MYACIDE® AS PLUS

ACTIVE INGREDIENT:
2-Bromo-2-nitropropane-1,3-diol 97.5%
INERT INGREDIENTS: 2.5%
TOTAL 100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CORROSIVE: CAUSES IRREVERSIBLE EYE DAMAGE AND SKIN BURNS. MAY BE HARMFUL IF SWALLOWED, ABSORBED THROUGH SKIN OR INHALED.

Do not get in eyes, on skin, or on clothing. Do not breathe dust. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

FIRST AID

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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.

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

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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

NOTE TO PHYSICIAN:
Probable mucosal damage may contraindicate the use of gastric lavage.

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 sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL AND CHEMICAL HAZARDS

Avoid contact with metal equipment such as scoops, mills or seives.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep away from heat.

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 to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Dispose of liner in a sanitary landfill, or by incineration, if allowed by State and local authorities. If burned, stay out of smoke.

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DOW
The Dow Chemical Company
Midland, Michigan 48674 U.S.A.
1-800-258-CHEM

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464-675
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DIRECTIONS FOR USE

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

GENERAL USE DIRECTIONS

To control the growth of slime-forming, spoilage, odor-causing and corrosion inducing bacteria and algae in industrial applications. Not for control of algae in California.

MYACIDE AS PLUS can be dosed directly or by preparing a stock solution immediately prior to application either by open pouring (not cooling water treatment) or by metered pump.

For product preservation MYACIDE AS PLUS is best added after any heating stage or when the product has cooled below 40°C.

This product may be used in terrestial and off-shore oil drilling muds and packer fluids. Do not apply by open pouring of liquid to cooling water systems; a metering pump delivery system is required for this use and application method.

Applicators and other handlers must wear:
- Coveralls over long-sleeved shirt and long pants.
- Goggles and face shield.
- Socks plus shoes.
- Chemical resistant gloves.
- Dust/mist filtering respirator (MSHA/NIOSH approval number prefix (TC-21C), or a NIOSH approved respirator with any N, R, P, or HE prefilter).

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

INDUSTRIAL RECIRCULATING WATER COOLING TOWERS AND EVAPORATIVE CONDENSERS

To control slime-forming bacteria and algae in industrial recirculation cooling towers and evaporative condensers, MYACIDE AS PLUS may be dosed as the solid directly into the sump or basin or it may be added to the cooling water return at a suitable point. The MYACIDE AS PLUS should be added at a point where there is adequate flow or turbulence to ensure quick dissolution (e.g. the pump outlet from the tower sump).

FREQUENCY AND DOSE: MYACIDE AS PLUS may be slug-dosed once or twice weekly as a normal routine. Where contamination is heavy, more frequent shock-dosing may be required. MYACIDE AS PLUS should be shock-dosed at between 0.21-0.84 lb/1000 gallons depending on the condition of the tower, the quality of the raw water input, and the amount of bleed off.

PRODUCED WATER

To inhibit the growth of slime-forming or corrosion-inducing sulfate-reducing bacteria in formation water produced by wells together with oil or gas, MYACIDE AS PLUS may be used as the solid or pre-dissolved in a quantity of warm water or alcohol, then injected into the water-containing oil or gas stream at any convenient point. It should be injected in slug doses, not as a continuous feed.

FREQUENCY AND DOSE: Depending on severity and rapidity of contamination, MYACIDE AS PLUS should be slug-dosed from once a week to once a month with 0.018-0.036 lb per barrel.

INDUSTRIAL PROCESS WATER

Use MYACIDE AS PLUS to effectively control bacterial and algal growth in industrial process water, including closed circuit machine cooling (injection molding, etc.) and stored (non-potable) water, as well as to reduce the biofouling of pipework, heat exchanges, and condenser tubes, and to minimize microbially produced corrosion. Dosing should be carried out into the sump/tank of the process water system. Shock-dosing is preferred. It is not necessary to dilute MYACIDE AS PLUS concentrate prior to dosing. MYACIDE AS PLUS can also be used as an intermittent flush treatment during regular maintenance cleaning of tank and equipment.

