



<b>ACTIVE INGREDIENT(S)</b>	
Potassium N-methyldithiocarbamate.....	26.0%
<b>INERT INGREDIENTS.....</b>	74.0%
<b>TOTAL.....</b>	100.0%

**KEEP OUT OF REACH OF CHILDREN  
DANGER**

**FIRST AID**

<b>If in Eyes</b>	- 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.
<b>If on Skin, Clothes</b>	- 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.
<b>If Swallowed</b>	- 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.
<b>If Inhaled</b>	- 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**

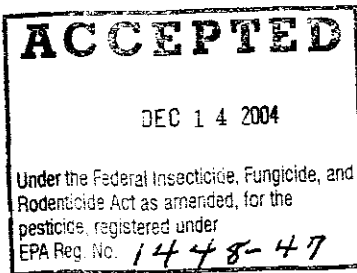
Probable mucosal damage may contraindicate the use of gastric lavage. This product may pose an aspiration pneumonia hazard.

**Precautionary Statements**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**DANGER:** Corrosive. Causes eye and skin damage. Harmful or fatal if swallowed. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Wash thoroughly after handling. Avoid contamination of food.

**ENVIRONMENTAL HAZARDS:** This pesticide is toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or public waters unless in accordance with 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 sewage 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.

BUSAN 52 can be dispersed directly from the shipping container by means of a chemical metering pump or suitable measuring containers. It should be mixed thoroughly with the material to be protected in a manner that will ensure uniform distribution of the microbicide. If necessary for uniform distribution, it can be diluted with water to any desired lower concentration. Dilute solutions of BUSAN 52, however, should be used on the same day they are prepared.

BUSAN 52 is used in pulp and paper mills (1) to control bacterial and fungal slime; (2) to inhibit the growth of bacteria that cause the degradation of papermaking chemicals such as animal glue solutions, clay slurries, starch solutions and slurries, and coating formulations.

**SLIME CONTROL IN PULP AND PAPER MILLS:** For controlling bacterial and fungal slime in pulp and paper mill systems, BUSAN 52 is employed at 125 to 500 g per metric ton (0.25 to 1 lb. per short ton) of pulp or paper produced. Addition may be made continuously or intermittently to the stock or white water as needed to control the growth of microorganisms. As a general rule, intermittent treatment at the specified rates for periods of 2 to 6 hours out of each 8, each 12, or each 24 hours is recommended. The concentrations of BUSAN 52 and the frequency of treatment should be adjusted higher or lower according to the rate of slime accretion. **Fumish:** For treatment of microbiologically contaminated fumish, BUSAN 52 is added to the system at a rate of 0.1 kg of BUSAN 52 per metric ton (0.2 lb. per short ton) of fumish to each beater or pulper.

**BROKE AND SLUSH PULP TREATMENT:** For uncoated broke, add 0.1 to 0.2 kg of BUSAN 52 per metric ton (0.2 to 0.4 lb. per short ton), and for coated broke add 0.3 kg of BUSAN 52 per metric ton (0.2 to 0.6 lb. per short ton). **Pulp Storage:** Pulp that may be held in storage for 8 hours to 1 week should be treated with 0.1 to 0.3 kg of BUSAN 52 per metric ton (0.2 to 1.0 lb. per short ton) of moisture-free pulp. The BUSAN 52 should be added in a manner that will ensure uniform distribution throughout the mass of pulp moving to storage. **Fresh Water:** For microbiologically contaminated fresh water BUSAN 52 may be used at concentrations of 1 to 4 parts per million for treatment periods of four hours out of each eight hours in the place of chlorine or other oxidants. BUSAN 52 should not be added to water used for drinking or bathing.

**PRESERVATION OF PAPERMAKING CHEMICALS:** BUSAN 52 can be used to inhibit the growth of bacteria that cause the microbiological degradation of papermaking chemicals. The required amount of BUSAN 52 should be added in such a manner as to ensure uniform distribution throughout the substrate to be protected. The table below shows the amounts of BUSAN 52 recommended for the preservation of various substrates; the pH shown is the maximum pH reached during processing and storage of the material. The concentrations are based on the total wet weight of slurry, emulsion, or solution to be protected as parts per million BUSAN 52 per million parts of substrate (weight/weight).

