

PM 21 33753-6

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# MYACIDE S-1<sup>®</sup>

## MYACIDE S-1

MYACIDE S-1 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

18.2%

**INERT INGREDIENTS:**

81.8%

**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.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

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**JAN 11 1993**

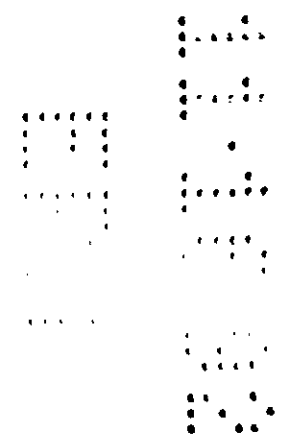
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 33753-6

MYACIDE S-1 IS A RESEARCH DISCOVERY OF THE BOOTS COMPANY PLC NOTTINGHAM ENGLAND

MYACIDE IS A REGISTERED TRADEMARK OF THE BOOTS COMPANY PLC

EPA REG NUMBER 33753-6  
EPA EST NUMBER 33753-EN-1

**NET CONTENTS**  
**5 gallons**



**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. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before re-use.**

**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.**

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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-1 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-1 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-1.

**QUANTITY - INITIAL AND MAINTENANCE**

MYACIDE S-1 should be shock dosed at between 125 ml and 500ml per cubic meter (1 pt. & 4 pts 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-1 should be injected as a slug dose at any convenient point.

**FREQUENCY**

Depending on severity and rapidity of contamination, MYACIDE S-1 should be used from once a week to once a month.

**QUANTITY - INITIAL AND MAINTENANCE**

125-500 mls/cubic meter (1 pt-4 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-1 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-1 should be slug dosed from once a week to once a month.

**QUANTITY - INITIAL AND MAINTAINANCE**

125-500 mls/cubic meter (0.04-0.17 pts. per barrel).

**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-1 should be used for each fracturing operation to ensure best results.

**QUANTITY - INITIAL AND MAINTAINANCE**

MYACIDE S-1 should be added at a rate of 250-500 ml/cubic meter (2 pts-4 pts/1000 gallons) depending on the quality of the makeup water.

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**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-1 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-1 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 250 ppm MYACIDE S-1 (250 mls/cubic meter or 2 pts/1000 gallons). When the above treatment has been successful, dosing can be lowered to a minimum of 50 ppm MYACIDE S-1 (50 mls/cubic meter or 0.4 pts/1000 gallons). For intermittant treatment of industrial process waters during routine maintenance MYACIDE S-1 should be used at 500 ppm (500mls /cubic meter or 4 pts/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-1 may be injected directly into the water bottom or may be sprayed over the surface of the hydrocarbon phase and allowed to percolate through.

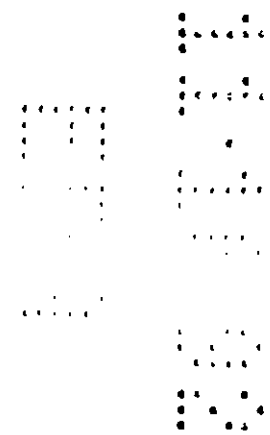
**FREQUENCY**

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-1 should be dosed at a rate which will achieve concentrations of 250-500 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-1 can be injected directly into the pipeline or may be added to the hydrocarbon phase. Addition of the MYACIDE S-1 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-1 should be dosed at a rate which will achieve concentrations of 125-1000 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**

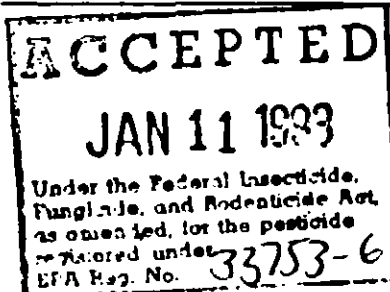
MYACIDE S-1 may be dosed directly into the mud or brine.

**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 0.09 to 0.18 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-1 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-1 should be used for each well squeeze operation to ensure best results.

