



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Antimicrobials Division (7510P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

89110-11

Date of Issuance:

12/19/17

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

Bionix BP25

Name and Address of Registrant (include ZIP Code):

Robert Rosenwasser  
Isomeric Industries  
361 17<sup>th</sup> Street, NW #1224  
Atlanta, GA 30363

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Antimicrobials Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Zeno Bain, Acting Product Manager 33  
Regulatory Management Branch I  
Antimicrobials Division (7510P)  
Office of Pesticide Programs

Date:

12/19/17

You are required to comply with the data requirements described in the DCI identified below:

- a. 2-Bromo-2-nitropropane-1,3-diol GDCI-216400-1336

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI listed above, you may contact the Reevaluation Team Leader (Team 36): <http://www2.epa.gov/pesticide-contacts/contacts-office-pesticide-programs-antimicrobial-division>

2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, “EPA Reg. No. 89110-11.”
3. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated September 1, 2017
- Alternate CSFs 1 – 2 dated September 6, 2017

If you have any questions, please contact Terria Northern by phone at 703-347-0265, or via email at [northern.terria@epa.gov](mailto:northern.terria@epa.gov).

Enclosure: Approved label

**ACCEPTED**

Dec 19, 2017

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No. 89110-11

# BIONIX BP25

FOR USE AS AN INDUSTRIAL BACTERICIDE AND PRESERVATIVE

**Active Ingredient:**

2-Bromo-2-nitropropane-1,3-diol:..... 25.0%

**Other Ingredients:** ..... 75.0%

**Total:** ..... 100.0%

EPA Reg. No. 89110-

EPA Est.

NET CONTENTS: As Marked on Container

**KEEP OUT OF REACH OF CHILDREN  
DANGER**

**FIRST AID**

<b>If in eyes:</b>	<ul style="list-style-type: none"><li>• 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.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If swallowed:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to by a poison control center or doctor.</li><li>• Do not give anything to an unconscious person.</li></ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li><li>• Call a poison control center for further treatment advice.</li></ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-535-5053 for emergency medical treatment information, twenty-four (24) hours a day, seven (7) days a week.	
<b>Notes to physician:</b> Probable mucosal damage may contraindicate the use of gastric lavage.	

**[See side panels for additional Precautionary Statements]**

In case of emergency, call INFOTRAC: (800)-535-5053

**Manufactured for:**  
**ISOMERIC INDUSTRIES**  
361 17TH Street NW #1224  
Atlanta, GA 30363  
678-665-4275

## **PRECAUTIONARY STATEMENTS HAZARD TO HUMANS AND DOMESTIC ANIMALS**

**DANGER. Corrosive. Causes irreversible eye damage and skin burns.** Harmful if swallowed, absorbed through skin, or inhaled. Do not get in eyes, on skin or on clothing. Wear protective eyewear such as goggles and face shield. Wear coveralls over long-sleeved shirt and long pants, socks and chemical resistant footwear. Avoid breathing spray mist. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

### **User Safety Recommendations**

**BEFORE HANDLING OR USING THIS PRODUCT, SEE YOUR EMPLOYER AND READ THE CURRENT SAFETY DATA SHEET.** Applicators and other handlers must wear: Coveralls over long-sleeved shirt and long pants, socks and chemical resistant footwear, goggles, face shield and chemical-resistance gloves made of material such as nitrile, butyl or neoprene rubber or barrier laminate.

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### **ENVIRONMENTAL HAZARDS:**

This pesticide is toxic to fish. Do not discharge effluent containing this product into lakes, ponds, streams, estuaries, oceans, or public water 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.

### **DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

**Read these entire Directions for Use before using BIONIX BP25.**

**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 California.** BIONIX BP25 can be dosed directly by preparing a stock solution immediately prior to application either by open pouring (not cooling water treatment) or by metered pump. For product preservation BIONIX BP25 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.

### **INDUSTRIAL RECIRCULATING WATER COOLING TOWERS AND EVAPORATIVE CONDENSERS**

To control slime-forming bacteria and algae in industrial recirculation cooling towers and evaporative condensers. BIONIX BP25 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 AND DOSE:** BIONIX BP25 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 BIONIX BP25. BIONIX BP25 should be shock-dosed at between 100 – 400ppm (0.8-3.2 pt./1000 gallons) depending on the condition of the tower, the quality of raw water input, and the amount of bleed off.

