



BUSAN 881

BUSAN is a registered trademark.

ACTIVE INGREDIENT(S)	
Disodium cyanodithioimidocarbonate.....	14.7%
Potassium N-methyldithiocarbamate.....	20.3%
INERT INGREDIENTS	65.0%
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 the first 5 minutes, then continue rinsing eye. - Call a poison control center or doctor for further treatment advice.
If on Skin, Clothes	- 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 the 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 further 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 901-278-0330 or 1-800-BUCKMAN 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

DANGER: 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 clothing and wash before reuse. Avoid contamination of food.

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 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.

Directions for Use

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

PULP AND PAPERMILLS: 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 added at 0.4 to 2.0 kg per ton (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 ton (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 ton (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 ton (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 ppm for treatment period 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.

CANE AND BEET SUGAR MILLS: In production of 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% 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 ton of cane ground per 24-hour day (or 0.35 fl oz 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 L (20kg) of BUSAN 881 per 1000 ton 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 (wt./wt.). This is equivalent to 2.3 to 4.6 mL of BUSAN 881 per minute for each 1000 tons of beets sliced per 24-hour day (or 0.070 to 0.14 fl oz 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 (wt./wt.). This is equivalent to 11.4 mL of BUSAN 881 per minute for each 1000 tons of beets sliced per 24-hour day (or 0.35 fl oz 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 BUSAN 881 at 20 ppm (wt./wt.). This treatment will help prevent spoilage of the juice during storage. Do not exceed a total feed rate of 16.4 L (20kg) of BUSAN 881 per 1000 tons of beets sliced per 24 hours (or 3.9 gallons (40 lb.) of BUSAN 881 per 1000 tons of beets sliced per 24 hours).

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 gallons of water treated (10 - 15 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 gallons 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 gallons (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 gallons 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 gallons 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.

COOLING WATER SYSTEMS: BUSAN 881 is used to inhibit the microorganisms in industrial, commercial and institutional cooling water system. In noticeably fouled systems, BUSAN 881 should be added at a rate of 1.5 to 3.0 fl. oz. of BUSAN 881 per 1000 gallons of system water (15 - 30 ppm) by until control is evident. Subsequent additions of BUSAN 881 should be made to the system as needed at a rate of 0.5 to 3.0 fl oz of BUSAN 881 per 1000 gallons of system water (5 - 30 ppm) to maintain control. The frequency of treatment depends upon the severity of the microbiological problem. For best results the system should be cleaned prior to treatment.

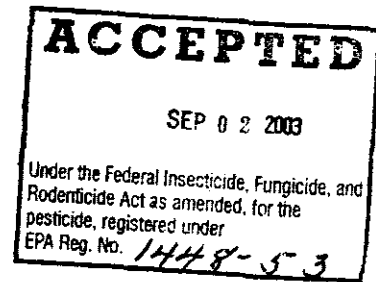
INDUSTRIAL WATER PURIFICATION SYSTEMS: BUSAN 881 is used to control microbiological fouling in industrial water purification systems including reverse osmosis, filters, clarifiers, and ion exchange equipment. For off-line treatment, BUSAN 881 should be fed at a concentration of 5.0 to 10.0 fl. oz. of BUSAN 881 per 1000 gallons of water (50 - 100 ppm) for 4 to 8 hours. For on-line maintenance treatment, dosing 1.0 to 2.0 fl oz of BUSAN 881 per 1000 gallons of water (10 - 20 ppm) for 6 to 12 hours should be made once a week or as needed to maintain control. Not intended for use in potable water systems.

Storage and Disposal

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



Manufactured by **Buckman Laboratories, Inc.**
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(901) 278-0330 or 1-800-BUCKMAN

EPA Est. No. 1448-TN-1
EPA Reg. No. 1448-53
Product Weight 10.2 lbs./gal. 1.22 kg/L
Net contents are marked on the container.

HMIS / NPCA Ratings				Last Revision		
Health	3	Flammability	1	Reactivity	1	6/25/2003

1448-53
9/2/2003
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