

# MYACIDE S-2<sup>®</sup>

## MYACIDE S-2

MYACIDE S-2 is a liquid 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 in metal working fluids.

### ACTIVE INGREDIENT:

2-Bromo-2-nitropropane-1,3-diol 40.8%

INERT INGREDIENTS: 59.2%

TOTAL 100.0%

KEEP OUT OF REACH OF CHILDREN

**DANGER**

### STATEMENT OF PRACTICAL TREATMENT

- |              |  |
|--------------|--|
| If swallowed | - Drink 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 S-2 IS A RESEARCH DISCOVERY OF  
THE BOOTS COMPANY PLC NOTTINGHAM ENGLAND

MYACIDE IS A REGISTERED TRADEMARK  
OF THE BOOTS COMPANY PLC

EPA REG NUMBER 33753-7  
EPA EST. NUMBER 33753-EN-1

**ACCEPTED**

SEP 15 1989

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under  
EPA Reg. No. 33753-7

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 container and triple rinse (or equivalent). 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.

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OCT 15 1980  
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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 S-2 may be slug dosed directly into the sump or basin or it may be added by a suitable chemical pump. Where metering pumps are used, these must be set to deliver the required dose as fast as possible (e.g. within 1 hour). The dosing point should be located close to the outlet from the basin to ensure rapid dispersal around the system.

FREQUENCY

MYACIDE S-2 may be shock dosed once or twice weekly as a normal routine. Where contamination is heavy, more frequent dosing may be required. In heavily fouled systems, the tower should be drained and cleaned before treating with MYACIDE S-2.

QUANTITY - INITIAL AND MAINTENANCE

MYACIDE S-2 should be shock dosed at between 50ml and 200ml per cubic meter (0.4pts. & 1.6pts per 1000 gallons) depending on the condition of the tower, the quality of raw water input and the amount of bleed off.

OIL FLOODING/INJECTION WATERS

To inhibit the growth of slime forming or corrosion inducing sulfate reducing bacteria in oil well injection waters.

METHOD AND LOCATION

MYACIDE S-2 should be injected as a slug dose at any convenient point.

FREQUENCY

Depending on severity and rapidity of contamination, MYACIDE S-2 should be used from once a week to once a month.

QUANTITY - INITIAL AND MAINTENANCE

50-200 mls/cubic meter (0.4-1.6 pts/1000 gallons)

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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.

METHOD AND LOCATION

MYACIDE S-2 should be injected into the water-containing oil or gas stream at any convenient point. It should be injected as slug doses, not as a continuous feed.

FREQUENCY

Depending on severity and rapidity of contamination MYACIDE S-2 should be slug dosed from once a week to once a month.

QUANTITY - INITIAL AND MAINTAINANCE

50-200 mls/cubic meter (0.018-0.072 pts. per barrel).

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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

Add directly to the water phase at any stage of the fracturing operation - for example at the pre-mixing stage or by direct injection at the well head in combined mix/injection procedures

FREQUENCY

MYACIDE S-2 should be used for each fracturing operation to ensure best results.

QUANTITY - INITIAL AND MAINTAINANCE

MYACIDE S-2 should be added at a rate of 100-200 ml/cubic meter (0.8-1.6 pts/1000 gallons) depending on the quality of the makeup water.

### 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.

MYACIDE S-2 can also be used as an intermittant, flush treatment during regular maintenance cleaning of water tanks (non-potable) or 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 with little possibility of re-infection or loss of MYACIDE S-2 because of makeup or dilution, less frequent dosing (once monthly/two monthly) should be sufficient.

#### QUANTITY - INITIAL AND MAINTENANCE

Dosing should be carried out to give an initial concentration of 100 ppm MYACIDE S-2 (100 mls/cubic meter or 0.8 pts/1000 gallons). When the above treatment has been successful, dosing can be lowered to a minimum of 20 ppm MYACIDE S-2 (20 mls/cubic meter or 0.16pts/1000 gallons). For intermittant treatment of industrial process waters during routine maintenance MYACIDE S-2 should be used at 200 ppm (200mls /cubic meter or 1.6pts/1000 gallons) and a contact time of at least one hour.