#### QUANTITY - INITIAL AND MAINTENANCE

MYACIDE S-1 should be added at a rate of 125-1000 ml/cubic meter (1-8 pts/1000 gallons) depending on the quality of the makeup water.

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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-1 may be added to each volume of fluid prior to injection.

**FREQUENCY**

MYACIDE S-1 should be added at a rate of 250-500 ppm (0.09-0.18 pts/barrel) based on the water percent of the injection fluid.

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**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-1 may be added during mixing or by injection during the EOR procedure.

**FREQUENCY**

MYACIDE S-1 should be added throughout the EOR operation.

**QUANTITY - INITIAL AND MAINTENANCE**

MYACIDE S-1 should be added at the rate of 250 - 500 ppm (0.09 to 0.18 pts. per barrel) depending on the quality of the make up water.

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**DRILLING FLUIDS**

For the preservation of oil and gas well drilling muds by inhibiting growth of cellulolytic, slime forming or sulfate reducing bacteric.

**METHOD AND LOCATION**

MYACIDE S-1 may be dosed directly into the mud hopper.

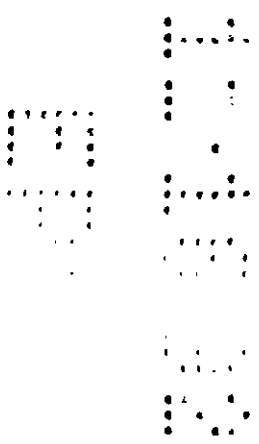
**FREQUENCY**

A single slug dose once to three times each 24hrs.

**QUANTITY - INITIAL AND MAINTENANCE**

Each slug dose should be 0.09 to 0.18 pts./barrel total mud volume.

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### METALWORKING FLUIDS

MYACIDE S-1 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 1500 ppm is recommended for initial treatment, higher levels up to 5000 ppm, but no greater for fouled systems.

After addition of MYACIDE S-1 the system should be circulated for about one hour before shutdown.

#### IN DILUTED FLUIDS

A concentration of 1500 to 5000 ppm of MYACIDE S-1 in the fluid is sufficient to control gross microbial growth. For example, add 2.5 gallons of MYACIDE S-1 to 1000 gallons of fluid to obtain a dose level of 2500 ppm in the fluid.

#### MAINTENANCE DOSAGE

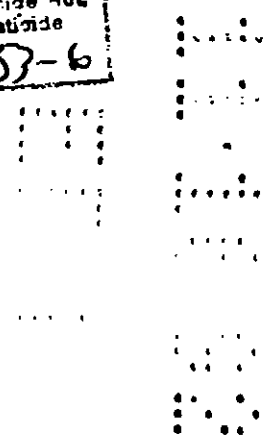
Add 500-1000 ppm of MYACIDE S-1 to maintain control of the system.

#### IN CONCENTRATES

MYACIDE S-1 may be incorporated in metalworking fluid concentrate by the manufacturer. However, the manufacturer should determine the storage stability of MYACIDE S-1 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.

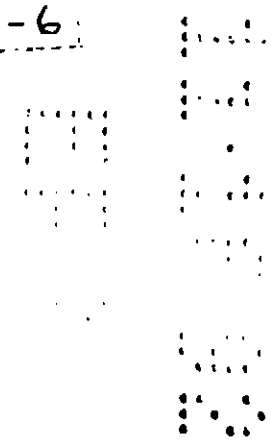
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**ADHESIVES**

For the control of microbial contamination, add 0.5-2.5 pts. of Myacide S1 per 100 lb. total formulation weight. The addition is best accomplished by adding the Myacide S1 to any water to be incorporated into the formulation.

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**PAPER MILL PROCESS WATER**

For the control of slime-forming bacteria in paper or paperboard process water systems.

**METHOD AND LOCATION**

MYACIDE S1 may be dosed at a convenient point early in the process system. Suitable dosing points are the machine chest, constant head box or backwater loop system.

**FREQUENCY**

MYACIDE S1 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.

