

BUSAN 881

BUSAN is a registered trademark.

ACCEPTED

KEEP OUT OF REACH OF CHILDREN
DANGER

JUL 9 1996

DIRECTIONS FOR USE

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

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide Busan 881 registered under EPA Reg. No. 1448-53

Busan 881 is employed for microorganism control in pulp and paper mills, cane and beet sugar mills, petroleum secondary recovery operations, and recirculating commercial and industrial cooling water systems.

Corrosive. Causes irreversible eye damage and skin burns. Harmful or fatal if swallowed. Harmful if absorbed through the skin or inhaled. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield, protective clothing and rubber gloves. Wash thoroughly after handling and before eating, drinking or using tobacco. Remove contaminated clothes and wash before reuse. Avoid contamination of food.

STATEMENT OF PRACTICAL TREATMENT: Ingestion: DO NOT INDUCE VOMITING. Rinse with copious amounts of water or milk first. Irrigate the esophagus and dilute stomach contents by slowly giving one (1) to two (2) glasses of water or milk. Avoid giving alcohol or alcohol related products. In cases where the individual is semi-comatose, comatose or convulsing, DO NOT GIVE FLUIDS BY MOUTH. In case of internal ingestion of the product seek medical assistance immediately: take individual to nearest medical facility. In case of skin contact, wash with plenty of soap and water. Remove contaminated clothing and wash before reuse. If product gets in the eyes, flush immediately with copious amounts of clean, cool water for at least 15 minutes. Get medical attention immediately. If inhaled, remove the victim to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. Get medical attention. NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms. Do not contaminate water by cleaning of equipment or disposal of waste. 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 Systems (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.

STORAGE AND DISPOSAL

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

STORAGE: Do not expose to extreme temperatures. Do not stack more than five drums high. Drums should be opened in well-ventilated areas. Leaking or damaged drums should be placed in overpack drums for disposal. Spills should be absorbed in sawdust or sand and disposed of in a sanitary landfill. Keep container closed when not in use.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. 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 your EPA Regional Office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent). 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.

In pulp and paper mills, Busan 881 is used to control bacterial slime. Busan 881 can be fed directly from the shipping containers by use of chemical-metering pumps. It can also be dispersed in suitable measuring containers or by means of drip-feed devices. For control of bacterial slime in pulp and paper systems, Busan 881 is employed at 0.4 to 2.0 kg per tonne (0.8 to 4.0 lb per ton) of pulp or paper (dry basis) for treatment periods of 6 hours out of each 12 or each 24 hours. The concentration and frequency of treatment should be adjusted higher or lower according to the rate of slime accretion. Best results are generally obtained by feeding Busan 881 into the suction side of the fan pump or into white water or stock moving to the fan pump. When necessary, this treatment can be supplemented by treatment of fresh water, slush pulp, broke, or other furnish components with Busan 881. When microbiologically contaminated furnish is added to the system, the supplementary addition of 0.5 kg of Busan 881 per metric ton (1.0 lb per ton) of this furnish (dry basis) to each beater or pulper will aid in keeping the system free of slime. Broke may also require supplementary treatment. For uncoated broke, the addition of 0.25 to 0.5 kg of Busan 881 per tonne (0.5 to 1.0 lb per ton) will usually be adequate, but coated broke may require as much as 1.0 kg of Busan 881 per tonne (2.0 lb per ton). Slush pulp may require treatment with a microbicide to preserve the pulp and prevent contamination of papermaking systems. Pulp that may be held in storage for 8 hours to 1 week should be treated with 0.25 to 0.75 kg of Busan 881 per tonne (0.5 to 1.5 lb per ton) of moisture-free pulp. When the fresh water used on a machine is a significant source of microbiological contamination, treatment of this water with Busan 881 will aid in slime control on the machine. For this purpose, Busan 881 is added to the fresh water at concentrations of 2 to 5 parts per million for treatment periods of 6 to 12 hours out of each 24 hours. Busan 881 should not be added to water used for drinking or bathing.

Busan 881 may be used in pulp and paper mills to inhibit the growth of microorganisms that cause the degradation of papermaking additives (clay slurries, starch slurries and solutions, coating formulations pigment slurries, and animal glue solutions). It should be added in such a manner to ensure uniform distribution throughout the system to be protected in concentrations of 50 to 400 ppm.

In cane and beet sugar mills producing raw sugar, Busan 881 is employed to inhibit the growth of bacteria that cause the inversion of sucrose, slime, and odors. **Cane Sugar Mills:** Busan 881 should be added to the cane juice at a point or points where the microbicide will circulate to all parts of the grinding equipment, troughs, screens, and pipes with which the juice comes in contact. Usually two points on each tandem are recommended for the application of Busan 881. Approximately 35 percent of the dosage should be added to the juice from the crusher and approximately 65 percent of the dosage should be added to the juice from the next-to-last mill. Busan 881 should never be added to the maceration water. Busan 881 should be fed continuously at a total feed rate of 20 ppm (parts per million) based on the weight of cane ground. This is equivalent to 11.4 mL of Busan 881 per minute for each 1000 tonnes of cane ground per 24-hour day (or 0.35 fluid ounces of Busan 881 per minute for each 1000 tons of cane ground per 24-hour day). Do not exceed a total feed rate of 16.4 litres (20kg) of Busan 881 per 1000 tonnes of cane ground per 24 hours (or 3.9 gallons (40 lb) of Busan 881 per 1000 tons of cane ground). Busan 881 is more effective when added to juice having a pH value below 5.5. Higher juice temperatures (up to about 65° C (150° F)) will also increase its effectiveness. **Beet Sugar Mills:** Busan 881 can be used in beet sugar mills to treat the wash water (used to wash the beet roots), the diffuser system and the raw juice. Busan 881 is added to the wash water continuously as it enters the washer at dosages of 4 to 8 ppm (weight/weight). This is equivalent to 2.3 to 4.6 mL of Busan 881 per minute for each 1000 tonnes of beets sliced per 24-hour day (or 0.070 to 0.14 fluid ounces of Busan 881 per minute for each 1000 tons of beets sliced per day). In diffuser systems, Busan 881 should be added continuously to the diffuser water supply at a dosage rate of 20 ppm (weight/weight). This is equivalent to 11.4 mL of Busan 881 per minute for each 1000 tonnes of beets sliced per 24-hour day (or 0.35 fluid ounces of Busan 881 per minute for each 1000 tons of beets sliced per 24-hour day). If the diffuser system is not treated with Busan 881 and the raw juice from the diffuser has to be stored for 1 to 3 days during a mill shutdown, the raw juice should be treated with 20 parts of Busan 881 per

