

AVICIDE®GD50

Mill Sanitation Biocide For Sugar Mill Micro-organism Control

Chemical Composition	<p>An aqueous solution blend of Gluteraldehyde, Poly[oxyethylene(dimethylimino)ethylene (dimethylimino)-ethylene-dichloride] and natural hydrophobic bio-surfactants.</p>
Code of Federal Regulations	<p>21 CFR - 173.320 (Food additives permitted for direct addition to food for human consumption)</p>
Description and Use	<p>AVICIDE®GD50 is a broad spectrum organic aldehyde/Polyquat based micro-biocide for the control of all type bacterial growth in sugar mills during extraction process. AVICIDE®GD50 is a synergistic blend of gluteraldehyde and long chain polyquaternary ammonium compound and dispersing salt which is specially formulated to provide a bacteriostatic properties, effective against both gram positive and gram negative bacteria, as well as effective against fungi. AVICIDE®GD50 prevents dextran formation, reduces starch levels and viscosity, increases recovery, accelerates the process and improves the quality of the final product.</p>
Typical Applications	<p>AVICIDE®GD50 is a non-corrosive, non-volatile liquid that is easy to handle. It is stable over a wide range of pH and temperature and has very low mammalian toxicity. Microbial infection in the mill can lead to the formation of dextran, which coats the juice gutters and strainers and, in severe cases, may cause pipe blockages.</p> <p>AVICIDE®GD50 kills troublesome bacteria such as <i>Leuconostoc mesenteroides</i>, <i>Lactobacillus casi</i> and <i>Bacillus subtilis</i>. Thus, it reduces sucrose losses caused by enzymatic inversion and helps to keep mill systems free of microbiological slime and odors. It is normally added to the cane juice at a point or points where the biocide will circulate to all parts of the grinding equipments, trough, screens and pipes with which the juice comes in contact.</p> <p>AVICIDE®GD50 effects of killing mesophilic as well as thermophilic microbes. Use of AVICIDE®GD50 also ensures better keeping quality of sugar due to presence of lesser microbes in sugar as well as molasses. Regular use of AVICIDE®GD50, coupled with good housekeeping, can reduce the growth of bacteria and thus reduce sugar loss and dextran formation, leading to an increase in the overall efficiency of the factory.</p>
Mode of Action	<p>AVICIDE®GD50 contains two different active ingredients and effective against leuconostoc, bacillus and Gram positive and Gram negative bacteria. The following action in two ingredients:</p> <p>1-Gluter aldehyde The primary ingredient aldehyde denatures cell membranes, cell enzymes and nucleic acids and reducing the formation of non-crystallizable sugars in the sugar cane juice. At the same time, AVICIDE®GD50 reacts with other types of undesirable sugars produced by the action of <i>leuconostoc messenteroids</i>, attacking its molecular structure.</p> <p>2. PolyQuaternary Ammonium Compound/Bio-surfactant The second ingredient is a biochemically modified acts a bactericide by destroying the cell wall of the <i>leuconostoc</i>, disintegrating the pathogen cell and killing 100 % of the bacteria present in less than two minutes. Also Bio-surfactant ingredient kills bacteria by inhibiting cell wall synthesis. Thus preventing new dextran formation.</p>
Advantages	<ul style="list-style-type: none"> • Particularly effective against gram-positive bacteria • Reduces reducing sugar & titrable acidity of molasses, giving higher recovery. • Reduction in dextran formation results in improved clarification, evaporation, pan boiling and hence an overall increase in factory efficiency.

**Dosage &
Point of addition:**

Actual dosage depends on the mill condition, climate, temperature and variety of cane. AVICIDE®GD50 should be fed continuously at the rate of 2.0 to 4.0 ppm to be used during the crushing of sugar cane.

AVICIDE®GD50 should be fed directly into the cane juice so that the treated juice circulates to all parts of the mill tandem. Feeding of AVICIDE®GD50 should be done at points so that maximum recirculation takes place over the entire mill tandem; this will ensure proper utilisation of the product. Convenient points of dosage are added 35% to crusher juice and 65% add to the juice from the next-to-the-last mill. Do not require of any other biocide (quat/carbamate) to bacterial immunity.

It is found to be beneficial that if AVICIDE®GD50 (1.0 ppm) is sprayed on prepare cane before fibrizer it also control losses during primary extraction of juice.

During mill breakdowns and after physical cleaning it is good practice to spray a dilute (1%) solution of AVICIDE®GD50 biocide into the mill beds, juice tanks and onto conveyors.

Storage & Handling

Product should be kept in a cool, dry location. The drum should be kept closed when not in use. Exposure to high humidity and temperature is not recommended.

Packing:

AVICIDE®GD50 is a packed in 50/100/200 Kgs. net high density polyethylene drums/barrels.

**Material Safety
Data Sheet (MSDS):**

For complete safety, health, personnel protection and first aid information, refer to the Material Safety Data Sheet (MSDS). A copy of which is available on request. Cheminova literature, including Safety Data Sheets, should be consulted prior to use of Cheminova products.



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