

PERFORMANCE BENEFITS:

- A specialized blend of proprietary buffers and other components to dissolve organic foulants and disperse colloidal particles.
- NSF certified for off-line use in systems producing drinking water.
- Temperature compensated to maintain optimum pH over a wide temperature range.
- Compatible with polyamide membranes from all major manufacturers.
- Suitable for use with other Avista cleaners.

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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RoClean P112 powder is a multicomponent, high pH buffered cleaner specifically formulated to remove silica scale safely from reverse osmosis (RO) membranes. This product is effective against silt and organic foulants such as colloidal silica, clay, organic color and bioslime.

RoClean P112 is a much safer option for silica scale removal than hydrofluoric acid and ammonium bifluoride solutions, which are potentially hazardous.

INSTRUCTIONS FOR USE
Cleaning

Below is a summary of the RoClean P112 cleaning procedure. For more detail, please refer to our technical bulletin, "Cleaning Spiral Wound Membrane Elements."

1. Fill the cleaning tank to the desired volume with 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 P112 to create a 1% wt/wt cleaning solution. 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 (m ³ /hr)
4	10 (2.4)
8	40 (9.0)

3. If the membranes are heavily fouled and the recirculated cleaning solution becomes discolored or turbid, discard as much as 15% of the solution volume. Heavily fouled elements may also benefit from a soaking period (up to 8 hours).
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 falls, 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.

PRODUCT INFORMATION
Packaging and Storage

Standard regional pack sizes are listed below. Information on drumless or bulk tanker delivery is available on request.

SPECIFICATIONS

Appearance: White powder

pH (1% solution): 12.0-12.9

PACKAGING FORMAT	AMERICAS/ ASIA	EMEA
Pail	45 lb	20 kg
Carboy	100 lb	-
Drum	350 lb	-