K-BAC 1000

A MICROBIOCIDAL BACTERICIDE, FUNGICIDE ALGICIDE AND SLIMICIDE, IN TREATING RECIRCULATING COOLING WATER IN INDUSTRIAL COOLING SYSTEMS AND FOR PAPER MILLS, NON-MARINE USES IN ENHANCED OIL RECOVERY SYSTEMS, AND METALWORKING CUTTING FLUIDS CONTAINING WATER

GUARANTEE: 2, 2-Dibromo-3-nitrilopropionamide: 98%

COMMERCIAL

REGISTRATION No.: 31030 PEST CONTROL PRODUCTS ACT

KEEP OUT OF REACH OF CHILDREN

DANGER – POISON

CORROSIVE TO EYES AND SKIN

POTENTIAL SKIN SENSITIZER

READ THE LABEL BEFORE USING

NET CONTENTS:

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PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN HAZARD TO HUMANS AND DOMESTIC ANIMALS DANGER CORROSIVE TO EYES AND SKIN POTENTIAL SKIN SENSITIZER

May be harmful or fatal if swallowed or inhaled. Do not get in eyes, on skin or on clothing. Do not inhale vapours or spray mist. Wear a long-sleeve shirt, long pants, shoes and socks, chemical-resistant gloves, a chemical-resistant apron, and a full-face NIOSH-approved respirator when handling. Wear a respirator if the area is not well ventilated and during cleaning, maintenance and repair activities. User should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing immediately if pesticide comes in contact with skin through soaked clothing or spills.

Then wash skin thoroughly and put on clean clothing. Wash contaminated clothing separate from other laundry prior to reuse. Users should remove protective clothing 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 product is toxic to fish and other aquatic organisms. It is not to be used in circumstances that would cause or allow it to enter lakes, streams, ponds, estuaries, oceans or other waters in contravention of federal or provincial regulatory requirements. The requirements of applicable laws should be determined before using the product. Do not discharge effluent containing this product into sewer systems without previously notifying the local sewage treatment plant authority.

Do not contaminate water by cleaning of equipment, or disposal of wastes. Do not discharge treated water into estuaries, lakes, streams, ponds, or public waters

CHEMICAL AND PHYSICAL HAZARDS

Reaction with strong reducing agents may be explosive. Avoid misting.

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 centre or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to mouth, if possible. Call a poison control centre or doctor for further treatment advice.

If swallowed: Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION: Dilution of an ingested corrosive is a safer first aid treatment than emesis.

WASH THOROUGHLY AFTER HANDLING

STORAGE: To maintain product quality store in a dark, cool, dry, well-ventilated area, not above 30°C, rotate and use stock within three months. Store in well-closed original containers, away from energy sources, combustible organic materials and oxidizers. Do not contaminate water, food or feed by storage or disposal.

DISPOSAL:

- 1. Triple-or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Follow provincial instruction for any required additional cleaning of the container prior to its disposal.
- 3. Make the empty container unsuitable for further use.
- 4. Dispose of the container in accordance with provincial requirements.
- 5. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.
- 6. For SPILLS: When handling or dealing with spills, use impact-resistant goggles with side shields, or face shield; wear body-covering clothes, including impervious chemical resistant gloves and boots; use a dust respirator if misting occurs. For small spills, recover free product. Cover wet spills with 10% sodium bicarbonate solution, water and then an inert absorbent before sweeping up and disposing as described for pesticide disposal. If drum contents are contaminated or decomposing, isolate unsealed drum in the open or in a well-ventilated area; flood with 10% sodium bicarbonate solution and large volumes of water if necessary. DO NOT FLUSH INTO SURFACE STREAMS. INFORM THE PROVINCIAL REGULATORY AUTHORITY OR THE REGISTRANT.

NOTICE TO USER

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

DIRECTIONS FOR USE

NOTE: ADD SOLUTIONS OF K-BAC 1000 SEPARATELY TO THE SYSTEM. DO NOT MIX THEM WITH OTHER ADDITIVES, IN ORDER TO AVOID DECOMPOSITION OF K-BAC 1000 DUE TO THE HIGH pH OF MANY ADDITIVE FORMULATIONS.

INDUSTRIAL RECIRCULATING WATER COOLING TOWERS

This product is for recirculating water systems only. For control of bacterial growths in cooling towers, add solutions of K-BAC 1000 to the basin (or at any other point of uniform mixing). Addition should be made with a metering pump; it may be continuous or intermittent, depending on the severity of the contamination when treatment is begun, and the retention time in the system. Badly fouled systems must be cleaned before treatment is begun.

INTERMITTENT or SLUG METHOD

INITIAL DOSE: When the system is noticeably fouled, add 1.2-2.4 grams of K-BAC 1000 / 1000 L of water in the system. Repeat until control is achieved.

