

APR 16 1996

Dr. Clive Aveyard
Knoll MicroCheck
Knoll Pharmaceuticals Ltd.
Thane Road (D90)
Nottingham NG2 3AA
England
UNITED KINGDOM

SUBJECT: MYACIDE AS
EPA Registration No. 33753-3
MYACIDE AS Plus
EPA Registration NO. 33753-5
MYACIDE S-1
EPA Registration No. 33753-6
MYACIDE S2
EPA Registration No. 33753-7 ✓
MYACIDE S15
EPA Registration No. 33753-17
Amendments Dated October 17, 1995

Dear Dr. Aveyard:

This is in response to your amendments dated above requesting approval of the skin sensization statements on each label.

The labelings referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, are acceptable subject to the comment listed below.

1. Under the "Statement of Practical Treatment", "If swallowed, " delete, "Drink egg whites, gelatin solution, if these are not available...". Submit five copies for each the finished labels before you release the products for shipment bearing the amended labeling.

Sincerely,

Marion J. Johnson, Jr.
Product Manager Manager 31
Antimicrobial Program Branch
Registration Division (7505)

Parryle
TRAC
4-1-96

2043

MYACIDE® S2

MYACIDE S2 is a liquid microbicide for use in controlling bacteria and algae in industrial applications.

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. Do not administer liquids to an unconscious person. 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

MYACIDE S2 IS A RESEARCH DISCOVERY OF
KNOLL PHARMACEUTICALS LTD
NOTTINGHAM, ENGLAND

MYACIDE IS A REGISTERED TRADEMARK OF KNOLL AG

EPA REG. NUMBER 33753-7
EPA EST. NUMBER 33753-5BR 003

NET CONTENTS: SEE PACKAGE

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Corrosive. Causes eye and skin damage. Do not get in eyes, on skin or clothing. May be fatal if swallowed. May cause allergic skin reactions in certain individuals. 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 other waters unless in accordance with the requirements of the National Pollutant Discharge Elimination Systems (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 local state water board or regional office of 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

Empty residue into application equipment. Triple rinse (or equivalent) then offer drum for recycling or reconditioning, or puncture. Dispose of container in a sanitary landfill, or by incineration, if allowed by State and local authorities. If burned, stay out of smoke.

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.

MYACIDE S2 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 within 1 hour. The dosing point should be located close to the outlet from the basin to ensure rapid dispersal around the system.

MYACIDE S2 may be shock dosed once or twice weekly. 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 S2.

MYACIDE S2 should be shock dosed at between 50 ml and 200 ml per cubic meter (0.4 pts. & 1.6 pts. per 1000 gallons) depending on the condition of the tower, the quality of raw water input and the amount of bleed off.

INDUSTRIAL PROCESS WATER

For the control of bacterial and algal growth in 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.

Shock dosing into the sump/tank of the process water system is preferred. MYACIDE S2 can also be used as an intermittent, flush treatment during regular maintenance cleaning of water tanks (non-potable) or equipment.

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 monthly/twice monthly) should be sufficient.

Dosing should be carried out to give an initial concentration of 100 ppm MYACIDE S2 (100 mls/cubic meter or 0.8 pts./1000 gallons). When successful, dosing can be lowered to a minimum of 20 ppm. For intermittent treatment of industrial process waters during routine maintenance MYACIDE S2 should be used at 200 ppm and contact time of at least one hour.

APR 16 1996

33753-7

OIL PROCESS WATERS

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

MYACIDE S2 should be injected as a slug dose at any convenient point at 50 to 200 mls/1000 \pm (0.4-1.6 pts/1000 gallons). A slug dose should be applied from once per week to once per month depending on the severity and rapidity of contamination.

OIL AND GAS FLUIDS

For the control of contamination and degradation of a wide range of gels and fluids caused by cellulolytic, slime forming or sulfate reducing bacteria. The type of fluids include fracturing, enhanced oil recovery, injection, well squeeze, drilling, workover and completion fluids.

MYACIDE S2 may be pre-mixed or added directly to the fluids during each industrial procedure. MYACIDE S2 should be added at the rate of 100-200 ppm (0.036 to 0.072 pts/barrel or 0.8 to 1.6 pts/1000 gallons).

