

REVERSE OSMOSIS CLEANER

RoClean™ L011

High pH, Liquid Cleaner

APPLICATIONS

RoClean™ 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 wastewater reuse applications. RoClean L011 is high 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.

CLEANING

Below is a summary of the RoClean L011 cleaning procedure. For more detail, please refer to our technical bulletin, "Cleaning Spiral Wound Membranes."

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 RoCleanL011 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. 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, 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	Clear to amber liquid
pH (2% solution)	10.5 – 11.8
Specific gravity (@25°C)	1.05 – 1.15

PERFORMANCE BENEFITS

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

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	-
Carboy	100 lb	45 kg	-
Drum	350 lb	100 kg	-

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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