun.
ENHANCED OIL RECOVERY SYSTEMS

For controlling slime-forming bacteria, sulfide producing bacteria, yeasts, and fungi in oil field water, polymer or micellar flood, water disposal systems, or other oil field water systems, add 1-80 ppm Antimicrobial N-20 (0.1-6.4 gallon Antimicrobial N-20 per 2400 barrels of water) depending on the severity of contamination. Additions must be made with a metering pump either continuously or intermittently.

Continuous Feed Method
When the system is noticeably fouled, add 10-80 ppm Antimicrobial N-20 (0.8-6.4 gallon Antimicrobial N-20 per 2400 barrels of water) continuously until the desired degree of control is achieved. Subsequently, treat with 1-15 ppm Antimicrobial N-20 (0.1-1.2 gallon Antimicrobial N-20 per 2400 barrels of water) continuously or as needed to maintain control.

Intermittent or Slug Method
When the system is noticeably fouled, or to maintain control of the system, add 10-80 ppm Antimicrobial N-20 (0.8-6.4 gallon Antimicrobial N-20 per 2400 barrels of water) intermittently for 4-8 hours per day, and from 1-4 times per week, or as needed depending the severity of contamination. Addition of Antimicrobial N-20 may be made at the free knockouts, before or after the injection pumps and injection well headers. NOTE: For control of bacteria, yeast, and fungi in aqueous solutions biopolymer used in flooding operations, add 15-80 ppm Antimicrobial N-20 (1.2-6.4 gallon Antimicrobial N-20 per 2400 barrels of water). Additions of Antimicrobial N-20 must be made with a metering pump immediately after preparation of the aqueous biopolymer solution to prevent loss of viscosity.

INDUSTRIAL AIR-WASHER SYSTEMS

Add 0.0015-0.095 gallon Antimicrobial N-20 per 1,000 gallon of water in the system, depending upon the severity of the contamination of control slime-forming bacteria and fungi in industrial air-washer systems.

Intermittent or Slug Method NOTE: For use only in industrial air washer systems that maintain effective mist eliminating components.

PULP & PAPER MILLS

For the control of bacterial, fungal, and yeast growths in pulp, paper and paperboard mills, add Antimicrobial N-20 at the rate of 0.15-0.50 lb/ton of pulp or paper (dry basis). Addition may be continuous or intermittent, depending upon the type of system and the severity of contamination. It must be made with a metering pump at a location that will ensure uniform distribution of Antimicrobial N-20 in the mass of fiber and water, such as the beaters, jordan inlet or discharge, broke chests, furnish chests save-alls, and white-water tanks. Heavily fouled systems must be boiled out, then treated with 0.15-0.35 lb Antimicrobial N-20 per ton of paper (dry basis), as necessary for control. Moderately fouled systems must be treated continuously with 0.35-0.50 Antimicrobial N-20 per ton of paper (dry basis) until the slime accumulation is controlled. Addition rates can then be reduced to 0.15-0.35 lb Antimicrobial N-20 per ton of paper on a continuous or intermittent basis, as needed for control. Dislodged slime may cause breaks in the paper and a clean up of the paper machine is advisable. Slightly fouled systems must be treated continuously with 0.15-0.35 lb Antimicrobial N-20 per ton of paper (dry basis) until the slime is controlled, then added on an intermittent basis to maintain control.
**PAPER & PAPER AUXILIARIES*/ADDITIVES*\**
Use Antimicrobial N-20 as a preservative for the control of bacteria and fungi in paper and paper additives*. Antimicrobial N-20 may be fed directly to the additive at the following recommended dosages.
Dose Ranges:
Paper Auxiliaries*/Additives* and Paper Slurries.........125-2000 ppm
*Not For Use In The State Of California

**REVERSE OSMOSIS SYSTEM**
(Not For Use In The State Of California)
Antimicrobial N-20 may be used to control bacteria and reduce biofouling in industrial membrane systems (reverse osmosis, ultrafiltration, micro filtration). Acceptable applications include reverse osmosis for the production of boiler makeup water, rinsing of electric components, and industrial wastewater treatment. Antimicrobial N-20 may be either slug fed or continuously fed to the feed streams of membrane systems. For slug feed, add between 50 and 70 ppm Antimicrobial N-20 for 30 minutes to 3 hours. Frequency of addition must be every 5 days or as needed. When fed continuously, feed rate must be between 10 and 100 ppm Antimicrobial N-20. NOTE: For industrial systems in which Antimicrobial N-20 residuals cannot be tolerated, Antimicrobial N-20 must be slug fed. During and for 30 minutes to 1 hour following chemical addition, permeate and concentrate streams must be diverted to waste.

