

REVERSE OSMOSIS CLEANERS

RoClean™ P111

High pH Powder Cleaner

APPLICATIONS

RoClean™ P111 powder is a multicomponent, high pH buffered cleaner formulated to remove severe biofouling including polysaccharides, severe colloidal fouling, and moderate humic/fulvic acid fouling. Where powder is preferred, RoClean P111 is successfully applied to systems operating on seawater, brackish water, or wastewater. RoClean P111 is certified by NSF International under NSF/ANSI Standard 60 for off-line use in drinking water systems.

CLEANING

Below is a summary of the RoClean P111 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 P111 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. CIP should be performed for 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. 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, dispose of the chemical and remake the cleaning solution.

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, 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	White, free-flowing powder
pH (2% solution)	10.5 – 11.5

PERFORMANCE BENEFITS

- A specialized blend of proprietary buffers to dissolve organic foulants and disperse colloidal particles.
- Highly buffered to resist pH changes during the cleaning process.
- Compatible with polyamide membranes from all membrane manufacturers.
- Suitable for use with other Avista™ cleaners.

PACKAGING AND STORAGE

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

PACKAGING FORMAT	AMERICAS	ASIA	EMEA
Pail	45 lb	20 kg	20 kg
Fiber carboy	90 lb	40 kg	-
Drum	350 lb	150 kg	-



CERTIFIED TO
NSF/ANSI 60

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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