For well squeeze fluids Myacide S2 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.

OIL AND GAS PIPELINE AND TANK MAINTENANCE

To control bacterial contamination in water bottoms in crude and refined hydrocarbon storage tanks, piping and transportation systems.

MYACIDE S2 may be injected directly into the water bottom, pipeline or may be added to the hydrocarbon phase.

Treatment can vary from once daily for pipeline maintenance to once every one or two months for both storage and transportation systems. Addition to the hydrocarbon phase will result in longer term protection by gradual diffusion into the water phase. MYACIDE S2 should be applied to achieve 50 to 400 ppm in the aqueous phase. Higher concentrations may be added when dosing the hydrocarbon phase.

PAPER MILL PROCESS WATER

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

MYACIDE S2 may be dosed at a convenient point early in the process system (machine chest, constant head box or backwater loop system).

MYACIDE S2 should be shock dosed once, twice or three times daily at between 20 mls and 500 mls (0.04 and 1.0 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.

MYACIDE S2 may be dosed directly into the hydropulper, machine chest or stock chest.

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.

MYACIDE S2 should be dosed at between 100 mls and 400 mls per tonne of stock (0.8 pts - 3.2 pts/1000 gallons) depending on the type and degree of contamination.

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.

For in-can preservation MYACIDE S2 should be added at any convenient point during the manufacturing process, ideally after any heating stage and when the product has cooled to below 40°C.

For control of bacterial spoilage during the use of fount solutions, MYACIDE S2 should be shock dosed at a suitable point in the fount reservoir where there is adequate flow or turbulence to ensure quick mixing. MYACIDE S2 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 S2 should be dosed at 200 to 1000 ppm based on the final formulation volume (200 to 1000 mls/cubic meter or 1.6 to 8 pts/1000 gallons). Fount solution - MYACIDE S2 should be shock dosed at between 40 to 200 ppm (40 to 200 mls/cubic meter; 0.32 to 1.6 pts/1000 gallons) depending on the contamination levels in the fount reservoir.

STARCH, PIGMENT AND EXTENDER SLURRIES

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

MYACIDE S2 may be dosed at or close to the end of the manufacturing process. If a heating stage is involved, the MYACIDE S2 should be added after this stage when the product has cooled to below 40°C.

MYACIDE S2 should be dosed at 200 to 1000 ppm based on the final formulation volume (200 to 1000 mls/cubic meter or 1.6 to 8 pts/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.

MYACIDE S2 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, add MYACIDE S2 after this stage when the product has cooled to below 40°C.

MYACIDE S2 should be dosed at 200 to 1000 ppm based on the final formulation volume (200 to 1000 mls/cubic meter or 1.6 to 8 pts/1000 gallons).

METALWORKING FLUIDS

MYACIDE S2 is recommended for use in soluble oils, semi-synthetic and synthetic fluids. It should be added directly to the sump (with agitation).

After addition of MYACIDE S2 the system should be circulated for about one hour before shutdown.

In diluted fluids, a concentration of 500 to 2000 ppm of MYACIDE S2 in the fluid is sufficient to control microbial growth. A dose of 1.0 gallon of MYACIDE S2 in 1000 gallons will give 1000 ppm. For maintenance, add 200-400 ppm of MYACIDE S2.

MYACIDE S2 may be incorporated in metalworking fluid concentrate by the manufacturer who should ensure that any incompatibility will not affect efficacy.

ADHESIVES

For the control of microbial contamination, add 0.2-1.0 pint of MYACIDE S2 per 100 lb. total formulation weight. The addition is best accomplished by adding the MYACIDE S2 to any water to be incorporated into the formulation.

ABSORBENT CLAYS

ACCEPTED

Improved Absorbent Clays with MYACIDE S2 to inhibit the growth of odor-causing bacteria. The suggested application rate is 50-400 ppm of Myacide S2 (0.08 - 0.64 oz av. per 100 pounds of clay).

APR 16 1996

Under the provisions of the
Food and Drug Administration
Act of 1938, the following
product has been found to be
safe and effective for use.

33753-7