

1/10

TM

MYACIDE AS PLUS

MYACIDE AS PLUS™

MYACIDE AS PLUS is a concentrated free-flowing crystalline solid bactericide for use in controlling bacteria found in Industrial Process water, oil and gas processing applications including drilling muds, fracturing fluids, produced waters, injection waters, water bottoms in storage tanks and metal working fluids.

ACTIVE INGREDIENT:

2-Bromo-2-nitropropane-1,3-diol 95.0 %

INERT INGREDIENTS: 5.0 %

TOTAL 100.0 %

KEEP OUT OF REACH OF CHILDREN

DANGER

STATEMENT OF PRACTICAL TREATMENT

- | | |
|--------------|--|
| If swallowed | - Drink milk, egg whites, gelatin solution, or if these are not available drink large quantities of water. Call a Physician. |
| If inhaled | - Remove person to fresh air. |
| If on skin | - Immediately flush skin with plenty of water for 15 minutes. |
| If in eyes | - Immediately flush eyes with plenty of water for 15 minutes. Call a Physician |

Note to Physician

Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiration depression and convulsion may be needed.

SEE SIDE PANEL FOR ADDITIONAL
PRECAUTIONARY STATEMENTS

MYACIDE AS PLUS IS A RESEARCH DISCOVERY OF
THE BOOTS COMPANY PLC NOTTINGHAM ENGLAND

MYACIDE IS A REGISTERED TRADEMARK
OF THE BOOTS COMPANY PLC

EPA REG NUMBER 33753-5
EPA EST NUMBER 33753-EN-1

NET CONTENTS
25 Kg

1001

DEC 14 1998

33753-5

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND
DOMESTIC ANIMALS

DANGER

Corrosive. Causes eye and skin damage. Do not get in eyes, on skin or clothing. May be fatal if swallowed. Avoid breathing dust. Wear goggles or face shield and rubber gloves when handling.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public waters unless this product is specifically identified and addressed in an NPDES permit. 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. Do not contaminate water by cleaning of equipment or disposal of waste.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. 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 at 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. Triple rinse (or equivalent) then offer drum for recycling or reconditioning, or puncture. Dispose of drum and liner in a sanitary landfill, or by incineration, if allowed by State and local authorities. If burned, stay out of smoke.

ACCEPTED

DEC 14 1989

337533

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT
IN A MANNER INCONSISTENT WITH ITS LABELLING

**INDUSTRIAL RECIRCULATING WATER
COOLING TOWERS AND EVAPORATIVE
CONDENSERS**

For the control of slime-forming bacteria and algae in industrial recirculation cooling towers and evaporative condensers.

METHOD AND LOCATION

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

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.

QUANTITY - INITIAL AND MAINTAINANCE

MYACIDE AS PLUS should be shock dosed at between 25g and 100g per cubic meter (0.21-0.84 lbs/1000 gallons) depending on the condition of the tower, the quality of the raw water input and the amount of bleed off.

DEC 14 1989

WATERFLOOD

Inhibit growth of anaerobic and aerobic bacteria in all waterflood base fluids used in the recovery of oil and gas from reservoirs.

METHOD AND LOCATION

MYACIDE AS PLUS can be added as a dry product or pre-dissolved in any base fluid, or injected directly at the well head.

FREQUENCY

MYACIDE AS PLUS should be added continuously to waterflood fluids or slug dosed depending on the bottom hole temperature and fluid chemistry.

QUANTITY - INITIAL AND MAINTENANCE

MYACIDE AS PLUS may be added at the rate of 25-100 ppm (0.009 to 0.036 lbs. per barrel) depending on the quality of the base fluid.

PIPELINE MAINTENANCE

To control aerobic and anaerobic bacteria, particularly sulfate reducing bacterial growth in oil and gas related production piping and transportation systems.

METHOD AND LOCATION

MYACIDE AS PLUS may be pre-dissolved in warm water or in a carrier solvent to give up to a 20% concentrate. This concentrate can be injected directly into the pipeline or may be added to the hydrocarbon phase. Using carrier solvent addition of MYACIDE AS PLUS directly into the hydrocarbon phase will produce long term water phase concentrations by a diffusion process.

FREQUENCY

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 control growth.

QUANTITY - INITIAL AND MAINTENANCE

MYACIDE AS PLUS should be dosed at a rate which will achieve concentrations of 25-200 ppm in the aqueous phase. When using a carrier solvent, higher initial 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.

