

BioMate* MBC2881

Membrane Biocide



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Features

- Highly effective in reducing bacterial growth and slime build-up on a variety of membrane types.
- Specifically formulated to be compatible with thin film polyamide, polysulfone, and PVDF membranes.
- Excellent results often obtained with only one 30-minute treatment per week.
- Performance of BioMate* MBC2881 is enhanced if used after cleaning with a performance alkaline cleaner such as Kleen* MCT405 or Kleen MCT511.

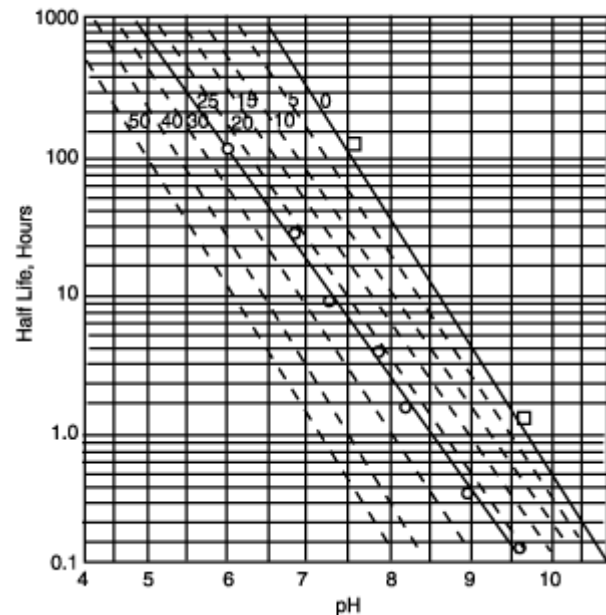
Description

BioMate MBC2881 is an EPA registered, non-oxidizing biocide used to sanitize reverse osmosis (RO), Nanofiltration (NF), and ultrafiltration (UF) systems and membranes. BioMate MBC2881 may be used as an intermittent treatment to the feed waters of these systems. A treatment program that includes BioMate MBC2881 with other GE Water & Process Technologies cleaning products will result in more effective membrane cleaning and decreased cleaning frequencies.

Application

BioMate MBC2881 acts rapidly to control microorganisms, then naturally hydrolyzes to compounds of much lower toxicity. Both high pH and high temperature speed this natural detoxifying process. The following figure illustrates this pH and temperature dependence. In addition, BioMate MBC2881 can be quickly deactivated with either sulfide ion or sulfite ion.

BioMate MBC2881 should only be used only for industrial applications. It should never be used in those applications in which membrane system permeate, or products formulated with permeate, could be consumed by or injected into humans or animals.



Half-Life of MBC2881 vs. pH and Temperature (°C)

Dosing

One thirty-minute treatment with BioMate MBC2881 per week is recommended for most RO systems. Apply BioMate MBC2881 by injecting the product in the RO system feedstream while the system is in operation. To treat severely fouled systems, BioMate MBC2881 may be used in a clean in place mode following a cleaning using performance Kleen MCT cleaners. Note that it is important to always con-



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duct alkaline cleaning first, followed by acid cleaning when biofouling is suspected.

Typical dosages are:

- 4-10 ppm when added continuously on-line
- 25 to 100 ppm when added intermittently on-line
- 100 ppm when used to sanitize membrane systems in CIP mode following a cleaning sequence.

Note: Do not exceed the EPA maximum dosage limits provided on the packaging label.

Materials Compatibility

Corrosion-resistant equipment, should be used for the storage, preparation, and use of this product per the following compatibility chart:

Rating	Material
A	EPR, Viton Lithurge, Kynar, PVC, Teflon
B	Viton A, Urethane, Buna N, Neoprene, Polyethyl HD, Nylon, Polyethyl HDCL, Polypropylene, Polysulfone
C	Butyl, Hypalon, Polyethyl LD
X	Stainless Steel, Aluminum, Low Carbon Steel

Packaging Information

BioMate MBC2881 is a liquid material, available in a wide variety of containers and delivery methods. Contact your GE representative for details.

On-line Addition Procedure:

NOTE: this procedure is NOT to be used for potable applications.

1. Direct the permeate and brine streams to waste.
2. Inject BioMate MBC2881 at the calculated dosage into the RO feed stream for 30 minutes.
3. Discontinue BioMate MBC2881 injection and continue to direct permeate and concentrate to waste for an additional 15 minutes.
4. Return the RO system to normal operation.

Clean-in-Place Sanitizing Instructions

The following general cleaning procedure can be followed. For the optimum cleaning procedure for your system, contact your GE representative.

1. Clean the membrane system following standard procedures for your plant. Always conduct alkaline cleaning first, followed by acid cleaning when biofouling is suspected.
2. Secure the RO system and valve into the CIP mode.
3. Fill the cleaning tank to the desired level of water.
4. Add 100 ppm of BioMate MBC2881 to the tank and recirculate to dissolve. The quantity of BioMate MBC2881 needed in ml is equal to the total volume of water contained in the tank and system in gallons times 0.302.
5. Recirculate the BioMate MBC2881 solution for 45 minutes.
6. Discontinue recirculation after 45 minutes and thoroughly rinse the system (both feedwater AND permeate water channels) with dechlorinated feedwater.
7. Flush thoroughly until all BioMate MBC2881 is removed from system.

Safety Precautions

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