FREQUENCY AND DOSE: In open systems, shock-dosing should be carried out on a once weekly to once monthly basis, depending on the degree of contamination. In closed circuit systems, less frequent dosing (once or twice monthly) would be sufficient. Dosing should be carried out to give an initial concentration of 50 ppm (0.42 lb/1000 gallons). When the above treatment has been successful, dosing can be lowered to a minimum of 10 ppm MYACIDE AS PLUS (0.08 lb/1000 gallons). For intermittent treatment of industrial process waters during routine maintenance, MYACIDE AS PLUS should be used at 100 ppm (0.84 lb/1000 gallons) and a contact time of at least one hour.

DRILLING FLUIDS AND WORKOVER AND COMPLETION FLUIDS

To inhibit the growth of cellulolytic, slime-forming or sulfate-reducing bacteria in oil and gas well drilling muds and brines, MYACIDE AS PLUS may be used as the solid or pre-dissolved in a quantity of warm water, then dosed directly into the mud or brine.

FREQUENCY AND DOSE: A single slug dose once to three times each 24 hours. Dosing may be less frequent where contamination is low. Each slug dose should be 0.018 to 0.036 lb per barrel total mud volume.

PIPELINE MAINTENANCE

To control aerobic and anaerobic bacteria, particularly sulfate-reducing bacteria, growth in oil and gas related production piping and transportation systems, pre-dissolve MYACIDE AS PLUS in warm water or in a carrier solvent to give up to 20% concentrate. This concentrate can be injected directly into the pipeline or may be added to the hydrocarbon phase. Using carrier solvent addition of the MYACIDE AS PLUS will produce long-term water phase concentrations by a diffusion process.

FREQUENCY AND DOSE: Carrier additions will vary with the degree of contamination and volume of fluids through the pipeline. Slug treatments are recommended and can vary from daily to monthly to control growth. MYACIDE AS PLUS should be dosed at a rate with will achieve concentrations of 25-200 ppm in the aqueous phase. When using a carrier solvent, higher concentrations may be used to allow diffusion into the aqueous phase. Dose will depend on the volume of oil or crude and the expected water fraction.

METALWORKING FLUIDS

MYACIDE AS PLUS is recommended for use in stoable oils, semi-synthetic, and synthetic fluids. It should be added directly to the sump (with agitation) or pre-dissolved in water and added as a solution. A dose of 250 ppm is recommended for initial treatment, higher levels up to 1000 ppm, but no greater for fouled systems. After addition of MYACIDE AS PLUS, the system should be circulated for about one hour before shut-down.

IN DILUTED FLUIDS: A concentration of 250 to 1000 ppm of MYACIDE AS PLUS in the fluid is sufficient to control gross microbial growth. For example, add 0.5 lb of MYACIDE AS PLUS to 1000 lb of fluid to obtain a dose level of 500 ppm in the fluid.

MAINTENANCE DOSAGE: Add 100-200 ppm of MYACIDE AS PLUS to maintain control of the system.

IN CONCENTRATES: MYACIDE AS PLUS may be incorporated in metalworking fluid concentrate by the manufacturer. However, the manufacturer should determine the storage stability of MYACIDE AS PLUS in the concentrate to ensure that incompatibility will not affect its efficacy. The amount to be incorporated will depend on the dilution factor recommended for the concentration.

PAPER MILL PROCESS WATER

To control slime-forming bacteria in paper or paperboard process water systems, MYACIDE AS PLUS may be dosed as the solid at a convenient point early in the process system. Suitable dosing points are the machine chest, constant head box or backwater loop system.

FREQUENCY AND DOSE: MYACIDE AS PLUS should be shock-dosed once, twice or three times daily in quantities sufficient to meet the required dose based on the daily production of finished products. Dose at between 0.02 and 0.5 lb per ton of finished paper or paperboard depending on the complexity of the system, quality of raw paper and type and degree of contamination.

PAPER MILLS - BULK PULP

To preserve bulk quantities of pulp in paper and paperboard manufacturing systems or to prevent foul odors and general biodeterioration of stock when it is stored in bulk for any significant period of time, add MYACIDE AS PLUS as the solid or pre-dissolve in a quantity of warm water, then dose directly into the hydropulper, machine chest or stock chest.

