

MURRYSVILLE BUSINNESS PARK • 101 TECHNOLOGY LANE • EXPORT, PA 15632 • (888) 247-2312 • FAX (724) 325-4522

TECHNICAL DATA SHEET

ADENA 6888

Product #AD6888

BROAD-SPECTRUM MICROBICIDE

ADENA 6888 is a liquid microbicide concentrate for the control of microorganisms in industrial and commercial cooling water and process water systems. Because of its unique biocidal and physical characteristics, it is also useful for controlling microbiological growth in specific applications including: cooling tower wood; crude and refined oils; drilling fluids; and process injection or produced waters in petroleum secondary recovery process.

Methods of Application

ADENA 6888 can be used in its concentrated form, or it can be emulsified in water or diluted with certain organic solvents. The concentrated product or its dilutions can be added to cooling water systems as slug doses or can be fed into the recirculating water at points of good agitation by chemical-metering pumps. In the following discussion, all recommended dosages are based on concentrated ADENA 6888 containing 5% active ingredients.

Microorganism Control in Cooling Water Systems

As a general rule, prior to treatment with ADENA 6888 the cooling water system should be thoroughly cleaned to remove algal growth, slime, and other deposits. The system should be drained, flushed, refilled with fresh water, and the treated regularly with ADENA 6888.

For the control of microorganisms on cooling towers and other parts of commercial and industrial recirculating cooling water systems, ADENA 6888 is used at concentrations of 5.9 to 35.7 ppm (weight/weight) or 0.8 to 4.8 fl oz of ADENA 6888 per 1000 gallons of water in the system. Initially a slug dose of 17.8 to 110.1 ppm or 2.4 to 14.8 fl oz of ADENA 6888 per 1000 gallons of water should be made, and this initial dosage should be repeated until control is evident. Subsequent additions of 5.9 to 35.7 ppm (0.8 to 4.8 fl oz of ADENA 6888 per 1000 gallons of water) should be made every 1 to 5 days, or as needed. The frequency of treatment depends on the amount of bleedoff and the severity of the microbiological fouling problem. Slug additions of ADENA 6888 should be made to the cooling tower sump.

Microorganism Treatment of Wooden Cooling Towers

Cooling tower wood is subject to two types of deterioration: that chemical in nature and that caused by the action of microorganisms. Those microorganisms most commonly involved are fungi capable of degrading cellulose. Such fungal attack destroys the strength of the wood.



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Many cooling water biocides are not effective fungicides. Even when combination algaecide, bactericide, fungicide products are used, contact with the entire surface of cooling tower wood is insufficient to provide the necessary protection against fungal attack. Because of its superior, broad-spectrum activity against cellulytic fungi, ADENA 6888 is the product of choice for maintenance treatment of cooling tower wood.

A 2.0 to 2.8% by weight dillution of ADENA 6888 in water is recommended for this application. The diluted ADENA 6888 should be applied in a manner that ensures its distribution over all exposed areas. This distribution is best accomplished by removing the tower fill and soaking it overnight in the diluted ADENA 6888. Where this is not practical, ADENA 6888 should be applied by spray application at a time

when the cooling tower can be taken off line. Persons spraying ADENA 6888 should be dressed so that the product will not contact the face, eyes, or skin. A full-body protective suit, boots, and self-contained breathing apparatus are recommended.

For best results, the treatment should be repeated once every four months.

Crude and Refined Oils

ADENA 6888 is an oil-soluble preservative for the control of bacteria and fungi that degrade crude oil and refined oils during transportation and storage. ADENA 6888 should be added to the oil as it is being transferred from the transportation container to the storage tank at the rate of 2.4 to 24.0 fl oz ADENA 6888 per 1000 gallons of oil (17.8 to 178.6 ppm based on weight of the oil). Addition should be made batchwise where mixing occurs or continuously to the suction side of the transfer pump.

Drilling Fluids

ADENA 6888 is used to stabilize several types of drilling fluids subject to microbiological degradation. To inhibit bacterial and fungal degradation of fluids or muds used in drilling of wells, ADENA 6888 is incorporated in the drilling fluid at concentrations of 0.2 to 1.0% based on the total weight of the fluid. Addition should be made in a manner that ensures adequate dispersion of the ADENA 6888 throughout the fluid.

ADENA 6888 is compatible with most drilling fluid compositions. However, in keeping with sound procedures, stability tests of the combination of ADENA 6888 and the drilling fluid materials should be made prior to use of the product under operating conditions.

<u>Petroleum</u> Secondary Recovery

ADENA 6888 is used to control slime-forming bacteria and fungi and other problem-causing microorganisms in floods, water-disposed systems, and other oil-field water systems. ADENA 6888 is added at a rate of 15.6 to 52.0 fl oz per 1000 gallons of water treated (116 to 387 ppm weight/weight). Additions should be made continuously or intermittently by means of a metering pump at the free water knockouts, before or after injection pumps and injection well headers.

Continuous Feed Method: When system is noticeably fouled, add ADENA 6888 at a rate of 15.6 to 52.0 fl oz per 1000 gallons of water continuously until desired degree of control is achieved. Then treat with 15.6 to 52.0 fl oz of ADENA 6888 per 1000 gallons of water continuously, or as needed to maintain control.



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Intermittent feed Method: When desired, ADENA 6888 can be fed directly by a timed metering pump. The dosage rate and feed time vary according to the degree of fouling, but typically 15.6 to 52.0 fl oz of ADENA 6888 per 1000 gallons of water is added to the system to be treated for 4 to 8 hours a day, 1 to 4 times a week.

Typical Product Characteristics	
Active ingredients:	
Methylene bis(thiocyanate)	2.5%
2-(Thiocyanomethylthio) benzothiazole.	2.5%
Inert ingredient	
Density at 25°C (77°F)	1.03 g/ml
Weight per U.S. gallon	8.6 lb.
pH (100 ppm in water)	
Flash point	70°C (158°F)

Packaging and Handling

ADENA 6888 is a liquid packed in nonreturnable drums and in bulk. **Refer to Material Safety Data Sheet for suitable materials of construction for handling and storing this product**.

Improper handling of this product can be injurious to workers. Observe all safety precautions shown on the label and in the Material Safety Data Sheet.



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