## **INDUSTRIAL AND/OR COMMERCIAL AIR WASHERS, AIR CONDITIONING AND/OR HUMIDIFYING SYSTEMS/PAINT SPRAY BOOTHS**

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.

INITIAL DOSE of this product should be 190 mL/cubic meter or 1.52 pt./1,000 gallons (equivalent to 20 ppm active ingredient).

SUBSEQUENT DOSING can be reduced by half. Intermittent treatment during regular maintenance and cleaning at a level to 40 ppm active ingredient is also recommended with a contact time of at least one hour.]

## **INDUSTRIAL PROCESS WATER**

Use BIONIX BP25 to effectively control bacterial and algal growth in industrial process water, including, closed circuit machine cooling (injection molding, etc.) and stored (non-potable) water, as well as to reduce the biofouling of pipework, heat exchangers, condenser tubes and to minimize microbial produced corrosion. Dosing should be carried out into the sump/tank of the process water system. Shock-dosing is preferred. BIONIX BP25 can also be used as an intermittent flush treatment during regular maintenance cleaning of water tanks (non-potable) or equipment.

FREQUENCY AND DOSE: 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 BIONIX BP25 Preservative because of makeup or dilution, less frequent dosing (once monthly/twice monthly) should be sufficient. Dosing should be carried out to give an initial concentration of 200 ppm BIONIX BP25 (1.6 pt./1000 gallons). When the above treatment has been successful, dosing can be lowered to a minimum of 40 ppm BIONIX BP25 (0.328 pt./1000gallons). For intermittent treatment of industrial process water during routine maintenance, BIONIX BP25 should be used at 400 ppm (3.2 pt./1000 gallons) and a contact time of at least one hour.

## **PAPER MILL PROCESS WATER**

To control slime-forming bacteria in paper or paperboard process water systems. BIONIX BP25 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 AND DOSE: BIONIX BP25 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. Dose at between 0.08-2 pints per ton of finished paper or paperboard, depending on the complexity of the system, quality of the raw paper, and type and the degree of contamination.

## **PAPER MILLS-BULK PULP**

To preserve bulk quantities of pulp in paper and paperboard manufacturing systems or to prevent foul odors and general biodeterioration of stock when it is stored in bulk for any significant period of time, add BIONIX BP25 directly into the hydro pulper, machine chest or stock chest.

FREQUENCY AND DOSE: 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. BIONIX BP25 should be dosed at 1.6-6.4 pt./1000 gallons per ton of stock depending on the type and degree of contamination.

## **SLIME CONTROL**

### **[Not approved for this use in the state of California]**

Shock Dosing: 84 to 312 grams (3 – 10.8 oz.) of BIONIX BP25 for each ton of paper produced per day should be added as a single daily shock dose; the actual quantity used depends on the severity of the slime problem. This addition may be made to any part of the stock preparation or backwater system.

Continuous addition: BIONIX BP25 should be added continuously for either the single period of 8 hours during every 24 hours or for two separate periods of 4 hours during every 24 hours. BIONIX BP25 should be metered at the rate of 234 - 276 grams (8.4 – 9.96 oz.) for each ton of paper produced during the dosing period. This addition should be made to the recirculated backwater.

### **METALWORKING FLUIDS**

For use in soluble oils, semi-synthetic and synthetic fluids. Add directly to the sump and circulate for about one hour before shutdown. This product may be incorporated in metalworking fluid concentrate by the manufacturer who should ensure that any incompatibility will not affect efficacy. In diluted fluids 1000- 4000 ppm of this product is sufficient to control microbial growth (2 gallons of this product in 1,000 gallons will give a dose level of 2,000 ppm). For maintenance, add 400-1600 ppm of this product.

### **ADHESIVES**

For control of microbial contamination, add 0.4 to 4.0 lb. of BIONIX BP25 per 1000 lb. total formulation weight. The addition is best accomplished by adding the product to any water to be incorporated into the formulation.

### **BUILDING MATERIALS**

#### **[Not approved for this use in the state of California]**

Recommended as an in-container preservative for the control of bacteria and fungi in building materials including mastics, caulks, joint cements, spackling, grouting, concrete admixtures. The suggested application rate is 0.3-1.8lbs / 1000lbs formulation.