DRILLING FLUIDS AND WORKOVER AND COMPLETION FLUIDS

For use in oil and gas well drilling muds, and brines, inhibiting growth of cellulolytic, slime forming or sulfate reducing bacteria.

METHOD AND LOCATION

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

A single slug dose once to three times each 24hrs. Dosing may be less frequent where the contamination is low.

QUANTITY - INITIAL AND MAINTENANCE

Each slug dose should be 0.018 to 0.036 pounds per barrel total mud volume.

2/11

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.

METHOD AND LOCATION

MYACIDE AS PLUS can be added as a dry product or pre-dissolved in each volume of fluid prior to injection.

FREQUENCY

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

DEC 14 1989

33753-5

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.

METHOD AND LOCATION

MYACIDE AS PLUS can be added during mixing as a dry product or pre-dissolved or added by injection during the EOR procedure.

FREQUENCY

MYACIDE AS PLUS should be added throughout the EOR operation.

QUANTITY - INITIAL AND MAINTENANCE

MYACIDE AS PLUS should be added at the rate of 50 - 100 ppm (0.018 to 0.036 lbs. per barrel) depending on the quality of the make up water.

1000

DEC 14 1989

U.S. GOVERNMENT PRINTING OFFICE

Washington, D.C. 20540

33753-5

WATER BOTTOMS IN OIL 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.

METHOD AND LOCATION

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 addition of MYACIDE AS PLUS into the hydrocarbon phase will provide long term water concentrations by a diffusion process.

FREQUENCY

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.

QUANTITY - INITIAL AND MAINTENANCE

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.

ALC

DEC 14 1970

33753

7/10

INDUSTRIAL PROCESS WATER

For the effective control of bacterial and algal growth in Industrial Process Water including closed circuit machine cooling (injection molding, etc.) and stored (non-potable) water.

To reduce the biofouling of pipework, heat exchangers, condenser tubes and minimise microbially produced corrosion.

METHOD AND LOCATION

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 tanks and equipment.

FREQUENCY

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.

QUANTITY - INITIAL AND MAINTENANCE

Dosing should be carried out to give an initial concentration of 50 ppm. (50 g/cubic meter or 0.42 lbs/1000 gallons). When the above treatment has been successful, dosing can be lowered to a minimum of 10 ppm. MYACIDE AS PLUS (10 g/cubic meter or 0.08 lbs/1000 gallons). For intermittent treatment of industrial process waters during routine maintenance MYACIDE AS PLUS should be used at 100 ppm. (100 g/cubic meter or 0.84 lb/1000 gallons) and a contact time of at least one hour.

PRODUCED WATER

To inhibit the growth of slime-forming or corrosion-inducing bacteria, reducing bacteria in formation water produced by wells together with oil or gas.

METHOD AND LOCATION

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

Depending on severity and rapidity of contamination

MYACIDE AS PLUS should be slug dosed from once a week to once a month.

QUANTITY - INITIAL AND MAINTAINANCE

Slug dose 50 - 100g/cubic meter (0.018-0.036 lbs per barrel).

DEC 14 1989

33753-5

FRACTURING FLUIDS

Reduces bacterial contamination and degradation of Fracturing Gels and Fluids used as well stimulants in the oil and gas industry.

METHOD AND LOCATION

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

MYACIDE AS PLUS should be used for each fracturing operation to ensure best results.

QUANTITY - INITIAL AND MAINTAINANCE

MYACIDE AS PLUS should be added at a rate of 50-100g per cubic meter (0.42-0.84 lbs per 1000 gallons) depending on the quality of the make up water.

WELL SQUEEZE FLUIDS

For the effective control of aerobic and anaerobic bacteria in well squeeze fluids and downhole well bore areas

METHOD AND LOCATION

MYACIDE AS PLUS may be added 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

MYACIDE AS PLUS should be used for each well squeeze operation to ensure best results

QUANTITY - INITIAL AND MAINTENANCE

MYACIDE AS PLUS should be added at a rate of 25-200 g. per cubic meter (0.21-1.68 lbs./1000 gallons) depending on the quality of the makeup water.

DEC 14 1969

33753-5

METALWORKING FLUIDS

MYACIDE AS PLUS is recommended for use in soluble 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 250ppm 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.

17/10

ADHESIVES

For the control of microbial contamination, add 0.1-0.5 lb. of Myacide AS Plus per 100 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.

DEC 14 1989

33753-B