SUBSEQUENT DOSES: When microbial control is evident, add 0.6-2.4 grams of K-BAC 1000 /1000 L of water in the system every 4 days, or as needed

to maintain control.

CONTINUOUS FEED METHOD

INITIAL DOSE: When the system is noticeably fouled, add 1.2-2.4 grams of K-BAC 1000 /1000 L of water in the system. Subsequently, maintain this treatment level by pumping a continuous feed of 0.12-1.2 grams of K-BAC 1000 / 1000 L of water lost by blowdown. Optimum performance with this product is attained by continuous or intermittent treatment. If "slug" treatment is used, the blowdown should be discontinued for 24-48 hours.

OIL FIELD APPLICATION

For reduction of bacterial contamination and degradation in oil recovery operations.

FRACTURING FLUIDS:

K-BAC 1000 reduces bacterial contamination and degradation of fracturing fluids and gels used in oil and gas well stimulations. K-BAC 1000 should be added to the water storage tanks before gelling and circulated to ensure mixing. K-BAC 1000 can be pre-dissolved in warm water and added at the well head for "on-the-fly" fracturing jobs. Use all pre-dissolved liquid within 24 hours.

Frequency and Dose: Add K-BAC 1000 at a rate of 5 to 16 ppm (5-16 g/1000 L) depending on water quality. Retreat after 48 hours if the fracturing job is delayed.

ENHANCED OIL RECOVERY (EOR) FLUIDS: K-BAC 1000 reduces bacteria contamination and degradation of EOR polymers and gels. K-BAC 1000 should be added to injection water before polymer addition.

Frequency and Dose:

K-BAC 1000 is added at a rate of 0.2 to 16 ppm (0.2-16 grams/1000 L) based on injection volume. Dry K-BAC 1000 should be added at a point to ensure proper dissolution and mixing.

WATER FLOODS

K-BAC 1000 can be used to control slime and corrosion causing bacteria in waters used for secondary oil and gas recovery. K-BAC 1000 can be added as a dry product or pre-dissolved in warm water. Use all pre-dissolved liquid within 24 hours. If the system is heavily fouled, slug

treat at the higher rate to remove biofilm. For maintenance, batch treat two to three times per week.

Frequency and Dose: K-BAC 1000 is added at a rate of 0.2 to 16 ppm (0.2-16 grams/1000 L) based on water injection volume. Dry K-BAC 1000 should be added at a point to ensure proper dissolution and mixing.

PAPER MILLS

NOTE: FOR USE IN THE MANUFACTURE OF PAPER AND PAPERBOARD THAT IS INTENDED ONLY FOR NON-FOOD CONTACT PURPOSES.

For the control of bacterial, fungal, and yeast growths in pulp, paper, and paperboard mills. Addition may be continuous or intermittent, depending upon the type of system and the severity of contamination. It should be made with a metering pump at a location that will insure uniform distribution of K-BAC 1000 in the mass of fiber and water, such as the beaters, jordan inlet or discharge, broke chests, furnish chests, save-alls, and white-water tanks.

HEAVILY FOULED SYSTEMS: Must be boiled out and then treated with 15-35 grams of K-BAC 1000 /tonne of paper (dry basis), as necessary for control.

MODERATELY FOULED SYSTEMS: Treat continuously with 35-50 grams of K-BAC 1000 /tonne of paper (dry basis) until the slime accumulation is controlled. Addition rates can then be reduced to 15-35 grams of K-BAC 1000 /tonne of paper on a continuous or intermittent basis, as needed for control. Dislodged slime may cause breaks in the paper and a clean-up of the paper machine may be advisable.

SLIGHTLY FOULED SYSTEMS: Treat continuously with 15-35 grams of K-BAC 1000 /tonne of paper (dry basis) until the slime is controlled, then added on an intermittent basis to maintain control.

DIRECTIONS FOR TREATING METAL-WORKING CUTTING FLUIDS CONTAINING WATER

K-BAC 1000 is effective in metal working fluid concentrates which have been diluted in water at ratios of 1:100 to 1:4. For controlling (or inhibiting) the growth of bacteria, fungi and yeasts that may deteriorate metal working fluids containing water, add this product to the fluid in the collection tank. Additions should be made with a metering pump.

INITIAL OR SLUG DOSE: When the system is noticeably fouled, add K-BAC 1000 at a rate of 60 grams/1000 L to the metal working fluid. Repeat until control is achieved.

SUBSEQUENT DOSE: When microbial control is evident, add K-BAC 1000 at a rate of 24-48 grams/1000 L of metal-working fluids per day, or as needed to maintain control. Additions of K-BAC 1000 can be made continuously or intermittently. Slug the system as required.