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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 S-2 may be injected directly into the water bottom or may be sprayed over the surface of the hydrocarbon phase and allowed to percolate through.

FREQUENCY

Direct addition to the water phase by injection or percolation should be carried out every 30-60 days, depending on the severity of the problem. Addition to the hydrocarbon phase will result in longer term protection by gradual diffusion from the hydrocarbon phase into the water phase (depending on storage conditions).

QUANTITY - INITIAL AND MAINTENANCE

MYACIDE S-2 should be dosed at a rate which will achieve concentrations of 100-200 ppm in the aqueous phase. Larger quantities may be added when dosing the hydrocarbon phase to allow diffusion of active ingredient into the water bottom during the long term.

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### PIPELINE MAINTENANCE

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

#### METHOD AND LOCATION

MYACIDE S-2 can be injected directly into the pipeline or may be added to the hydrocarbon phase. Addition of the MYACIDE S-2 will produce long term water concentrations by a diffusion process.

#### FREQUENCY

Slug treatments are recommended and can vary from daily to to monthly to control growth.

#### QUANTITY - INITIAL AND MAINTENANCE

MYACIDE S-2 should be dosed at a rate which will achieve concentrations of 50-400 ppm in the aqueous phase. Higher concentrations may be used to allow diffusion into the aqueous phase. Dose will depend on the volume of crude or oil 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 S-2 may be 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 0.036 to 0.072 pts./barrel total mud volume.

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## WELL SQUEEZE FLUIDS

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

### METHOD AND LOCATION

MYACIDE S-2 may be added during pre-mixing of the well squeeze fluid or may be added by direct injection at the well head during the well squeeze procedure.

### FREQUENCY

MYACIDE S-2 should be used for each well squeeze operation to ensure best results.

### QUANTITY - INITIAL AND MAINTENANCE

MYACIDE S-2 should be added at a rate of 50-400 mls/cubic meter (0.42-3.36 pts/1000 gallons) depending on the quality of the makeup water.

## METALWORKING FLUIDS

MYACIDE S-2 is recommended for use in soluble oils, semi-synthetic, and synthetic fluids. It should be added directly to the sump (with agitation).

A dose of 500 ppm is recommended for initial treatment, higher levels up to 2000 ppm, but no greater for fouled systems.

After addition of MYACIDE S-2 the system should be circulated for about one hour before shutdown.

### IN DILUTED FLUIDS

A concentration of 500 to 2000 ppm of MYACIDE S-2 in the fluid is sufficient to control gross microbial growth. For example, add 1.0 gallon of MYACIDE S-2 to 1000 gallons of fluid to obtain a dose level of 1000 ppm in the fluid.

### MAINTENANCE DOSAGE

Add 200-400 ppm of MYACIDE S-2 to maintain control of the system.

### IN CONCENTRATES

MYACIDE S-2 may be incorporated in metalworking fluid concentrate by the manufacturer. However, the manufacturer should determine the storage stability of MYACIDE S-2 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 concentrate.

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### INJECTION FLUIDS

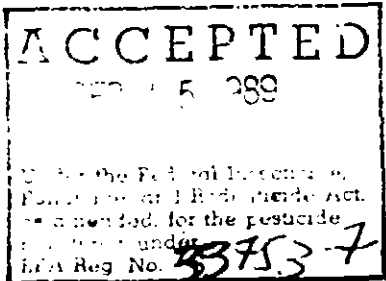
For the control of contamination and corrosion from bacterial sources in fluids/waste fluids that are disposed of through injection into an approved well following approved guidelines.

#### METHOD AND LOCATION

MYACIDE S-2 may be added to each volume of fluid prior to injection.

#### FREQUENCY

MYACIDE S-2 should be added at a rate of 100-200 ppm (0.036-0.072 pts/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.

#### METHOD AND LOCATION

MYACIDE S-2 may be added during mixing or by injection during the EOR procedure.

#### FREQUENCY

MYACIDE S-2 should be added throughout the EOR operation.

#### QUANTITY - INITIAL AND MAINTENANCE

MYACIDE S-2 should be added at the rate of 100 - 200 ppm (0.036 to 0.072 pts. per barrel) depending on the quality of the make up water.