

TriClean™ 217

Specialty Low-pH Cleaner

Scaling, manganese dioxide, dye fouling and polymer fouling are all serious problems in reverse osmosis (RO) that often result in costly membrane replacement. Generic acids lack the efficiency to thoroughly remove certain types of scaling and are completely ineffective on some of the most serious foulants, leaving the membrane uncleaned.

TriClean 217 is a highly effective liquid low-pH cleaner developed for optimum removal of calcium carbonate, calcium sulfate, barium sulfate, strontium sulfate, calcium fluoride, metal hydroxides, iron, dyes and manganese dioxide from composite membranes. TriClean 217, in combination with TriClean 211, is also effective in the removal of some polymers and stubborn dye fouling from composite membranes.

CLEANING PROCEDURE

Prior to cleaning, record pH and TDS readings of the permeate and concentrate water for reference during the final rinse. Appropriate safety equipment should be used.

1. Fill cleaning tank with RO water.
2. Add 3.8 liters (1 gal) of TriClean 217 for every 95 liters (25 gal) of water.
3. Add 3.8 liters (1 gal) of TriClean 211 for every 379 liters (100 gal) of water (optional).
4. Adjust and maintain a pH of 2.5 - 3.5.
5. Heat solution to 43°C (110°F).*
6. Recirculate cleaning solution through each stage, independently, for a minimum of one (1) hour.
7. Static soak each stage, independently, for a minimum of one (1) hour.
8. Rinse cleaning solution from system using RO permeate water until concentrate pH is equal to RO permeate rinse water pH.

* Consult with membrane manufacturer to determine max allowable temperature.

**For a more detailed cleaning procedure, please see our Membrane Cleaning Guide – Cellulose Acetate Elements (TSG-C-005).

SYSTEM RESTART PROCEDURE

Flush permeate and concentrate of membrane system to appropriate drain at <50 psi for 20 minutes. Restart membrane system with both permeate and concentrate diverted to appropriate drain and flush for a minimum of 30 minutes. System can be put back online when RO permeate TDS, concentrate TDS and pH are similar to readings taken prior to cleaning.

PACKAGING

TriClean 217 is shipped as a liquid in 5 gallon plastic pails or 55 gallon plastic drums.

SDS INFORMATION

For the most up to date SDS information, please contact MICRODYN-NADIR Technical Service or visit our website at www.microdyn-nadir.com.

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