

# BioMate\* FBC9992

## Water Technologies & Solutions fact sheet

### biocide for ethanol fermentation and fermentative process hygiene

#### description and use

BioMate FBC9992 is a biocide used with the objective of inhibiting bacteria development during ethanol fermentation, and also during the operations that precede fermentation itself, like mills and diffusers, heat exchangers, tanks and piping in general. BioMate FBC9992 also preserves the integrity of the equipment by avoiding bio-corrosion. The presence of the bacteria found in such processes comes from the operation of sugar-cane harvesting, and the bacteria proliferation causes significant sucrose losses, with production of undesirable by-products like lactic and acetic acid, dextrans, etc. These losses lead as a consequence to reduction in the industrial yield of the plant as a whole.

#### benefits

BioMate FBC9992 works as a competitive microorganism inhibitor, favoring the *Saccharomyces cerevisiae* in the process of capturing the inverted sugars, at the expense of the contaminating bacteria. The action mechanism of BioMate FBC9992 is based on the chemical reaction of the amino groups with the cells' external surfaces. Besides, BioMate FBC9992 also functions as a surfactant that promotes the disinfection and cleaning of the contaminated systems due to its synergistic composition. The product presents a large bactericide spectrum, working not only against lactic bacteria, but also against bacteria of the genus *Leuconostoc* sp, thus avoiding dextran building-up. BioMate FBC9992 also performs against thermo-resistant bacteria present in the molasses, which have been submitted to intense thermal treatment during sugar processing, and which increase significantly the infection within fermentation vats when not controlled.

#### basic composition

BioMate FBC9992 contains in its formulation activated aldehydes in synergy with surfactants, which have the property of penetrating in the cell structure and biofilms.

#### dosage and applications

The recommended dosage of BioMate FBC9992 will depend on a previous evaluation of the contamination intensity. In mills and diffusers in distilleries, the typical dosage varies from 8 to 10 ppm, continuously. In the cleaning process of tanks, heat exchangers and piping in general, the dosage varies from 20 to 30 ppm, as a shock dosage. In fermentation tanks and yeast growing tanks, do not exceed the dosage of 15ppm daily per yeast batch, during the yeast recirculation process.

#### packaging

BioMate FBC9992 is packed in 200-liter drums.

#### safety and handling

All necessary safety precautions should be taken when handling BioMate FBC9992: wear protection gloves and safety glasses, avoid breathing the vapors and avoid contact with eyes.

In case of contact with the eyes, wash with plenty of water for at least 15 minutes. Keep eyelids of the victim opened and look for an ophthalmologist. In case of contact with the skin, wash with plenty of water, remove contaminated clothes and shoes and look for medical assistance.

In case of swallowing, do not induce vomit.

In case of spilling, isolate the area, absorb into inert material (earth, sand or sawdust), remove with appropriate devices and wash the place with water.

When handling, use mask with filter for organic vapors, panoramic glasses and PVC gloves.

Handle the product in a ventilated place or a place with mechanic exhaust. Store the product in the shadow and in a ventilated and dry place, away from heat sources or live flame.

### **safety precautions**

A Material Safety Data Sheet containing detailed information about this product is available on request.

**LENNTECH**

info@lennotech.com Tel. +31-152-610-900  
www.lennotech.com Fax. +31-152-616-289