



Product Data

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NABE-M

A Microbicide Concentrate

Bulletin No. E24

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NABE-M is a combination of two organosulfur compounds, and it is effective for the control of algae and bacteria in recirculating commercial and industrial cooling water systems. NABE-M is soluble in water, which permits its ready dilution to any desired lower concentration. This product does not cause foaming and thus can be added to systems by slug addition at maximum use concentrations. NABE-M also is not lost from systems by evaporation.

PRODUCT CHARACTERISTICS

NABE-M is a liquid packed in nonreturnable drums with bungs. Penton, Teflon, polyethylene, polypropylene, molded nylon, and stainless steel are all satisfactory for storing and handling NABE-M. Prolonged contact of concentrated NABE-M with copper alloys, however, should be avoided. NABE-M is completely soluble in water. The composition and some of the physical properties of NABE-M are as follows:

Active ingredients:

Disodium cyanodithioimidocarbonate	14.7%
Potassium N-methyldithiocarbamate	20.3%
Inert ingredients	65.0%
Density at 25 °C (77 °F)	1.22 g/mL
Approximate weight per gallon	10.2 lb
Approximate volume per kilogram	820 mL
Approximate volume per pound	370 mL
pH of 100 parts per million in distilled water	9-10

NABE-M will freeze if stored at very low temperatures for prolonged periods, but will not solidify above -18 °C (0 °F). Before being opened and used, drums of NABE-M that may be frozen should be stored in an area with a temperature above 4 °C (40 °F) for sufficient time to allow complete thawing.

METHODS OF APPLICATION

NABE-M is a concentrate that may be diluted to any desired lower concentration to prepare ready-to-use microbicides, and it is also suitable for use in many operations without dilution. For microbicides prepared by dilution of NABE-M with water, the amounts employed for different applications will, of course, depend upon the concentration of active ingredients in the final product. NABE-M and dilutions of this product can be fed into systems by means of chemical-metering pumps or can be dispensed in suitable measuring containers. In the following all references to the amounts recommended for different applications are based on concentrated NABE-M containing 35% active ingredients.

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Cooling Water Systems

As a general rule, it is recommended that before treatment of a cooling water system with NABE-M is begun, the system should be cleaned thoroughly to remove all old algal growths, microbiological slime, and other deposits. The system then should be drained, flushed, and refilled with fresh water and regular treatment with NABE-M initiated.

To control the growth of algae and bacteria on cooling towers, in heat exchangers, and in other parts of recirculating cooling water systems, NABE-M is used at concentrations of 5 to 30 parts per million (ppm) by weight or 0.5 to 3.0 fl oz of NABE-M per 1000 gal of water in the system. However, an initial addition of 15 to 30 ppm NABE-M, based on the total weight of water in the system (1.5 to 3.0 fl oz of NABE-M per 1000 gal of water) is recommended. Subsequent additions of 5 to 30 ppm NABE-M (0.5 to 3.0 fl oz of NABE-M 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 microbiological fouling.

PRECAUTIONS

The following are the human and environmental safety precautions appearing on the NABE-M label:

WARNING

KEEP OUT OF REACH OF CHILDREN

Causes eye damage and skin irritation. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Harmful or fatal if swallowed. Avoid contamination of food.

FIRST AID: 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 swallowed, call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression, and convulsion may be needed.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish. Keep out of lakes, streams, or ponds. Permits may be required for discharges containing this pesticide into lakes, streams, ponds, or public water. For guidance, contact the regional office of the Environmental Protection Agency.

STORAGE & DISPOSAL

PROHIBITIONS: Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container.

PESTICIDE DISPOSAL: Pesticide, spray mixture, or rinseate that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticides or buried in a safe place away from water supplies.

CONTAINER DISPOSAL: Triple rinse (or equivalent) and dispose in an incinerator or landfill approved for pesticide containers, or bury in a safe place.

GENERAL: Consult Federal, State, or local disposal authorities for approved alternative procedures such as limited open burning.

Recommendations given in this bulletin are based on tests believed to be reliable. However, the use of the product is beyond the control of Buckman Laboratories, Inc., and no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established practices. The buyer must assume responsibility, including injury or damage, resulting from misuse of the product as such, or in combination with other materials. This bulletin is not to be taken as a license to operate under or recommendation to infringe any patent.

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