**Recommended Concentration of BUSAN 52 for Preservation of Papermaking Chemicals**

Substrate	pH below 7 ppm	pH above 7 ppm
Animal glue solutions	75-150	150
Clay slurries, phosphate dispersed	50-100	100
Coating formulations, protein binders	150-400	400
Coating formulation, starch binders	50-150	150
Starch slurries, and solutions	50-150	150

Note: BUSAN 52 is composed of substances that have been allowed for use in the manufacture of paper and paperboard under U.S. Food and Drug Administration Regulation 176.300.

BUSAN 52 is used to inhibit the growth of bacteria and fungi that cause the degradation of cellulosic solutions, such as hydroxyethyl cellulose solutions, and to inhibit the growth of bacteria that cause degradation in water-thinned paints, emulsion resins, and cutting oils.

**PROTECTIVE COLLOIDS:** Enzymes resulting from the growth of certain fungi and bacteria in water-thinned cellulosic protective colloids such as hydroxyethyl cellulose solutions cause a loss in viscosity of these solutions. BUSAN 52 has demonstrated effectiveness in controlling this microbiological growth and thereby provides viscosity stability for the protective colloid. Concentrations of 0.05 to 0.2 percent of BUSAN 52 based on the total weight of the solution are suggested for preservation; the exact concentration to be used will depend on the particular system, amount of microorganism contamination, and the degree of protection desired.

**EMULSION RESINS AND WATER-THINNED PAINTS:** Enzymes produced by bacteria can also cause loss of viscosity in emulsion resins. BUSAN 52 at 0.05 to 0.2 percent based on the weight of the emulsion has shown effectiveness as a preservative for both acrylic and polyvinyl acetate emulsion resins. Such emulsion resins are commonly used for the manufacture of emulsion paints, adhesives, waxes, and polishes; and these finished products can also be preserved by the use of BUSAN 52. Concentrations of 0.05 to 0.2 percent of BUSAN 52 based on the weight of the finished product are employed in the latter applications.

**CUTTING FLUIDS:** BUSAN 52 can be used to prevent degradation of aqueous emulsions of cutting oils or fluids. Concentrations of 0.03 to 0.2 percent of BUSAN 52 based on the total weight of water and cutting fluid are recommended, and the treatment with BUSAN 52 should be repeated periodically at no greater than 5-week intervals. In some cases, BUSAN 52 may be added to concentrated cutting fluids, and the amount of Busan 52 used should be such that concentrations of 0.03 to 0.2 percent are obtained when the cutting oil or fluid is mixed with water.

**WATER-BASED DRILLING, COMPLETION AND PACKER FLUIDS:** BUSAN 52 is also used to inhibit the growth of fungi and bacteria in water-based drilling muds, completion fluids, packer fluids, and other water-based drilling fluids containing starch, gums, sugars, or other organic materials. For these purposes BUSAN 52 is added at concentrations of 0.05 to 0.2% by weight.

**HIDES AND SKINS:** BUSAN 52 is used to prevent bacterial decomposition of brine-cured hides and skins. BUSAN 52 should be used at a level of 0.01 - 0.05% (100-500 ppm) based upon the weight of green fleshed hides or skins and saturated brine solution. In raceway operations, BUSAN 52 can be added directly to the raceway during the addition of hides and operations paddles. In processor/mixer operations, BUSAN 52 should be added as dispersion in water. A satisfactory dispersion of 1 part BUSAN 52 plus 4 parts water can be added prepared by adding the BUSAN 52 to the water (as opposed to adding water to BUSAN 52) with agitation.

**LEATHER MANUFACTURE:** Busan 52 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, treatment levels of 0.01-0.075% (100-750 ppm) based on the total weight of hides/skins and process water (float) used. To preserve tannery glue solutions, Busan 52 can be added to the glue at rates of 100-250 ppm, based on the total weight of the glue solution.

Technical assistance in applying BUSAN 52 for microorganism control as described above is available upon request when a description of the problem is provided.

**Storage and Disposal**

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

**PESTICIDE STORAGE:** 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 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 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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Memphis, Tennessee 38108, USA

**(901) 278-0330 or 1-800-BUCKMAN**

**EPA Est. No. 1448-TN-1**

**EPA Reg. No. 1448-47**

**Product Weight 10.5 lbs/gal 1.26 kg/L**

Net contents are marked on the container.

**HMIS / NPCA Ratings**

Health **3** Flammability **1** Reactivity **1**

**Last Revision 10/28/2004**

1448-47

12/14/2004

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