### **ABSORBENT CLAYS, CORN COBS AND GROUND WOOD**

Impregnate absorbent clays, corn cobs or ground wood with BIONIX BP25 to inhibit the growth of odor-causing bacteria. The suggested application rate is 100-800 ppm (0.16-1.28 oz. av. per 100 pounds of absorbent material).

### **STARCH, PIGMENT AND MINERAL AND EXTENDER SLURRIES**

#### **[Not approved for this use in the state of California]**

To inhibit the growth of spoilage bacteria during the manufacture, storage and distribution of water-based suspension concentrates, this product 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, this product should be added after the product has cooled to below 40°C.

FREQUENCY AND DOSE: This product should be dosed at 400-2,000 ppm based on the final formulation volume (3.2-160 pt./1,000 gallons).

### **LATICES, POLYMER EMULSIONS OR SOLUTIONS**

#### **[Not approved for this use in the state of California]**

Recommended for the control of bacteria and fungi in the manufacture and storage of synthetic and natural polymer lattices including: acrylics, styrene-butadiene, carboxylated styrene-butadiene, ethylene-vinyl acetate and biopolymers intended for industrial use including xanthan gum, gum arabic, guar gum, protein derived polymers, starches and casein derived polymers; photographic emulsions, silicone and other antifoam emulsion systems. The suggested application rate is 0.4 – 2.0lbs / 1000lbs formulation.

### **LIQUID HOUSEHOLD AND INSTITUTIONAL PRODUCTS**

#### **[Not approved for this use in the state of California]**

For the control of bacteria and fungi in liquid soaps, liquid cleaners, liquid detergents, liquid laundry products, liquid dishwashing detergents, waxes, polishes, liquid fabric treatment/refresher products, liquid air fresheners/deodorizers, car care products, and other similar cleaners. For the control of bacteria and fungi in packaged utility products such as pre-moistened sponges and mops. For the control of bacteria and fungi in solutions that are then put into/onto wet wipes for use in industrial, commercial, residential and household uses cited above. Wet wipes containing a solution preserved with this product may not be used for personal care, as baby wipes, or for food contact. May be added to those products formulated as concentrates which are in turn diluted for use at level to ensure that the final use-dilution product will contain between 100 ppm to 2000 ppm

BIONIX BP25.

## **SEMI-SOLID/SOLID HOUSEHOLD AND INSTITUTIONAL PRODUCTS**

### **[Not approved for this use in the state of California]**

For the control of bacteria and fungi in semi-solid/solid soaps, semi-solid/solid cleaners, semi-solid/solid detergents, semi-solid/solid laundry, semi-solid/solid dishwashing detergents, waxes, polishes, semi-solid/solid fabric treatment/refresher products, semi-solid/solid air fresheners/deodorizers, car care products, and other similar cleaners. For the control of bacteria and fungi in packaged utility products such as pre-moistened sponges and mops. For the control of bacteria and fungi in solutions that are then put into/onto wet wipes for use in industrial, commercial, residential and household uses cited above. Wet wipes containing a solution preserved with this product may not be used for personal care, as baby wipes, or for food contact. May be added to those products formulated as concentrates which are in turn diluted for use at level to ensure that the final use-dilution product will contain between 100 ppm to 2000 ppm of BIONIX BP25.

## **SURFACTANTS AND RAW MATERIALS USED IN CONSUMER, HOUSEHOLD AND INSTITUTIONAL PRODUCTS**

### **[Not approved for this use in the state of California]**

For preservation of surfactants and raw materials supplied for the manufacture of industrial and consumer products. The suggested application rate is 0.4 - 2.0lbs / 1000lbs formulation.

## **WATER BASED AGRICULTURAL PESTICIDE CONCENTRATES**

### **[Not approved for this use in the state of California]**

For preservation, BIONIX BP25 should be dosed at 336 to 1680 ml / cubic meter or 2.64 to 13.4 pints / 1000 gallons based on the final formulation volume (400 to 2000 ppm BIONIX BP25).

## **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, add this product at any convenient point in the manufacturing process. Ideally, this product 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 fount solutions, shock dose this product at 200-400 ppm (1.6-3.2 pt./l,000 gallons) at a suitable point in the fount reservoir where there is adequate flow or turbulence to ensure quick mixing.

**FREQUENCY AND DOSE:** This product may be shock-dosed once or twice weekly in the fount as a normal routine, or more frequently if required.

