

### Performance:

RoClean P703 offers an array of performance benefits:

- Superior results in the removal of **metals** and **calcium carbonate** scale, especially when compared to generic citric and hydrochloric acid solutions.
- Certified by NSF International for use in RO systems producing drinking water.
- Compatible with the polyamide and cellulose acetate elements.
- Contains a proprietary blend of buffers, chelants, and reducing agents to promote the dissolution of metal deposits.
- Highly buffered to resist pH changes during the cleaning process.
- Can be used in conjunction with other applicable cleaners as shown in the Avista cleaner selection guide.
- Temperature compensated to maintain optimum pH over a wide temperature range.

**RoClean P703** is a low pH powdered cleaner designed to remove iron, manganese, and aluminium deposits from spiral wound polyamide and cellulose acetate elements. This formulation is temperature compensated to ensure that the cleaning solution remains in the effective pH range regardless of variations in solution temperature.

RoClean P703 has been certified by NSF International under ANSI/NSF Standard 60 for use as an off-line cleaner in drinking water systems.

### Use Instructions:

Below is a summary of the RoClean P703 cleaning guidelines. For detailed procedures, please consult the Avista technical bulletin entitled "Cleaning of Spiral Wound Membrane Systems".

1. Fill the cleaning tank to the desired volume with RO permeate or DI water. Heat the solution to the maximum acceptable temperature (see membrane manufacturer guidelines, or use 50°C) as this will dramatically increase the cleaning efficiency. Add sufficient RoClean P703 to create a 2% wt/wt solution if the fouling is moderate/severe or 1% if the fouling is mild. Recycle the solution through the cleaning tank to ensure adequate mixing.

2. Recirculate 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 the guidelines listed below:

Element Diameter	Flow rate per Vessel, gpm (m <sup>3</sup> /hr)
4"	10 (2.4)
8"	40 (9)

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 soak period (up to 8 hours).

4. Monitor the pH of the solution during the cleaning process. If the pH remains in the desired range of 2.5 - 3.5 and the solution is not turbid, it may be used to clean subsequent stages. In the unlikely event that the pH rises above 3.5, prepare a new batch and repeat steps 1-4.

5. When the clean is completed, rinse the membranes by recirculating RO permeate through each pressure vessel. The system can then be returned to service.

### Packaging and Storage:

Standard regional pack sizes are listed below. Custom packaging can be provided worldwide to meet customer needs. Information on drumless or bulk tanker delivery is available on request.

Specifications	
Appearance:	Cream powder
pH (2% solution):	2.5 – 3.5
Density (kg/litre):	n/a

Packaging Formats	Americas	EMEA
Pails	45 lbs	20 kg
Fibre Carboy	90 lbs	-
Fibre Drums	350 lbs	-



CLASSIFIED BY NSF INTERNATIONAL AS A DRINKING WATER TREATMENT CHEMICAL UNDER ANSI/NSF STANDARD 60 FOR USE OFF-LINE IN REVERSE OSMOSIS SYSTEMS.

