



FILMTEC Membranes

Handling, Preservation and Storage: Preservation of RO and NF Systems

Preservation of RO and NF Systems

The procedure of shutting down an RO/NF system has been described in [RO and NF Systems Shutdown \(Section 5.4\)](#). FILMTEC™ elements must be preserved any time the plant is shut down for more than a maximum of 48 h to prevent biological growth. Depending on the previous operational history of the plant, it will be necessary in almost all cases to clean the membranes prior to shutdown and preservation. This applies to cases when the membranes are known or assumed to be fouled.

After cleaning, the preservation should follow within the next 10 h as follows:

1. Totally immerse the elements in the pressure vessels in a solution of 1 to 1.5% SMBS, venting the air outside of the pressure vessels. Use the overflow technique: circulate the SMBS solution in such a way that the remaining air in the system is minimized after the recirculation is completed. After the pressure vessel is filled, the SMBS solution should be allowed to overflow through an opening located higher than the upper end of the highest pressure vessel being filled.
2. Separate the preservation solution from the air outside by closing all valves. Any contact with oxygen will oxidize the SMBS.
3. Check the pH once a week. When the pH becomes 3 or lower, change the preservation solution.
4. Change the preservation solution at least once a month.

During the shutdown period, the plant must be kept frost-free, and the temperature must not exceed 113°F (45°C). A low temperature is desirable.

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For more information about FILMTEC membranes, call the Dow Liquid Separations business:

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Notice: The use of this product in and of itself does not necessarily guarantee the removal of cysts and pathogens from water. Effective cyst and pathogen reduction is dependent on the complete system design and on the operation and maintenance of the system.

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