**MATERIAL PRESERVATION**

**ADHESIVE, GLUES AND TACKIFIER PRESERVATION:**
Add Antimicrobial N-20 as an in-container preservative for the control of bacteria and fungi in water soluble and water dispersed adhesives. Antimicrobial N-20 can be directly mixed homogeneous into to dry glues before they are concentrated.
Dose Ranges (per 1000 gallons of material):
Albumin Containing Glues, Bone Glues, Casein-Containing Adhesives, Cellulose-Based Adhesives, Dextrin-Based Adhesives, Fish Glues, Gelatin-Based Glues, Leather Glues, Plant Glues, Polymer Dispersion-Based Adhesives, Skin Glues, Starch-Based Glues (Liquid) (Solid) 25-2000 ppm

**CONSTRUCTION PRODUCTS AND HOUSEHOLD PRODUCTS**
Add Antimicrobial N-20 for the control of bacteria and fungi in water soluble and water dispersed construction products. Antimicrobial N-20 can be fed either directly to the finished construction or household product or to one of the raw materials used in the formulation of the construction and/or household product.
Dose Ranges (per 1000 gallons of material):
Biopolymers *(e.g. Xanthan), Caulking Materials, Mastics, Ceramic Glazes*, Chemical Cleaning Solutions, Cleaning Solutions, Concrete and Masonry Additives*, Fire Extinguishing Medium*, Photographic Gelatins*, Plasters*, Polishes, Rubber Systems*, Tints*, Wax Emulsions 25-2000 ppm

For Use In Non Food Contact Applications Only

*Not For Use In The State Of California
METAL WORKING FLUIDS CONTAINING WATER
This product is effective in metalworking fluid concentrates, which have been diluted in water at ratios of 1:100 - 1:4. For controlling (or inhibiting) the growth of bacteria, fungi, and yeasts that may deteriorate metalworking fluids containing water, add Antimicrobial N-20 to the fluid in the collection tank. Additions must be made with a metering pump.

Initial or Slug Dose: When the system is just noticeably fouled, add 0.25 gallon Antimicrobial N-20 per 1,000 gallon of metalworking fluid to the system. Repeat until control is achieved.

Subsequent Dose: When microbial control is evident, add 0.1-0.2 gallon Antimicrobial N-20 per 1,000 gallon of metal working fluid per day, or as needed to maintain control. Additions can be made continuously or intermittently. Slug the system as required.

PAINTS, COATINGS AND STAINS*- For Use In Non Food Contact Applications Only:
Antimicrobial N-20 is generally incorporated directly into pigments and fillers, but it can also be first dissolved in a suitable solvent or added directly to the pre-heated binder systems. For best results, the preservative must be homogeneously incorporated into the stain or paint. Discoloration may occur, and must be evaluated.
Dose Ranges (per 1000 gallons of material): Alkyd Resin-Based Systems, Casein-Systems, Latex-Based Systems, Oil-Containing Systems, Synthetic Resin Dispersions...... 125-2000 ppm

For Use In Non Food Contact Applications Only
*Not For Use In The State Of California

PIGMENTS, DYES AND FILLER SUSPENSIONS
Mix Antimicrobial N-20 evenly with dispersing agents for processes where the temperature does not exceed 100°C. For all other processes, Antimicrobial N-20 is metered directly into the material to be preserved during the cooling step after the temperature falls below 50°C and homogeneously distributed by stirring.
Dose Ranges (per 1000 gallons of material):
Calcium Carbonate Slurries, Carbon Black Pigment Slurries, Clay Slurries, Iron Oxide Pigment Slurries, Kaolin Slurries, Organic Dyes and Pigment Slurries, Other Filler Suspensions, Starch Slurries............. 125-2000 ppm

For Use In Non Food Contact Applications Only

POLYMER DISPERSIONS AND EMULSIONS:
Antimicrobial N-20 is added immediately after the preparation of the polymer dispersion or emulsion during the cooling process. Losses of active ingredient caused by elevated temperatures must be avoided.
Dose Ranges: (Polymer Dispersions and Emulsions) (per 1000 gallons of material):

For Use In Non Food Contact Applications Only
EQUIPMENT CLEANING
(Not For Use In The State Of California)
This product can be used to kill microorganisms present in solutions or growing on the surfaces of process equipment such as reaction vessels, storage tanks, and containers, piping and hoses. For standard cleaning of equipment, add 50 to 250 ppm of this product in an aqueous solution to process piping and equipment. Heavily fouled solutions or equipment may be treated with this product. After treating process equipment with this product, allow the solution to be in contact with surfaces for up to four hours. If bleach is being used for cleaning purposes at 50-250 ppm available chlorine, this product can be used as part of a dual treatment program at 50-100 ppm by weight, in combination with sodium hypochlorite. Treatment process equipment with chlorine first. Follow this treatment with this product. Do not combine concentrated sodium hypochlorite solution with this product.

Not for use in Food/Beverage processing equipment.

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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