

BIOBAN™ BP-40

Active Ingredient(s)
 2-Bromo-2-nitropropane-1,3-diol. 40.8%
 Inert Ingredient(s) 59.2%
 Total 100.0%

E.P.A. Registration No. 464-676
 E.P.A. Est. 37429-GA-2

KEEP OUT OF REACH OF CHILDREN

DANGER

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals
CORROSIVE • CAUSES IRREVERSIBLE EYE DAMAGE AND SKIN BURNS • HARMFUL IF SWALLOWED, ABSORBED THROUGH THE SKIN, OR INHALED

Do Not Breathe Vapor or Spray Mist • Do Not Get In Eyes, On Skin, Or On Clothing • Wear Goggles Or Face Shield, Protective Clothing, and Rubber (or chemical resistant) Gloves • Wash Thoroughly With Soap and Water After Handling and Before Eating, Drinking, or Using Tobacco • Remove Contaminated Clothing and Wash Clothing Before Reuse • Prolonged or Frequently Repeated Skin Contact May Cause Allergic Reactions in Some Individuals



THE DOW CHEMICAL COMPANY
 Midland, Michigan 48674 U.S.A.
 (989)636-4400

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FIRST AID:	
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	• Call poison control center or doctor immediately for treatment advice. • Have a person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center.
IF ON SKIN:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment.
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for treatment.
NOTE TO PHYSICIAN	
Probable mucosal damage may contraindicate the use of gastric lavage.	
HOT LINE NUMBER	
IN CASE OF AN EMERGENCY endangering life or property involving this product, call collect (989)636-4400. Have the product container or label with you when calling a poison control center or doctor or going for treatment.	

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 local 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. Storage: 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 container 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 the labeling.

GENERAL USE DIRECTIONS
 To control the growth of slime-forming, spoilage, odor-causing and corrosion inducing bacteria and algae in industrial applications. Not for control of algae in the State of California. BIOBAN BP-40 can be dosed directly either by open pouring or by metered pump. Do not apply by open pouring of liquid to cooling water systems; a metering pump system is required for this use and application method. For in-can product preservation BIOBAN BP-40 is best added to any liquid phase as late as possible during the manufacturing process and after any heating stage, or when the product has cooled below 40°C. Ensure good mixing and even distribution throughout the product.

Applicators and other handlers must wear long-sleeve shirt and long pants, socks plus shoes, and chemical resistant gloves. Do not apply this product in a way that will contact workers or other persons. Follow manufacturer's instruction for cleaning/maintaining personal protective equipment (PPE). If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. If pesticide gets inside clothing remove clothing immediately, wash thoroughly, and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

INDUSTRIAL RECIRCULATING WATER COOLING TOWERS AND EVAPORATIVE CONDENSERS
 BIOBAN BP-40 may be 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 doses within 1 hour. The dosing point should be located close to the outlet from the basin to ensure rapid dispersal around the system.

BIOBAN BP-40 may be dosed once or twice weekly at 52-210 m/cubic meter or 0.42-1.6 pt/1000 gallons (25 to 100 ppm active ingredient) depending on the condition of the tower, the quality of raw water input and the amount of bleed off. Where contamination is heavy, more frequent dosing may be required. In heavily fouled systems, the tower should be drained and cleaned before treating with BIOBAN BP-40.

PAPER MILLS-BULK PULP
 Add BIOBAN BP-40 directly into the hydro-pulper, machine chest or stock chest.

Add BIOBAN BP-40 once weekly to once daily at between 113 and 421 ml per ton of stock or 0.83-3.3 pt/1000 gallons (50-200 ppm active ingredient) depending on the degree of contamination.

INDUSTRIAL PROCESS WATER
 For use in closed circuit machine cooling (injection molding, etc.) and stored (non-potable) water. To reduce the biofouling of pipework, heat exchangers, condenser tubes and minimize microbially produced corrosion. Shock dosing into the sump/tank of the process water system is preferred. Closed circuit systems require less frequent dosing.

In open systems shock dosing should be carried out on a once weekly to once monthly basis depending on the degree of contamination.

Initially dose at 105 m/cubic meter, or 0.8 pt/1000 gallons (50 ppm active ingredient). When successful, dosing can be lowered to a minimum level equivalent to 10 ppm active ingredient. For intermittent treatment or during routine maintenance use BIOBAN BP-40 at 100 ppm active ingredient, and a contact time of at least one hour.

OIL AND GAS FLUIDS
 This product may be used in terrestrial and off-shore drilling muds and packer fluids.

Use for in-can preservation of a wide range of gels and fluids including petroleum, enhanced oil recovery, injection, well squeeze, drilling, workover and completion fluids.

Add BIOBAN BP-40 at 105-210 m/cubic meter (0.8-1.6 pt/1000 gallons, or 0.035-0.07 pt/barrel) which is equivalent to 50-100 ppm active ingredient.

For well squeezed fluids add BIOBAN BP-40 at 52-420 m/cubic meter, or 0.42-3.38 pt/1000 gallons (25-200 ppm active ingredient).