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ACTIVE INGREDIENTS:

Sodium cyanodithioimidocarbonate 14.7%

Potassium N-methyldithiocarbamate 20.3%

INERT INGREDIENTS: 65.0%

million parts of juice (weight:weight). This treatment will help prevent spoilage of the juice during storage. Do not exceed a total feed rate of 16.4 liters (20kg) of Busan 881 per 1000 tonnes of beets sliced per 24 hours (or 3.9 gallons (40 lb) of Busan 881 per 1000 tons of beets sliced per 24 hours).

In petroleum secondary recovery operations, Busan 881 is used in waterfloods to control sulfate-reducing bacteria, iron bacteria, and bacteria that cause slime. **Sulfate Reducers:** Busan 881 is effective for the control of sulfate-reducing bacteria (*Desulfovibrio* sp.) in many types of waters utilized in secondary recovery of petroleum, including produced salt water, sea water, salt water from wells, commingled waters, waters retained in open ponds, and water going to disposal wells. It is employed for this purpose at 1.0 to 1.5 fl oz per 1000 gal of water treated (10 to 15 parts per million (ppm) by weight). Treatment of produced waters with Busan 881 should be continuous and the product should be added at the heater-treater dump, into gathering lines, or into receiving tanks. Treatment should always be upstream from the filter. Wells should be treated continuously by adding Busan 881 at the well annulus or into the tank before the filter. The best treatment point for commingled water is as far upstream as possible. For example with a waterflood using produced water mixed with fresh water for make-up, Busan 881 is usually introduced at the heater-treater dump on the salt-water line and down the annulus of the fresh water well. For seawater the usually recommended point of addition is the first holding tank. Water obtained from a well adjacent to a source of seawater should be treated with Busan 881 down the annulus of the well to protect the well equipment and transfer lines. Use of Busan 881 in gathering or skimming ponds serves to keep the population of sulfate reducing bacteria at a minimum while the water is held in ponds so that a better quality of water with hydrogen sulfide will be available for the processing plant. Busan 881 should be added to the gathering line going to the first pond at the rate of 1 fl oz per 1000 gal of water going to the pond (10 ppm of Busan 881 based on the total weight of the water going to the pond). An additional 1.0 fl oz per 1000 gal (10 ppm) should be fed ahead of the filters. To minimize sulfide generation by sulfate reducers and subsequent plugging of disposal wells, Busan 881 should be added to the produced waters going to the wells. Addition should be made at the gathering or skimming pond before the pumps inject water into the well. The recommended amount is 1.0 fl oz of Busan 881 per 1000 gal of water (10 ppm). **Iron Bacteria and Other Bacteria:** Busan 881 is effective for the control of iron bacteria and other troublesome bacteria that are sometimes present in fresh water. The place of application recommended is as far upstream in the system as possible, and the amount recommended is 1.0 fl oz of Busan 881 per 1000 gal of water (10 ppm Busan 881). For example, when long lines are used from the source well to the holding tank, Busan 881 should be added at the source well annulus. When a short line is involved, treatment can be made at the intake of the first holding tank or surge tank, but it always should be made upstream from the filter.

In recirculating commercial and industrial cooling water systems, Busan 881 is used to inhibit the growth of algae and bacteria. As a general rule, it is recommended that before treatment of a cooling water system with Busan 881 is begun, the system should be cleaned thoroughly to remove all old algal growths, microbiological slime and other deposits. The system should be drained, flushed and refilled with fresh water and regular treatment with Busan 881 initiated. To control the growth of algae and bacteria on cooling towers, in heat exchangers, and in other parts of recirculating cooling water systems, Busan 881 is used at concentrations of 5 to 30 parts per million (ppm) by weight or 0.5 to 3 fl oz of Busan 881 per 1000 gal of water in the systems. However, an initial addition of 15 to 30 ppm Busan 881, based on the total weight of water in the system (1.5 to 3.0 fl oz of Busan 881 per 1000 gal of water) is recommended. Subsequent additions of 5 to 30 ppm Busan 881 (0.5 to 3.0 fl oz of Busan 881 per 1000 gal of water) should be made at 1 to 5 day intervals, depending on the amount of blowdown or bleedoff and the severity of the microbiological fouling.

Manufactured By EPA Est. No.1448-TN-1

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EPA Reg. No. 1448-53

Product Weight: 10.2 lbs/gal 1.22 kg/L

NET CONTENTS MARKED ON CONTAINER

HMIS/NPCA RATING

Health 3 Flammability 1 Reactivity 1

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