**IN-CAN PRESERVATION:** This product should be dosed at 400-2,000 ppm based on the final formulation volume depending on level of contamination. (3.2-16 pt./ 1,000 gallons)

**FOUNT SOLUTIONS:** This product should be shock-dosed at 80-400 ppm (1.6-3.2 pt./l,000 gallons) depending on the level of contamination in the fount reservoir.

## **PAINTS, LATEX AND OTHER EMULSION SYSTEMS**

To provide in-can preservation and prevent bacterial spoilage during storage of acrylic, styrene-acrylic, polyvinyl acetate, and other latex emulsion, latex emulsion based paints, photographic emulsions, silicone and other antifoam emulsion systems, and to prevent spoilage of in-service paint applications tanks, add this product 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 during manufacturing, add this product 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:** This product should be dosed at 400-2,000 ppm (0.16 – 1.28 oz. av. per 100 pounds of absorbent material). Add this product at 400-2,000 ppm based on the final formulation volume (3.2-16 pt./l,000 gallons).

## **HIDES AND SKINS**

### **[Not registered for this use in the state of California]**

BIONIX BP25 is used to prevent bacterial decomposition of hides and skins. When the product is used for temporary preservation, it is applied at 0.04-.40% (400-4000 ppm) based on the weight of

green fleshed hides or skins. The specific dosage and contact time will be dependent on the condition of the hides and the desired length of preservation. When used for the preservation in brine of hides/skins BIONIX BP25 should be used at a level of 0.002-0.2% (20-2000 ppm) in a raceway or at 0.002-0.2% (20-2000 ppm) in a mixer based on the total weight of hides or skins and saturated brine solution. In raceway operations, it can be added directly to the raceway during the addition of hides and operations of paddles. In processor/mixer operations the product should be added as dispersion in water. A satisfactory dispersion of 1 part BIONIX BP25 plus 4 parts water can be prepared by adding the BIONIX BP25 to the water (as opposed to adding water to BIONIX BP25) with agitation.

## **LEATHER**

### **[Not registered for this use in the state of California]**

BIONIX BP25 can be used to prevent bacterial decomposition of brine-cured, wet-salted, air-dried or green fleshed hides and skins in the soaking process. For this purpose, BIONIX BP25 can be used at treatment levels of 0.002-0.12% (20-1200 ppm) based on the weight of the hides/skins and process water (float) and added as dilution in water. A satisfactory dilution of 1 part BIONIX BP25 plus 9 parts water can be prepared by adding the BIONIX BP25 to the water (as opposed to adding the water to BIONIX BP25) with agitation. This dilution should be made immediately prior to use in the soaking process and added directly to the soak tank, paddles, mixers or drums as suitable.

## **WATER BASED AGRICULTURAL PESTICIDE CONCENTRATES**

### **Do not use for applications involving direct or indirect food or drinking water contact**

For preservation, BIONIX BP25 should be dosed at 400 to 2000 ppm based on the final formulation volume (3.2 to 16pt./1000 gallons).

## **OIL AND GAS FLUIDS**

For use in both terrestrial and off-shore drilling muds, packer fluids, and brines for the control of contamination and degradation of a wide range of gels and fluids including fracturing, enhanced oil recovery, injection, well squeeze, drilling, workover and completion fluids. Inhibits growth of cellulolytic, slime-forming or sulfate-reducing bacteria. This product may be dosed directly into the mud or brine.

FREQUENCY AND DOSE: A single slug dose one to three times each 24 hours. Dosing may be less frequent where the contamination is low. Each slug dose should be 0.072-0.144 pt./barrel total mud volume.]

## **DRILLING MUDS**

To preserve oil and gas well drilling muds by inhibiting growth of cellulolytic, slime-forming, or sulfate-reducing bacteria. BIONIX BP25 may be dosed directly into the mud hopper.

FREQUENCY AND DOSE: A single slug dose one to three times each 24 hours. Each slug dose should be 0.072 to 0.144 pt./barrel total mud volume.

## **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. BIONIX BP25 may be dosed directly into the mud or brine.

FREQUENCY AND DOSE: A single slug dose one to three times each 24 hours. Dosing may be less frequent where the contamination is low. Each slug dose should be 0.072 to 0.144 pt./barrel total mud volume.