**QUANTITY - INITIAL AND MAINTENANCE**

MYACIDE S1 should be dosed at between 50mls and 1250 mls (0.1 and 2.5 pts) per tonne 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**

For the preservation of bulk quantities of pulp in paper and paperboard manufacturing systems. To control foul odours and general biodeterioration of stock when it is stored in bulk for any significant period of time.

**METHOD AND LOCATION**

MYACIDE S1 may be dosed directly into the hydropulper, machine chest or stock chest.

**FREQUENCY**

In general a single slug dose will provide control 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.

**QUANTITY - INITIAL AND MAINTENANCE**

MYACIDE S1 should be dosed at between 250mls and 1000mls per tonne of stock (2 - 8 pts/1000 gallons) depending on the type and degree of contamination.

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**STARCH, PIGMENT AND EXTENDER SLURRIES**

To inhibit the growth of spoilage bacteria during the manufacture, storage and distribution of water based suspension concentrates.

**METHOD AND LOCATION**

MYACIDE S1 may be dosed at or close to the end of the manufacturing process in a quantity of the process water. If the manufacturing process involves a heating stage, the MYACIDE S1 should be added after this stage when the product has cooled to below 40°C.

**QUANTITY**

MYACIDE S1 should be dosed at 500 to 2500 ppm based on the final formulation volume (500 to 2500mls/cubic metre or 4 to 20pts/1000 gallons).

**PAINTS, LATEX AND ANTIFOAM EMULSION SYSTEMS**

To provide in-can preservation and prevent bacterial spoilage during shelf-life storage of acrylic, styrene-acrylic, polyvinyl acetate and other latex emulsion concentrates and latex emulsion based paints. Also for the preservation of silicone and other antifoam emulsion systems.

**METHOD AND LOCATION**

MYACIDE S1 may be added at any convenient point during the manufacturing process. Ideally it should be added as a final just prior to packing of the product into bulk or sales packs.

If a heating stage is involved in the manufacture, add MYACIDE S1 after this stage when the product has cooled to below 40°C.

**QUANTITY**

MYACIDE S1 should be dosed at 500 to 2500 ppm based on the final formulation volume (500 to 2500mls/cubic metre or 4 to 20pts/1000 gallons).

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### WATER BASED PRINTING INKS AND FOUNT SOLUTIONS

To inhibit the growth of spoilage bacteria during the storage and use of water based printing inks and fount solutions.

#### METHOD AND LOCATION

For In-Can preservation MYACIDE S1 should be added 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.

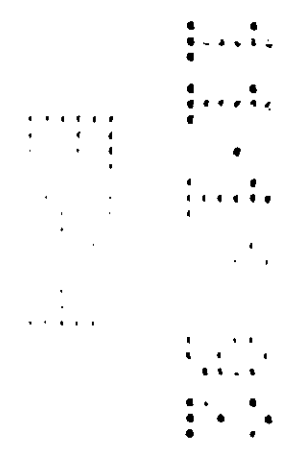
For the control of bacterial spoilage during the use of fount solutions, MYACIDE S1 should be shock dosed at a suitable point in the fount reservoir where there is adequate flow or turbulence to ensure quick mixing. MYACIDE S1 may be shock dosed once or twice weekly as a normal routine. Where conditions indicate, more frequent shock dosing may be required.

#### QUANTITY

In-Can preservation - MYACIDE S1 should be dosed at 500 to 2500 ppm based on the final formulation volume (500 to 2500mls/cubic metre or 4 to 20pts/1000 gallons).

Fount Solutions - MYACIDE S1 should be shock dosed at between 100 and 500 ppm (100 to 500mls/cubic metre ; 0.8 to 4pts /1000 gallons) depending on the contamination levels in the fount reservoir.

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### ABSORBENT CLAYS

Impregnate absorbent clays with MYA<sup>®</sup>IDE S-1 to inhibit the growth of odor-causing bacteria. The suggested application rate is 125-1000 ppm (0.2-1.6 oz av.) per 1000 pounds of clay.

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