FREQUENCY AND DOSE: In general, a single slug dose will provide protection for up to 3 days or longer depending upon the initial level of contamination in the stock. In situations where contamination is high, repeat dosing every 1-7 days may be required. MYACIDE AS PLUS should be dosed at between 0.09-0.44 lb per ton of stock (0.42-1.7 lb/1000 gallons) depending on the type and degree of contamination.

WATER-BASED PRINTING INKS AND FOUNT SOLUTIONS

To inhibit growth on spoilage bacteria during the storage and use of water-based printing inks and fount solutions. For in-can preservation, add MYACIDE AS PLUS at any convenient point during the manufacturing process. Ideally, it should be added as a final step after any heating stage and when the product has cooled to below 40°C. To control bacterial spoilage during the use of fount solutions, MYACIDE AS PLUS should be shock-dosed at a suitable point in the fount reservoir where there is adequate flow or turbulence to ensure quick dissolution. MYACIDE AS PLUS may be shock-dosed once or twice weekly as a normal routine. Where conditions indicate, more frequent shock-dosing may be required.

IN-CAN PRESERVATION: MYACIDE AS PLUS should be shock-dosed at 100 to 500 ppm based on the final formulation volume (0.84-4.2/1000 gallons).

FOUNT SOLUTIONS: MYACIDE AS PLUS should be shock-dosed at between 25 and 100 ppm (0.21-0.84 lb/1000 gallons) depending on the contamination levels in the fount reservoir.

STARCH, PIGMENT AND EXTENDED SLURRIES

To inhibit the growth of spoilage bacteria during the manufacture, storage, and distribution of water-based suspension and concentrates, MYACIDE AS PLUS may be dosed at or close to the end of the manufacturing process as the solid or pre-dissolved in a quantity of the process water. If the manufacturing process involves a heating stage, the MYACIDE AS PLUS should be added after this stage when the product has cooled to below 40°C.

FREQUENCY AND DOSE: MYACIDE AS PLUS should be dosed at 100 to 500 ppm based on the final formulation volume (0.84-4.2 lb/1000 gallons).

WATERFLOOD

To inhibit the growth of anaerobic and aerobic bacteria and all waterflood base fluids used in the recovery of oil and gas reservoirs, add MYACIDE AS PLUS as a dry product or pre-dissolve in any base fluid, or inject directly at the well head.

FREQUENCY AND DOSE: MYACIDE AS PLUS should be added continuously to waterflood fluids or slug-dosed depending on the bottom hold temperature and fluid chemistry at the rate of 25-100 ppm (0.009-0.036 lb per barrel) depending on the quality of the base fluid.

INJECTION FLUIDS

For the control of contamination and corrosion from bacterial sources in fluids/waste fluids that are disposed of through injection into an approved well following approved guidelines, add MYACIDE AS PLUS as a dry product or pre-dissolved in each volume of fluid prior to injection.

FREQUENCY AND DOSE: MYACIDE AS PLUS should be added at a rate of 50-100 ppm (0.018-0.036 lb per barrel) based on the water percent of the injection fluid.

ENHANCED OIL RECOVERY (EOR) FLUIDS

For the effective control of bacterial growth and eliminating degradation of EOR gels and fluids used in the oil and gas industry, add MYACIDE AS PLUS during mixing as a dry product or pre-dissolve or add by injection during the EOR process.

FREQUENCY AND DOSE: MYACIDE AS PLUS should be added throughout the EOR operation at the rate of 50-100 ppm (0.018-0.036 lb per barrel) depending on the quality of the makeup water.

Recommended doses expressed as ppm are ppm-product.

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WELL SQUEEZE FLUIDS

For the effective control of aerobic and anaerobic bacteria in squeeze fluids and downhole well bore areas, add MYACIDE AS PLUS during pre-mixing of the well squeeze fluid or (in the case of direct mix injection systems) an aqueous solution may be added by direct injection at the well head during the well squeeze procedure.

