



PERFORMANCE BENEFITS: *Green*

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

RoClean L212 is an EDTA and Phosphate Free high pH, liquid cleaner formulated to remove silt and organic foulants including colloidal silica, clays, organic color, and bioslime from spiral wound polyamide elements. This product is especially effective in removing bioslime and solids in element feed spacers.

RoClean L212 is certified by NSF International under NSF/ANSI Standard 60 as an off-line cleaner in drinking water systems.

INSTRUCTIONS FOR USE

Cleaning

Below is a summary of the RoClean L212 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 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 L212 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 (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.

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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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: Clear, colorless to amber liquid
pH (2% solution): 11.7-12.7
Specific Gravity (@25°C): 1.1-1.2

PACKAGING FORMAT	AMERICAS/ ASIA	EMEA
Pail	45 lb	20 kg
Drum	500 lb	200 kg
IBC tote	2500 lb	-