RXSOL RO - 4

Part/Order no:	Packing
RXSOL-33-3308-025	25 kg

Features:

- Highly effectivecleaner and maintenance solution for polyamide and polyaramid membranes.
- May also be used for cellulose acetate membranes under some circumstances. Contact your GE infrastructure Water & Process Technologies representative for details.
- Liquid product, designed to maintain an effective pH of 2.5 ± 0.5 over a range of dilutions.
- Enhanced performance at elevated temperatures.
- No adverse effects with repeated use.
- Optimum results are obtained when used in conjunctio with RXSOL-4 or RXSOL-3304.

Description:

RXSO-4 is a low pH liquid formulation designed specifically to remove organic foulants (including biological) and scale from reverse osmosis (RO), nanofiltration (NF), ultrafiltration (UF), and microfiltration (MF) membranes. This product contains a blend of solubilizing and complexing agents, as well as a surfactant to enhance cleaning efficacy. Used in tandem with an alkaline cleaner, this highly effective product provides superior cleanings, resulting in longer system running times and optimal membrane life expectancy.

Typical Applications:

During the operation of a membrane separation system, organic materials and suspended solids in the incoming water can accumulate on the membrane surface. Fouling from these species impedes the flow of water through and across the membrane.This can result in unacceptably low production,high operating pressure, or an excessivepressure drop in the system. Additionally, dissolved solids in the incoming water can concentrate up to a level where they begin to precipitate on the membrane surface. Scaling from hardness and metal salts, found in most unsoftened water, impedes the flow of water through the membrane. The accumulation of scale next to the membrane surface can increase the amount of dissolved material passing through the membrane, resulting in product water of unacceptable quality. Before the particulate fouling and scale accumulate to a level where product water flow or quality declines, or membrane damage is imminent, removal using offline cleaning is required. Indications of the need for cleaning include a significant decrease in normalized permeate flow, a significant increase in pressure drop across the system (or individual stage), or an increase in the normalized salt passage, such that product quality is unacceptable. Your GE representative can assist you with monitoring your system and determining when cleaning is advised.

Feed Requirements:

Feed System - This product should be applied using the membrane cleaning equipment supplied by the manufact-manufacturer of the membrane system. If such a system is not present, contact your GE representative for informatio on fabricating or obtaining a cleaning system.

Dilution - The recommended dilution for this product is 5 pounds (2.3 kg) of RXSOL-4 per 5 gallons (19L) of water, or approximately one gallon (3.8 L) of RXSOL-4 for each 9 gallons (34 L) of water.

Materials Compatibility - Corrosion - resistant equipment should be used for the storage, preparation, and use of this product per the following compatibility chart:

Rating	Material
A	Butyl, Viton A, Buna N, Hypalon, Neoprene, EPR, Natural Rubber, Viton Lithurge, Kynar, Polyethyl HDCL, Polypropylene, Polysulfone.
B	LB, Al, SS, Tygon, Polyethyl HD & LD, PVC, Nylon, Teflon
c	–
X	LCS

Packaging Information:

RXSOL-4 is a liquid material, available in a wide variety of containers and delivery methods. Contact your GE representative for details

Packaging Information:

The following general cleaning procedure can be followed. For the optimum cleaning procedure for your system, contact your GE representative.

- Inspect cleaning tank, hoses, and cartridge filters. Clean tank and flush hoses if necessary. Install new cartridge filters.
- Fill cleaning tank with RO permeate or DI water. Turn on agitator or tank recirculation pump.
- Slowly add RXSOL-4 to cleaning tank (5 pounds (2.3 kg) of RXSOL- 4 per 5 gallons (19L) of water, or approximately one gallon (3.8L) of RXSOL-4 for each 9 gallons (34 L) of water) and allow to mix thoroughly.
- Check solution temperature. If solution temperature is lower than recommended level, adjust heating control to provide optimum temperature. If manuf- acturer's recommendation is not available, contact your GE representative.
- Check solution pH. The solution pH should be 2.5 to 3.5 or as recommended by the membrane manufacturer. If pH is too low, adjust pH upward with NaOH, or other chemical as recommended by the membrane manufacturer. If pH is too high, adjust with hydrochloric acid.
- Circulate solution through one stage at a time in the direction of feed flow for 30 minutes. Circulate at the flow rate recommended by themembrane or system manufacturer. If manufacturer' srecommen- dation is not available, contact your GE representative. Pressure should be low enough so that minimal permeate is produced during cleaning, but always less than 60 psig (4.2 kg/cm2).
  In cases of heavy fouling, the first return flow (up to 15% of the cleaning tank volume) should be diverted to drain to prevent redeposition of removed solids. For optimum results, each stage must be cleaned separately in a multistage system.
- If the first stage cleaning solution becomes turbid or discolored, dump the tank and prepare a fresh cleaning solution before proceeding. If solution pH or temperature moves out of the recommended range, a new solution should be prepared. In any event, a new cleaning solution should be prepared for each stage.
- Rinse with RO permeate before returning system to service.
- When returning unit to service, divert product water to drain until any residual cleaning solution has been rinsed from system.

Depending on the nature of the fouling, a soak periodmay be necessary for optimum results. Consult your GE representative for details.

Safety Precautions:

A Material Safety Data Sheet containing detailed information about this product is available upon request.

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