FREQUENCY AND DOSE: MYACIDE AS PLUS should be used for each well squeeze operation to ensure best results. Add MYACIDE AS PLUS at a rate of 0.21-1.68 lb/1000 gallons, depending on the quality of the makeup water.

FRACTURING FLUIDS

MYACIDE AS PLUS reduces bacterial contamination and degradation of fracturing gels and fluids used as well stimulants in the oil and gas industry. MYACIDE AS PLUS may be added during pre-mixing of the fracturing fluid or (in the case of direct mix injection systems) an aqueous solution may be added by direct injection at the head during the fracturing procedure.

FREQUENCY AND DOSE: MYACIDE AS PLUS should be used for each fracturing operation to ensure best results. MYACIDE AS PLUS should be added at a rate of 0.42-0.84 lb/1000 gallons depending on the quality of the makeup water.

WATER BOTTOMS IN OIL STORAGE OR TRANSPORTATION TANKS

For effective control of bacterial contamination in water bottoms in crude and refined hydrocarbon storage systems. Above and below ground storage tanks and large marine systems are all suitable for treatment. MYACIDE AS PLUS may be pre-dissolved in warm water to give up to a 20% concentrate. This concentrate can be injected directly into the water bottom or may be sprayed over the surface of the hydrocarbon phase and allowed to percolate through. Using a carrier solvent for addition of MYACIDE AS PLUS into the hydrocarbon phase will provide long-term water concentrations by a diffusion process.

FREQUENCY AND DOSE: Direct addition to the water phase should be carried out every 30-60 days. Using a carrier solvent for addition to the hydrocarbon phase will provide longer term water concentrations depending on frequency of hydrocarbon movement, draining of water bottom, and other factors. MYACIDE AS PLUS should be dosed at a rate which will achieve concentrations of 50-100 ppm in the aqueous phase. When using a carrier solvent, higher initial concentrations may be used to allow diffusion into the aqueous phase.

Adhesives

For the control of microbial contamination, add 0.1-0.5 lb of MYACIDE AS PLUS per 1000 lb total formulation weight. The addition is best accomplished by pre-dissolving the MYACIDE AS PLUS in any water to be incorporated into the formulation.

INDUSTRIAL AND/OR COMMERCIAL AIR WASHERS

For the effective control of bacterial growth in air scrubbing units and to reduce built up slime deposits. Dosing should be carried out into the water sump of the scrubbing unit on a routine basis. Shock dosing is preferred. It is not necessary to dilute MYACIDE AS PLUS concentrate prior to dosing. MYACIDE AS PLUS can also be used as an intermittent flush treatment during regular maintenance/cleaning of the scrubbing unit.

FREQUENCY AND DOSE: Shock dosing should be carried out on a regular basis. Heavily fouled systems may require twice weekly treatment. Light to moderate contamination will require once weekly to once monthly additions. Dosing should be carried out to give an initial concentration of 50 ppm (0.42 lb/1000 gallons). When the above treatment has been successful, dosing can be lowered to a minimum of 25 ppm MYACIDE AS PLUS (0.21 lb/1000 gallons). For intermittent treatment of air scrubbing systems during routine maintenance/cleaning MYACIDE AS PLUS should be used at 100 ppm (0.84 lb/1000 gallons) and a contact time of at least one hour.

INDUSTRIAL AND/OR COMMERCIAL AIR CONDITIONING AND HUMIDIFYING SYSTEMS

For the effective control of bacterial growth in air conditioning and humidifying systems and to remove built up slime deposits. Dosing should be carried out into the conditioning water sump on a routine basis. Shock dosing is preferred. It is not necessary to dilute MYACIDE AS PLUS concentrate prior to dosing. MYACIDE AS PLUS can also be used as an intermittent flush treatment during regular maintenance/cleaning of the air conditioning units.

FREQUENCY AND DOSE: Shock dosing should be carried out on a once weekly to once monthly basis. Dosing should be carried out to give and initial concentration of 50 ppm (0.42 lb/1000 gallons). When the above treatment has been successful, dosing can be lowered to a minimum of 25 ppm MYACIDE AS PLUS (0.21 lb/1000 gallons). For intermittent treatment of air conditioning systems during routine maintenance MYACIDE AS PLUS should be used at 100 ppm (0.84 lb/1000 gallons) and a contact time of at least one hour.

