



PRODUCT DATA SHEET

PRO-TEK SRP 1

MEMBRANE ANTISCALENT

PRODUCT DESCRIPTION AND APPLICATION

PRO-TEK SRP 1 is a highly effective scale inhibitor developed for reverse osmosis (RO) systems. Scaling and iron fouling of RO membranes will reduce system performance and lead to premature membrane replacement. Precipitation of scale and deposits build up on the RO membrane, which leads to poor permeate quality, low permeate production, unscheduled downtime, increased water consumption and increased energy costs.

PRO-TEK SRP 1 has shown excellent performance against the following scaling compounds: calcium carbonate, calcium sulfate, barium sulfate, strontium sulfate, calcium fluoride, silica and iron.

For use in RO & UF units with a feedwater flow rate of >545 m³/day (100 gpm),

PRO-TEK SRP 1 is used when the silica level in the brine is less than 185 mg/l at a brine pH of 7.5 and temperature 77°F (25°C). For higher silica levels, the recommended product is DEUTERIUM PRO-TEK SRP 12.

Specific Gravity @77°F (25°C):	1.36
pH (Neat):	10.5
Freeze-Thaw Recovery:	Complete
Viscosity @77°F (25°C):	23 cps
Flash Point (PMCC):	None
Solubility in Water:	Complete
Freeze Point:	Not Available
Volatile Organic Compounds (VOC):	Not Available

MATERIALS OF COMPATIBILITY

Compatible	Not Compatible
Stainless Steel 304	Brass
CPVC Piping	Neoprene
Polyethylene	Viton
Polypropylene	Buna-N
Plasite 4300	Polyurethane
Plasite 7122	EDPM
	Hypalon

PHYSICAL & CHEMICAL PROPERTIES

These properties are typical. Refer to the Material Safety Data Sheet (MSDS), for the most current data.

Color:	Clear, yellow
Form:	Liquid
Odor:	Slight ammonia smell
Density:	11.33 lb/gal



DOSAGE AND FEEDING

PRO-TEK SRP 1 should be fed continuously to minimize precipitation of scale and fouling of RO and nano-filtration membranes. It is recommended to operate the dosing pump with the highest possible frequency and to adjust the dosage by adjusting the pump stroke to ensure membrane protection.

It is preferred to feed PRO-TEK SRP 1 neat via a closed feed system to prevent contamination from foreign material (a closed feed system being defined as a system in which fluid is moved from a closed storage vessel into a treated media without exposure to the atmosphere, except through normal venting or pressure relief devices).

PRO-TEK SRP 1 can be diluted using RO permeate (only) following these guidelines:

1. Use RO permeate for dilution.
2. Prepare a fresh antiscalant solution every 3-5 days.
3. Inspect the antiscalant day tank before adding the new solution. If needed, the antiscalant tank should be cleaned prior to filling.
4. Dilution rates up to a factor 10 are typically applied. Dilution factors higher than 10 will require more attention with respect to the condition of the antiscalant tank (cleaning) and preparation of a new solution (every 1-3 days).
5. NaOH can be added to the dilution to increase the pH to 10-11. This is especially recommended for warm environments to prevent bio-growth.

PRO-TEK SRP 1 dosage is dependent on feedwater chemistry, membrane type, and system operating parameters (e.g., recovery, temperature and pressure). These parameters determine the potential foulant that is likely to foul the membrane elements.

To determine the optimum product dosage for your system, we recommended the use of our chemical projection computer program. This program will select the appropriate scale inhibitor treatment program and calculate the recommended dosage based on the RO design and operation as well as feedwater or brine chemistry. This program will do all calculations for you easily and automatically.

SAFETY AND HANDLING

Before using PRO-TEK SRP 1, please refer to SECTION 8 of the MSDS for proper personal protective equipment (PPE) and SECTION 3 for health effects.

STORAGE

PRO-TEK SRP 1 has a suggested in-plant storage limit of one year. The suggested maximum storage temperature is 100°F (38°C).

REMARKS

For Medical and Transportation Emergencies involving PRO-TEK products, please see the Material Safety Data Sheet for the phone number.