## **OIL FLOODING WATER/INJECTION WATERS**

To inhibit the growth of slime-forming or corrosion-inducing sulfate-reducing bacteria in oil well injection waters, inject BIONIX BP25 as a slug dose at any convenient point.

FREQUENCY AND DOSE: Depending on severity and rapidity of contamination, BIONIX BP25 should be used from once a week to once a month at a concentration of 0.8-3.2 pt./1000 gallons.

## **INJECTION FLUIDS**

### **[Not registered for this use in the state of California]**

To control contamination and corrosion from bacterial sources in fluids/waste fluids that are disposed of



through injection into an approved well following approved guidelines, add BIONIX BP25 to each volume of fluid prior to injection.

FREQUENCY AND DOSE: BIONIX BP25 should be added at a rate of 200-400 ppm (0.072- 0.144 pt./barrel) based on the water percent of the injection fluid.

### **ENHANCED OIL RECOVERY (EOR) FLUIDS**

For effective control of bacterial growth and eliminating degradation of EOR gels and fluids used in the oil and gas industry, add BIONIX BP 10 during mixing or by injection during the EOR procedure.

FREQUENCY AND DOSE: BIONIX BP 10 should be added throughout the EOR operation. BIONIX BP 10 should be added at the rate of 200-400 ppm (0.072-0.144 pt./barrel) depending on the quality of the makeup water.

### **WELL SQUEEZE FLUIDS**

For the effective control of aerobic and anaerobic bacteria in squeeze fluids and downhole well bore areas, add BIONIX BP25 during pre-mixing of the well squeeze or by direct injection at the well head during the well squeeze procedure.

FREQUENCY AND DOSE: BIONIX BP25 should be used for each well squeeze operation to ensure best results. Add BIONIX BP25 at a rate of .8-6.4pt/1000 gallons, depending on the quality of the makeup water.

### **FRACTURING FLUIDS**

BIONIX BP25 reduces bacterial contamination and degradation of fracturing gels and fluids as well stimulants in the oil and gas industry. Add BIONIX BP25 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 AND DOSE: BIONIX BP25 should be used for each fracturing operation to ensure best results. Add BIONIX BP25 at a rate of 1.6-3.2 pt./1000 gallons, depending on the quality of the makeup water.

### **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, inject BIONIX BP25 into the water-containing oil or gas stream at any convenient point. It should be injected as slug doses, not continuous feed.

FREQUENCY AND DOSE: Depending on the severity and rapidity of contamination BIONIX BP25 should be slug-dosed from once a week to once a month with 0.0332-0.132 pt./barrel.

### **PIPELINE AND TANK MAINTENANCE**

#### **[Not registered for this use in the state of California]**

To control aerobic and anaerobic bacteria, particularly sulfate-reducing bacteria, growth in oil and gas related production piping and transportation systems, inject BIONIX BP25 directly into the pipeline or add to the hydrocarbon phase. Addition of the BIONIX BP25 will produce long-term water concentrations by a diffusion process.

FREQUENCY AND DOSE: Slug treatments are recommended and can vary from daily to monthly to control growth. BIONIX BP25 should be dosed at a rate which will achieve concentrations of 100-800 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.

### **WATER BOTTOMS IN OIL OR TRANSPORTATION TANKS**

#### **[Not registered for this use in the state of California]**

BIONIX BP25 provides 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. BIONIX BP25 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 AND DOSE:** 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). Incorporate BIONIX BP25 at a rate which will achieve concentrations of 200 -400 ppm in the aqueous phase. Larger quantities may be added when dosing the hydrocarbon phase to allow diffusion of the active ingredient into the water bottom.

### **STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage and disposal.

#### **PESTICIDE STORAGE**

Product should be stored in an area that is not subject to extreme temperatures. Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food and feed. Do not store or transport in unlined metal container.

#### **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 HANDLING**

(For plastic containers, less than or equal to 5 gallons)

[Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip.

Fill container  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat the procedure two more times. The offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.]

(For plastic containers greater than 5 gallons)

[Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip.

Fill container  $\frac{1}{4}$  full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat the procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.]

### **WARRANTIES AND WARRANTY DISCLAIMERS**

**Conditions of Sale:** Isomeric Industries ("ISOMERIC") warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the directions under normal conditions of use. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to ISOMERIC. To the extent consistent with applicable law, ISOMERIC DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY. To the extent consistent with applicable law, ISOMERIC SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF

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