

PERFORMANCE BENEFITS:

- Specifically formulated to clean membrane surfaces and reduce high differential pressures in reverse osmosis (RO) systems.
- A specialized blend of proprietary dispersants and 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 major manufacturers.

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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.

CORPORATE OFFICES

Avista Technologies, Inc.



Avista Technologies (UK) Ltd

AvistaClean® P312 powder is a multicomponent, high pH buffered cleaner formulated to remove a combination of organic and particulate foulants from reverse osmosis (RO) membranes. Its proprietary biodispersants remove silt, colloidal silica, clay, organic color and bioslime from membranes to help reduce high differential pressure.

AvistaClean P312 is temperature compensated to maintain optimum pH over a wide temperature range and 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 AvistaClean P312 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 AvistaClean P312 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 recirculated cleaning solution becomes discolored or turbid due to severe fouling on membranes, 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 of 11.8-12.4 and the solution is not turbid, it may be used to clean subsequent stages. In the unlikely event that the pH falls below 11.8, 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 (2% solution): 11.9-12.4

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