

REVERSE OSMOSIS CLEANERS

RoClean™ L403

Low pH Liquid Cleaner

APPLICATIONS

RoClean™ L403 is a liquid multicomponent, low pH cleaner formulated to remove severe calcium carbonate scaling, moderate metal fouling and metal-organic complexes from reverse osmosis (RO) membranes and nanofiltration (NF). This cleaner is successfully applied to systems operating on seawater, brackish surface and ground water where a liquid cleaner is preferred. RoClean L403 is commonly used as a maintenance cleaner for scheduled cleaning.

CLEANING

Below is a summary of the RoClean L403 cleaning procedure.

1. Fill the cleaning tank to the desired volume with reverse osmosis (RO) permeate or deionized water. Heat the solution to the maximum acceptable temperature (according to the membrane manufacturer's guidelines), as this will dramatically increase cleaning efficiency. Add sufficient RoClean L403 to create a 2% wt/wt solution if the fouling is moderate to severe or a 1% wt/wt solution if the fouling is mild. Recirculate the solution through the cleaning tank to ensure adequate mixing.

2. Run the cleaning solution through each RO system stage, one at a time, for a minimum of 60 minutes at the flow rate recommended by the membrane manufacturer. If that rate is not known, use these guidelines:

ELEMENT DIAMETER inches	FLOW RATE PER VESSEL gpm (m³/hr)
4	10 (2.4)
8	40 (9.0)

3. At the beginning of the cleaning process allow 15% of the initial cleaning solution to go to drain. If there is not enough tank volume add 15% of the 1% or 2% cleaning solution. If the membranes are heavily fouled and the cleaner has extreme high color or suspended solids, rebatch the chemical.

4. Monitor the pH of the solution during the cleaning process. If the pH remains in the desired range and the solution is not turbid, it may be used to clean subsequent stages. In the unlikely event that the pH rises, add more cleaner, or prepare a new batch and repeat steps 1-4.

5. When cleaning is complete, rinse the membranes by flushing RO permeate through each pressure vessel. The system can then be returned to service.

CHEMICAL AND PHYSICAL PROPERTIES

CHARACTERISTICS	DATA
Appearance	Clear to amber liquid
pH (2% solution)	2.5 – 3.5
Specific gravity (@25°C)	1.3 – 1.4

PERFORMANCE BENEFITS

- RO and NF membrane cleaner designed to dissolve metal deposits and remove calcium carbonate scale.
- Commonly used as a maintenance cleaner for scheduled cleaning.
- Highly buffered to resist pH changes during the cleaning process.
- Compatible with polyamide membranes from all membrane manufacturers.

PACKAGING

Standard regional pack sizes are listed below. Information on bulk delivery options is available on request.

PACKAGING FORMAT	EMEA
IBC	1100 kg
Drum	230 kg
Pail/Bag	–
Jerry Can	20 kg

Please consult your sales representative for further technical or logistical details, and always review the SDS before use to ensure suitable safety precautions are followed.

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