

IND-TDS-EU-Sokalan RO 100

Sokalan[®] RO 100 Antiscalant

Description

Sokalan RO 100 is an aqueous solution of a polycarboxylate with a low molar mass. It is a broad spectrum antiscalant designed to inhibit inorganic scale formation in membrane processes.

Sokalan RO 100 is low-phosphorus chemistry.

Chemical Reactivity

Sokalan RO 100 is not affected by chlorine or other oxidizing biocides under normal conditions of use. Sokalan RO 100 may be used in membrane systems using chlorine and sodium metabisulfite.

Performance

Solenis Sokalan RO 100 offers a variety of performance and application benefits:

- Inhibits RO membrane scaling caused by the following:
 - Calcium carbonate (CaCO₃)
 - Calcium sulfate (CaSO₄)
 - Barium sulfate (BaSO₄)
- Dispersant properties reduce colloidal and silt fouling of membrane surfaces.
- Compatible with thin film composite (polyamide) and cellulose acetate RO membranes of the leading manufacturers.

Application and Dose Level

The recommended injection point is into the feed water downstream of any filtration equipment and cartridge filters. This recommendation is of general nature and addresses primarily small to medium RO installations with irregular maintenance schedule: if cartridge filters are not changed appropriately (time schedule or differential pressure) the silt and colloidal matter in the cartridge filter can interact with the antiscalant and can potentially result in underdosing the antiscalant.

However, in some plants and due to plant configurations, the dosing point could be before cartridge filters.

Sokalan RO 100 is miscible with water in all proportions. It may be applied as neat product or as a solution in demineralized water or RO permeate. Microbiological growth does not occur in neat Sokalan RO antiscalants and the products are stable without the addition of preservatives/biocides.

The inherent microbiological growth inhibition properties of our Sokalan RO antiscalants are effective in diluted product up to a dilution factor of 1:3 (i.e. 25 % wt. Sokalan RO product and 75 % wt. hardness-free dilution water).

If higher dilutions are required (e.g. to match the size of the dosing pump), Solenis recommends the addition of membrane compatible preservatives/biocides (e.g. SMBS, DBNPA), as diluted solutions of Sokalan RO can become biologically fouled in few days depending on external factors, like temperature and the dilution rate.

Test work confirmed that the addition of 500 ppm SMBS or 10 ppm DBNPA can control microbiological growth of diluted Sokalan RO antiscalants in the dosing tank for up to 14 days.

Dilution rates of up to 1:50 were tested.

Please contact your local sales representative if higher dilution rates are required.

This recommendation is of general nature and addresses primarily small to medium RO installations with irregular maintenance schedule, or water recycling plants with high biological load.

If the antiscalant is diluted with RO permeate, the dosing tank volume is properly selected to allow frequent batching and the tank is cleaned regularly as part of the general maintenance program, the addition of a preservative/biocide may be avoided.

Sokalan RO 100 should be dosed continuously and proportionately to the feed water flow, to maintain the recommended dose level. The dose level required is dependent on the quality of the feed water and the saturation indices of the various scale forming species present in the concentrated brine.

The specific dose level will be specified by the Solenis technical representative, who can also assist you in optimizing the appropriate dose rate for your system.

Certificates

Sokalan RO 100 is certified to ANSI / NSF Standard 60 for use in reverse osmosis systems producing potable water.

The product is also Halal and Kosher certified.

Storage

Storage stability 18 months from date of production (provided that the product is stored properly in its original sealed packaging and stored under the recommended storage conditions).

Packaging

This product is available in a variety of packaging sizes. Your Solenis representative will recommend the appropriate packaging for the application.

Important Information

Typical Properties: Refer to the Safety Data Sheet (SDS).

Regulatory Information: Refer to the SDS or contact your sales representative for any additional regulatory and environmental information.

Safety: Solenis maintains an SDS for all of its products. Use the health and safety information contained in the SDS to develop appropriate product handling procedures to protect your employees and customers.

Our SDS should be read and understood by all of your supervisory personnel and employees before using Solenis products in your facilities.