



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

EPA Reg. Number:

88714-10

Date of Issuance:

10/25/16

NOTICE OF PESTICIDE:

Registration
 Reregistration
(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

K-BAC® 2050

Name and Address of Registrant (include ZIP Code):

Water Science Technologies, LLC
1704 Vanderbilt Road
Birmingham, AL 35234

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:

Julie Chao, Product Manager 33
Regulatory Management Branch I, Antimicrobials Division (7510P)

Date:

10/25/16

2. You are required to comply with the data requirements described in the DCI identified below:
 - a. Glutaraldehyde GDCI-043901-30859

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>.

3. Be aware that proposed data requirements have been identified in a Preliminary Work Plan for Glutaraldehyde. For more information on these proposed data requirements, you may contact the Reevaluation Team Leader (Team 36): <http://www2.epa.gov/pesticide-contacts/contacts-office-pesticide-programs-antimicrobial-division>.
4. Make the following label changes before you release the product for shipment:
 - Revise the EPA Registration Number to read, "EPA Reg. No. 88714-10."
5. 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 June 1, 2016

If you have any questions, please contact Zebora Johnson by phone at (703) 308-7080, or via email at johnson.zeboraj@epa.gov.

Sincerely,



Julie Chao, Product Manager 33
Regulatory Management Branch 1

Enclosure: Approved Label

{All text in brackets [xxx] is optional and may or may not be intended on a final label.}
 {All text in braces {xxx} is administrative and will not appear on a final label.}

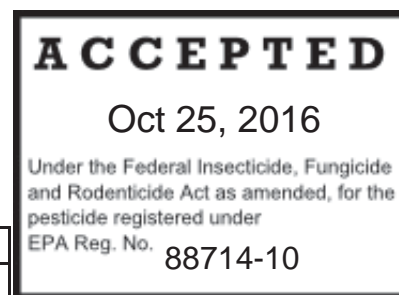
K-BAC® 2050

COMMERCIAL MICROBIOCIDE

A microbiocide for controlling slime-forming and sulfate-reducing bacteria, fungi, yeast and algae. For use in sugar beet mills and process water systems; paper mills and associated process water systems; pigments and filler slurries for food and non-food contact paper and paperboard; non-food contact water based coatings for paper and paperboard; air washers and industrial scrubbing systems; recirculating cooling and process water systems; reverse osmosis membranes; heat transfer systems; service water and auxiliary systems; industrial wastewater systems including wastewater sludge and holding tanks; water-based conveyor lubricants; aqueous metalworking fluids; oil field applications including drilling muds, workover, fracturing, completion and packer fluids; gas production, transmission and storage; preservation of food contact adhesives and mineral slurries used in paper making and preservation of concentrates.

ACTIVE INGREDIENT: Glutaraldehyde 50.0%
INERT INGREDIENTS: 50.0%
TOTAL: 100.0%

KEEP OUT OF REACH OF CHILDREN
DANGER



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 first 5 minutes, then continue rinsing eye. Call a poison control center 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 center or doctor for treatment advice.
IF SWALLOWED: Call poison control center 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 center or doctor. Do not give anything by mouth to an unconscious person.
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 center or doctor for treatment advice.
HOT LINE NUMBER
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-255-3924 for emergency medical treatment information.
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Corrosive. Causes irreversible eye damage and skin burns. Harmful if inhaled or absorbed through the skin. May be fatal if swallowed. Do not get in eyes, on skin or on clothing. Avoid breathing vapors and mists. Not to be used as an aerosol. Do not swallow. Prolonged or frequently repeated skin contact may cause allergic skin reactions in certain individuals. May cause asthmatic signs and symptoms in some hyper-reactive individuals. Wear eye goggles, rubber gloves and protective clothing when handling this product. Wash

thoroughly with soap and water after handling and before eating, drinking and using tobacco. Remove contaminated clothing and wash before reuse.

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 when disposing of equipment washwaters.