CHEMICAL TOILET DEODORANTS

To inhibit the growth of odor-causing bacteria in chemical toilets. Deodorant concentrates should incorporate MYACIDE AS PLUS at levels of 1-28%, depending on the desired concentration level. To effectively control odor in a portable toilet, a level of 100-500 ppm MYACIDE AS PLUS is recommended.

PAINTS, WATER-BASED COATING APPLICATION TANKS, AND LATEX AND ANTIFOAM EMULSION SYSTEMS

To provide in-can preservation and prevent bacterial spoilage during storage of acrylic, styrene-acrylic, polyvinyl acetate, and other latex emulsion concentrates and latex emulsion based paints. Also for the preservation of silicon and other antifoam emulsion systems, and to prevent spoilage of in-service paint application tanks. Add THIS PRODUCT at any convenient point during the manufacturing process. Ideally it should be added as a final step just prior to packing of the product into bulk or sales packs. If a heating stage is involved in the manufacture, add THIS PRODUCT after this stage when the product has cooled to below 40°C. Addition to application tanks should be by slug dosing the tank as needed to prevent bacterial spoilage.

FREQUENCY AND DOSE: THIS PRODUCT should be dosed at 100 to 500 ppm based on the final formulation volume (0.84-4.2 lb/1000 gallons).

ABSORBENT CLAYS, CORN COBS, and GROUND WOOD

Impregnate absorbent clays, corn cobs, or ground wood with MYACIDE AS PLUS to inhibit the growth of odor-causing bacteria. The suggested application rate is 25-200 ppm (0.04-0.32 oz av. per 100 pounds of absorbent material).

RAW MATERIALS

To inhibit bacterial spoilage during shelf-life storage and the use of raw materials when supplied for the manufacture of industrial and consumer products, this product may be added at any convenient point during the manufacturing process. Ideally it should be added as a final step just prior to packing of the product into bulk or sales packs. If a heating stage is involved in the manufacture of a product add this product after this stage when the product has cooled to below 40°C.

FREQUENCY AND DOSE: this product should be dosed at 100 to 500 ppm based on the final formulation volume (0.84-4.2 lb/1000 gallons).

SURFACTANTS

To inhibit bacterial spoilage during shelf-life storage and the use of bulk anionic, nonionic amphoteric and cationic surfactants when supplied for the manufacture of industrial and consumer products, this product may be added at any convenient point during the manufacturing process. Ideally it should be added as a final step just prior to packing of the product in bulk or sales packs. If a heating stage is involved in the manufacture of a product add this product after this stage, when the product has cooled to below 40°C.

FREQUENCY AND DOSE: this product should be dosed at 100 to 500 ppm based on the final formulation volume (0.84-4.2 lb/1000 gallons).

CONSUMER, HOUSEHOLD AND INSTITUTIONAL PRODUCTS

To inhibit bacterial spoilage during the shelf-life storage and use of consumer, household and institutional products including dishwashing liquids, surface cleaners and polishes, this product may be added at any convenient point during the manufacturing process. Ideally it should be added as a final step just prior to packing of the product into bulk or sales packs. If a heating stage is involved in the manufacture of a product add this product after this stage when the product has cooled to below 40°C.

FREQUENCY AND DOSE: this product should be dosed at 100 to 500 ppm based on the final formulation volume (0.84-4.2 lb/1000 gallons).

WATER BASED AGRICULTURAL PESTICIDE CONCENTRATES

To inhibit bacterial spoilage during the shelf-life storage and use of water based agricultural pesticide concentrates, this product may be added at any convenient point during the manufacturing process. Ideally it should be added as a final step just prior to packing of the product into bulk or sales packs. If a heat stage is involved in the manufacture of a product add this product after this stage when the product has cooled to below 40°C.

FREQUENCY AND DOSE: this product should be dosed at 100 to 500 ppm based on the final formulation volume (0.84-4.2 lb/1000 gallons).

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