

PERFORMANCE BENEFITS:

- A proprietary blend of buffers, low foaming surfactants and chelants to remove grease and oil.
- Also effective on colloidal silica, clay, organic color, bacterial slime and formulated specifically for oil.
- Highly buffered to resist pH changes during the cleaning process.
- Compatible with polyamide membranes from all major manufacturers.

AvistaClean® L011 liquid is a multicomponent, high pH buffered cleaner formulated to remove oil and grease that may be found in reverse osmosis (RO) systems used in waste water reuse applications.

AvistaClean L011 is highly buffered to resist pH changes during the cleaning process, and contains a proprietary blend of buffers, low foaming surfactants and chelants to dissolve organic foulants and disperse colloidal particles.

INSTRUCTIONS FOR USE
Cleaning

Below is a summary of the AvistaClean L011 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 L011 liquid 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 the cleaning solution and re-batch. 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: Colorless to pale yellow liquid
pH (2% solution): 10.5-11.8
Specific Gravity (@25°C): 1.05-1.15

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