Instructions in Case of Spills or leaks: Wear goggles, rubber gloves, and protective clothing. Absorb spills and leaks with inert material such as sand, clay or vermiculite. Shovel into a sealable container and dispose of in an authorized EPA disposal facility.

In Case of Fire: Use water, carbon dioxide, dry chemical (eg. Sodium bicarbonate) extinguishing medias. Fire fighters should be equipped with self-contained breathing apparatus and turnout gear.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: K-BAC 2050 solutions are corrosive to many commonly used materials of construction such as steel, galvanized iron, aluminum, tin and zinc. These solutions can be stored and handled in baked phenolic lined steel, stainless steel or reinforced epoxy equipment. This product freezes at approximately -20°C (-4°F). Therefore, unless the storage tank is inside or underground, heating and insulation may be required. If heating is needed, exposure to high temperatures should be avoided. For short storage (1 month) temperatures up to 100°F can be tolerated; however, the preferred maximum storage temperature is approximately 80°F. Keep away from fire and open flames. A stainless steel centrifugal pump is suggested for transfer service.

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 Environment Control Agency, or the Hazardous Waste Representative at the nearest EPA regional office for guidance.

CONTAINER HANDLING: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from the container into the application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

GENERAL: Consult Federal, State and local authorities for approved alternative procedures RCRA Hazardous Waste Code D002.

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELLING

GENERAL USE DIRECTIONS: Add K-BAC 2050 at a point of uniform mixing where the treated water will be circulated or mixed throughout the system. Badly fouled systems should be cleaned before treatment begins. K-BAC 2050 can be applied either intermittently (slug dose) or by continuous feed where stated. Where appropriate, feed points should be below the water line to minimize vapor.

AIR WASHERS AND INDUSTRIAL SCRUBBING SYSTEMS, RECIRCULATING COOLING AND PROCESS WATER SYSTEMS

Use only in industrial air washer systems, which have mist-eliminating components. Badly fouled systems can be shock treated by using the highest recommended rate of K-BAC 2050. Under these conditions, blowdown should be discontinued for up to 24 hours. Apply by intermittent or continuous feed methods.

Initial Dose: When the system is noticeably fouled, add 11.5-23.0 fl. oz. (100-200 ppm) of K-BAC 2050 per 1,000 gal. of water in the system. Repeat until control is achieved. **Subsequent Dose:** When microbial control is evident, add 4.6-11.5 fl. oz. (40-100 ppm) of K-BAC 2050 per 1,000 gal. of water in the system per day, or as needed to maintain control.

REVERSE OSMOSIS MEMBRANES

Use only where approved for compatibility by the membrane manufacturer. Immerse membrane in a tank containing 2,000 to 20,000 ppm K-BAC 2050 for 6 to 24 hours. K-BAC 2050 can also be added to in-line recirculating systems of installed out of service osmosis equipment. Add 200 to 2,000 ppm K-BAC 2050 to the tank on the circulating system and maintain this concentration by periodic addition to counteract any system leakage. Flush the system through with clean water before returning to service.

HEAT TRANSFER SYSTEMS

For use in Evaporative Condensers, Dairy Sweetwater Systems, Hydrostatic Sterilizers and Retorts, Pasteurizers and Warmers, and Once-Through Cooling Water Systems. **Initial Dose:** When the system is noticeably fouled, add 11.5-23.0 fl. oz. (100-200 ppm) of K-BAC 2050 per 1,000 gal. of water in the system.

Subsequent Dose: For maintenance, use a continuous feed of 4.6-11.5 fl. oz. (40-100 ppm) of K-BAC 2050 per 1,000 gal. of water in the system per day.

SERVICE WATER AND AUXILIARY SYSTEMS

Use in systems such as fire water reserves, spray paint booths, and emergency cooling water systems. Dose initially at 11.5-23.0 fl. oz. (100-200 ppm) of K-BAC 2050 per 1,000 gal. of water in the system. Reapply as necessary to maintain this concentration.

