

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

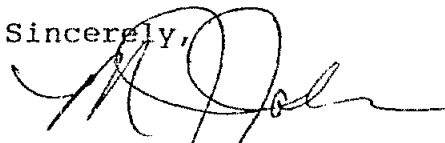
Dear Dr. Aveyard:

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 Pracrual 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)

Printle
7505C
4-1-96

MYACIDE™ AS PLUS

MYACIDE AS PLUS is a concentrated free-flowing crystalline solid microbiocide for use in controlling bacteria and algae found in industrial applications.

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 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 AS PLUS IS A RESEARCH DISCOVERY OF KNOLL PHARMACEUTICALS LTD., THANE ROAD, NOTTINGHAM ENGLAND

MYACIDE IS A REGISTERED TRADEMARK OF KNOLL AG

EPA REG. NUMBER 33753 - 5
EPA EST. NUMBER 33753-6BR 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. Wear goggles or face shield and rubber gloves when handling. Harmful or fatal if swallowed. May cause allergic skin reactions in certain individuals. 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 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. 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.

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.

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 (eg. the pump outlet from the tower sump).

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 25g and 100g per cubic meter (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.

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 AS PLUS 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 50 ppm MYACIDE AS PLUS (50g/cubic meter or 0.42 lb/1000 gallons). When successful dosing can be lowered to a minimum of 10 ppm. For intermittent treatment of industrial process waters during routine maintenance MYACIDE AS PLUS should be used at 100 ppm and a contact time of at least one hour.

INDUSTRIAL AND/OR COMMERCIAL AIR WASHERS, AIR CONDITIONING AND HUMIDIFYING SYSTEMS

For the control of bacterial and algal growth and to remove built up slime deposits. Shock dosing is preferred and should be carried out into the water sump on a routine basis once per week or month. Heavily fouled systems may require twice weekly treatment.

The initial dose should give a concentration of MYACIDE AS PLUS at 50 ppm (50 g/cubic meter or 0.42 lb/1000 gallons). Subsequent dosing can be reduced by half.

Intermittent treatment during regular maintenance and cleaning to give 100 ppm active ingredient is also recommended with a contact time of at least one hour.

For small packages a 40g sachet in 200 gallons (or a 4g sachet in 20 gallons) of water will achieve 50 ppm.

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 AS PLUS should be injected as a slug dose at any convenient point at 25-100 ppm (0.009 to 0.036 lb/barrel). 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 oils and fluids caused by cellulolytic, slime forming or sulfate reducing bacteria. The type of fluids include fracturing, enhanced oil recovery, injection, well squeeze, drilling, waterflood, workover and completion fluids.

MYACIDE AS PLUS may be pre-mixed or added directly to the fluids during each industrial procedure. MYACIDE AS PLUS should be added at the rate of 50-100 ppm (0.018 to 0.036 lb/barrel).

For well squeeze fluids Myacide AS PLUS should be added at 25-200 ppm depending on the quality of the makeup water.

ACCEPTED
with COMMENTS
in EPA Reg. 33753-6

APR 16 1996

Under the
Fungicide
BB number

Registered use

33703-6

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 AS PLUS can 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 AS PLUS should be applied to achieve 25-200 ppm in the aqueous phase. Higher concentrations may be added when dosing the hydrocarbon phase.

MYACIDE AS PLUS should be dosed at a rate which will achieve concentrations of 25-200 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

PAPER MILL PROCESS WATER

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

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

MYACIDE AS PLUS should be shock dosed once, twice or three times daily at between 10 g and 250 g (0.02 and 0.5 lb) 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 AS PLUS 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 AS PLUS should be dosed at between 50 g and 200 g/tonne of stock (0.42 lb - 1.7 lb/1000 gallons) depending on the type and depending on the type and degree of contamination.

PAINT ATEX 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 AS PLUS 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 AS PLUS after this stage when the product has cooled to below 40°C.

MYACIDE AS PLUS should be dosed at 100 to 500 ppm based on the final formulation volume (100 to 500 g/cubic meter or 0.84 to 4.2 lb/1000 gallons).

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) and the system should be circulated for about one hour before shutdown.

In diluted fluids, a concentration of 250 to 1000 ppm of MYACIDE AS PLUS in the fluid is sufficient to control microbial growth (1.0 lb of MYACIDE AS PLUS in 1000 lb will give a dose level of 1000 ppm). For maintenance, add 200-400 ppm of MYACIDE AS PLUS.

MYACIDE AS PLUS 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 0.1-0.5 lb of MYACIDE AS PLUS per 100 lb total formulation weight. The addition is best accomplished by adding the MYACIDE AS PLUS to any water to be incorporated into the formulation.

ABSORBENT CLAYS

Impregnate absorbent clays with MYACIDE AS PLUS to inhibit the growth of odor-causing bacteria. The suggested application rate is 25-200 ppm of Myacide AS Plus (0.04-0.32 oz av.) per 100 pounds of clay.

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 AS PLUS 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 AS PLUS should be shock dosed at a suitable point in the fount reservoir where there is adequate flow or turbulence to ensure quick mixing. 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 dosed at 100 to 500 ppm based on the final formulation volume (100 to 500 g/cubic meter or 0.84 to 4.2 lb/1000 gallons). Fount solution - MYACIDE AS PLUS should be shock dosed at between 25 to 100 ppm (25 to 100 g/cubic meter; 0.21 to 0.84 lb/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 AS PLUS may be dosed at or close to the end of the manufacturing process. If a heating stage is involved, the MYACIDE AS PLUS should be added after this stage when the product has cooled to below 40°C.

MYACIDE AS PLUS should be dosed at 100 to 500 ppm based on the final formulation volume (100 to 500g/cubic meter or 0.84 to 4.2 lb/1000 gallons).

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 (0.84 to 4.2 lb/1000 gallons) MYACIDE AS PLUS is recommended.

ACCEPTED
with COMMENTS
in EPA Letter Report

APR 16 1996

Under
Signature
of
EPA

133703-6