OIL PROCESS WATERS
 For use in oil and gas well injection and formation waters. Inject BIOBAN BP-40 as a slug dose directly into well and formation waters at 52-210 m/cubic meter; 0.42-1.6 pt/1000 gallons or 0.0177-0.07 pt/barrel, 25-100 ppm active ingredient). A slug dose should be applied from once per week to once per month depending on the severity of contamination.

OIL AND GAS PIPELINE AND TANK MAINTENANCE
 For use in water bottoms in crude and refined hydrocarbon storage tanks, piping and transportation systems.

Inject BIOBAN BP-40 directly into the water bottom or pipeline, or add to the hydrocarbon phase. Treat once daily for pipeline maintenance to once every one or two months for both storage and transportation systems. Apply BIOBAN BP-40 at 52-420 m/cubic meter or 0.42-3.38 pt/1000 gallons of aqueous phase (25-200 ppm active ingredient). Higher levels may be added when dosing the hydrocarbon phase which will result in longer term protection by gradual diffusion into the water.

METALWORKING FLUIDS
 For use in soluble oils, semi-synthetic and synthetic fluids. Add directly to the sump (with agitation) and allow the system to circulate for about one hour before shutdown.

In diluted fluids add 520-2100 m/cubic meter or 0.52-2.1 gallon/1000 gallon (250-1000 ppm active) to control microbial growth. For maintenance add 210-842 m/cubic meter or 0.21-0.8 gallon/1000 gallon (100-400 ppm active ingredient) on a weekly basis preferably in the afternoon before shutdown. The frequency may be increased where significant contamination is identified.

BIOBAN BP-40 may be incorporated in metalworking fluid concentrate by the manufacturer who should ensure that any incompatibility will not affect efficacy.

NET WT: 249.4 kg / 550 lb

LOT

84063-00162329-3/24/2003-1703 Active

PAPER MILL PROCESS WATER
 Apply at a convenient point early in the process system (machine chest, constant head box or fastwater top system). Shock dose one, twice or three times daily at 1 to 25 ppm a.l. in the process water. This equates to 22 and 525 ml (0.45 and 1.13 pt) per ton of finished paper or paperboard depending on the complexity of the system, quality of raw paper and type and degree of contamination.

ADHESIVES
 For control of microbial contamination, add 0.25 to 2.5 lb of BIOBAN BP-40 per 1000 lb total formulation weight. The addition is best accomplished by adding the product to any water to be incorporated into the formulation.

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 fountain solutions. For in-can preservation, add BIOBAN BP-40 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. To control bacterial spoilage during the use of fountain solutions, BIOBAN BP-40 should be shock-dosed at a suitable point in the fountain reservoir where there is adequate flow or turbulence to ensure quick mixing. BIOBAN BP-40 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: BIOBAN BP-40 should be dosed at 200 to 1000 ppm based on the final formulation volume (1.6 to 8 pt/1000 gallons).

FOUNT SOLUTIONS: BIOBAN BP-40 should be shock-dosed at between 40 and 200 ppm (0.32 to 1.6 pt/1000 gallons) depending on the contamination levels in the fountain reservoir.

STARCH PIGMENT AND EXTENDER SLURRIES
 To inhibit the growth of spoilage bacteria during the manufacture, storage and distribution of water-based suspension concentrates, BIOBAN BP-40 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 BIOBAN BP-40 should be added after this stage when the product has cooled to below 40°C.

FREQUENCY AND DOSE: BIOBAN BP-40 should be dosed at 200 to 1000 ppm based on the final formulation volume (1.6 to 8 pt/1000 gallons).

PAINTS, WATER-BASED COATING APPLICATION TANKS, AND LATEX AND ANTIFOAM EMULSION SYSTEMS
 To provide in-can preservation and prevent bacterial spoilage during storage of acrylic, styrene-acrylic, polyvinyl acetate and other emulsion concentrates and latex emulsion based paints. Also for the preservation of silicon and other antifoam emulsion systems, and to prevent spoilage of in-service paint applications tanks. Add BIOBAN BP-40 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 BIOBAN BP-40 after this stage when the product has cooled to below 40°C. Addition to application tanks should be by slug dosing the tank as needed to prevent bacterial spoilage.

FREQUENCY AND DOSE: BIOBAN BP-40 should be dosed at 200 to 1000 ppm based on the final formulation volume (1.6 to 8 pt/1000 gallons).

ABSORBANT CLAYS, CORN COBS AND GROUND WOOD
 Incorporate absorbent clays, corn cobs or ground wood with BIOBAN BP-40 to inhibit the growth of odor-causing bacteria. The suggested application rate is 52-500 ppm (0.08-0.6 oz. av. per 100 pounds absorbant material).

Recommended doses expressed as ppm are ppm product.

† Not for Use in California

DISINFECTANT LIQUID, CORROSIVE, N.O.S. (2-BROMO-2-NITRO-1,3-PROPANEDIOL SOLUTION)

UN1903 PG III

Apply Corrosive 8 label.

ACCEPTED
 FEB 18 2004
 Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide, registered under EPA Reg. No. 464-676

464-676

02/18/2004

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