INDUSTRIAL WASTEWATER SYSTEMS

For use in aerobic and anaerobic, belt pressed, digested and undigested sludges; and holding tanks. Add 0.5 to 2.3 gal. (450 to 2,250 ppm) of K-BAC 2050 per 1,000 gal. of wastewater or sludge.

SUGAR BEET MILLS AND PROCESS WATER SYSTEMS

Apply by intermittent or continuous feed methods. Repeat intermittent dose until control is achieved. The total should not exceed 106 gal. per 1,000 tons of beets sliced per day. **Initial Dose:** When the system is noticeably contaminated, add 5.5 to 13.6 fl. oz. (200 to 500 ppm) of K-BAC 2050 per ton of sliced beets.

Subsequent Dose: When microbial control is evident, add 0.8 to 8.2 fl. oz. (30 to 300 ppm) of K-BAC 2050 per ton of sliced beets to the system as necessary to maintain control.

Not for use in the State of California.

PAPER MILLS AND ASSOCIATED PROCESS WATER SYSTEMS

Apply by intermittent or continuous feed methods. **Initial Dose:** When the water is noticeably contaminated, add 0.5-3.0 lbs per ton of pulp or paper (dry basis). Repeat until control is achieved. **Subsequent Dose:** When microbial control is evident add 0.3-2.0 lbs per ton to pulp or paper (dry basis) as necessary to maintain control.

PIGMENTS AND FILLER SLURRIES FOR FOOD AND NON-FOOD CONTACT PAPER AND PAPERBOARD

To inhibit the growth of spoilage microorganisms during manufacture, storage and distribution of pigments and filler slurries such as kaolin, calcium carbonate and titanium dioxide. Add K-BAC 2050 to produce a concentration of 100-600 ppm by weight of the formulation slurry (1.0-6.0 lbs of product per 10,000 lbs. of slurry). Apply once during manufacture.

WATER BASED COATINGS FOR NON-FOOD-CONTACT PAPER AND PAPERBOARD

To inhibit the growth of spoilage microorganisms during manufacture, storage and distribution of water-based coatings for use on non-food-contact paper and paperboard. Add K-BAC 2050 at 100-600 ppm by weight of the formulation slurry (1.0-6.0 lbs of product per 10,000 lbs of slurry).

OIL WELL WATER FLOODS

Initial Dose: Add K-BAC 2050 at 100-5,000 ppm of the water flood system (0.09-4.5 gal. K-BAC 2050 per 1,000 gal. floodwater). Add K-BAC 2050 intermittently until control is achieved. **Subsequent dose:** Add 50 to 250 ppm of K-BAC 2050 (0.05 to 0.25 gal. of K-BAC 2050 to each 1,000 gal.) each week to maintain bacterial control.

DRILLING MUDS, WORKOVER, FRACTURING AND COMPLETIONS FLUIDS

Add 100 to 1,000 ppm K-BAC 2050 (0.38 to 3.8 gal. K-BAC 2050 per 100 barrels or 4,200 gal.), depending on the severity of the bacterial contamination. Add additional K-BAC 2050 to maintain the proper concentration as the total volume of the system increases with the well depth. For workover fluids, circulate the system until the fluid returns clear. Shut the system down and idle for several hours. Remove the workover fluid. This well should be ready for productive use.

PACKER FLUIDS

Add K-BAC 2050 at 50-600 ppm (0.21 to 2.5 gal. per 100 barrels of fluid) to a freshly prepared fluid, depending on the severity of contamination. Apply once before sealing the treated packer fluid in the wall between the casing and production tube.

GAS PRODUCTION AND TRANSMISSION PIPELINES AND SYSTEMS

Add K-BAC 2050 to inhibit microbiological growth in gas production or transmission pipelines and systems supplying liquid and natural gas during commercial production. Inject K-BAC 2050 directly into the transmission pipeline at the earliest available entry point. Add K-BAC 2050 at a dose rate of 50 to 600 ppm of the water in the system. Injections to the system should be made on a weekly basis, or as needed to maintain control.

GAS STORAGE WELLS AND SYSTEMS

Treat individual injection wells with K-BAC 2050 at 500 to 5,000 ppm and maintain this concentration in the water present in the formation. Treatment of the well should take place during the summer before gas is injected. Dose individual drips to maintain a concentration of 200 to 2,000 ppm K-BAC 2050. Treatment should be repeated yearly, or as needed to maintain control.

HYDROTESTING

For use in pipelines, valve systems, boilers and vessels. Water used to hydrotest pipelines or vessels should contain 100 to 4,000 ppm (0.1 to 4.0 gal. per 1,000 gal. water) of K-BAC 2050, depending on water quality, pH, environmental conditions and the length of time the equipment will remain idle. At neutral pH and below, treated water can remain in the system for more than 1 year.

PIPELINE PIGGING AND SCRAPING OPERATION

Add K-BAC 2050 to the water immediately following the scraper. This water volume can be kept to a minimum and contained between the scraper and trailing pig. Add K-BAC 2050 at 1,000 to 10,000 ppm (0.1 to 1.0 gal. K-BAC 2050 per 100 gal. water), depending on the length of the pipeline and the severity of biofouling.

WATER BASED CONVEYOR LUBRICANTS

For use in brewery, juice, dairy, beverage, and food processing systems. Thoroughly clean tracks and conveyors to remove all gross contamination. Rinse well. Use a commercially available automatic feed system to provide 1.4 to 8.4 fluid ounces (100 to 600 ppm) of K-BAC 2050 per 100 gal. of dilute lubricant.

Avoid contamination of food in application of this product.

Not for use in the State of California.

GENERAL PRESERVATION

Non-food contact: For use by manufacturers for in-can preservation of aqueous industrial, institutional and consumer non-food contact products that require the control of bacteria and fungi; for example, mineral slurries used in paints and plastics, concrete admixtures, pigments, lattices, printing inks, paint, laundry detergents, and cleaning products. Add K-BAC 2050 to the product formulation at a rate of 2.8 to 28 fluid ounces (200 to 2000 ppm) per 100 gal. of the water content of the product. Mix uniformly.

Food contact: For use by manufacturers that require the control of bacteria or fungi in the preservation of food-contact adhesives and mineral slurries used in papermaking.

Not for use in the State of California.

PRESERVATION OF CONCENTRATES

Use in concentrates where effective preservation is needed after dilution. Add K-BAC 2050 at a rate such that the diluted end-use product will contain 200 to 2,000 ppm (.02% to 0.2%) of product.

AQUEOUS METALWORKING FLUIDS

K-BAC 2050 should be added to a metalworking fluid system at a point of uniform mixing such as the fluid collection tank. Additions may be added intermittently at intervals of one week or less. Initial Dose: When the system is noticeably fouled apply 0.2 to 0.6 gal. of K-BAC 2050 per 1,000 gal. of metalworking fluid to the system. Repeat until control is achieved. Subsequent Dose: When microbial control is evident, add 0.08 to 0.4 gal. of K-BAC 2050 per 1,000 gal. of metalworking fluid to the system weekly, or as needed to maintain control. Badly fouled systems should be cleaned before treatment begins.

Not for use in the State of California.

CONDITIONS OF SALE: The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risk inherently associated with use of this product. Ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of the Seller. All such risks shall be assumed by the Buyer. The manufacturer warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to above. THE MANUFACTURER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL THE MANUFACTURER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. The manufacturer offers this product, and the Buyer and User accept it, subject to the foregoing Conditions of Sale and Warranty which may be varied only by agreement in writing signed by a duly authorized representative.

DISTRIBUTED BY:



WATER SCIENCE TECHNOLOGIES, LLC

1704 VANDERBILT ROAD
BIRMINGHAM, AL 35234
PHONE: 866-284-9244

HMIS®

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F=1

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EPA Reg. No. 88714-RN

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Net Contents: See Package

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