

**SAFECHM
SS250**
Antiscalant
Antifoulant



Improve Quality of Life with So~Safe

Antiscalant Technical DATA SHEET

Safechem SS 250

Usage

Scaling & Corrosion Inhibitors for Brackish Water with high Silica in Reverse Osmosis and Nano Filtration Desalination Plants. General antiscalant on phosphonate and polycarboxilate basis with synergetic mixture adapted for controlling inorganic scales of carbonate, sulfate, metal oxides and high silica up to 400 mg/l in the RO-concentrate in Brackish Water.

Safechem SS 250 is compatible with all major RO-membranes. In general, it is not affected by chlorine or biocides when they are used as normal disinfectants. However, when Ozone is used, engineers are requested to contact us.

Dosage

Conventional methods use simple indices like Langelier, Stiff-Davis, Oddo-Tomson and Ryznar indexes, to predict scale and choose the right antiscalant and dose. These simple indicators are driven from the basic concept of saturation under heating in thermal plants or heat exchanger and is assumed, that every ion in the water is available 100% freely as reactant for scale forming. They have two major drawbacks:

1. The mechanism of dehydration or dewatering of dissolved salts on membranes surface, differs from the simple thermal saturation modules.
2. The interaction between the different ions present in brackish water, especially with high salt content, leads to sophisticated fouling modules (fouling fractions), which varies in the practice from the simplified assumption, that every ions reacts 100% as it is in the water analysis, using simple indices.

Using these conventional methods leads to errors in projection of scale and in choosing antiscalant and dose.

Safechem SS 250 formulas for Brackish Water with High Silica membrane systems takes into consideration the above mentioned points to predict and prevent scale formation at cost effective dosing rate as low as 2 ppm based on water analysis. So Safe offers a special service to calculate the exact dosing for operations based on water analysis and system design and operating parameters.

Safechem SS 250 has been tested against major competition products in the market and provides an equivalent or better performance.

Physical and Chemical Properties

General Properties

Form: Aqueous, liquid

Color: Yellow to Orange

Important Properties to protect health, environment and safety

pH-value (Concentrate)	: 1-2
pH-value in aqueous solution (1%w/w)	: 2.5-3.0
Flash point (Pensky/Martens)	: >100°C
Solubility in Water (weight %)	: Completely soluble
Eyes Irritation, Rabbits	: Strong irritant

This product is not classified as an environmental hazard. This classification corresponds to 1999/45/EG.

Handling

Avoid skin and eye contact. After work wash hands especially before eating, drinking or smoking.

Storage

Keep container hermetically sealed. Store in a cool and good ventilated area.

Regulations & Registration

EG-Identification

Symbol Irritant	: Xi
R-Symbols R41	: Serious eye damage.
S- Symbols S26	: If contact with eye happens, wash immediately with plenty of water. Obtain medical advice.
S28	: If contact with skin happens, wash immediately with plenty of water.
S36/37/39	: At work, wear suitable protection clothing, protection gloves and protection glass/face protection.
EINECS No	: All ingredients of this products are listed in EINECS or ELINCS, except the one exempted by EG-guideline 67/548.
National regulation (Switzerland)	: Registered.
Swiss Federal Health Ministry	: Giftklasse: 3
International regulation (USA)	: Drinking Water Treatment Chemicals
Underwriters Laboratories	
Inc. UL	: ANSI/NSF STANDARD 60 (registered)

Produced by:

Somicon AG

Membrane and Process Technology
K-956 c/o Novartis Areal 9,
Badenstrasse via Porte 91
CH-4002 Basel, Switzerland
Tel.: +41 (0) 61 631 64 04
Fax: +41 (0) 61 631 64 05

Especialty for:

So Safe Water Technologies

So~Safe House, C-47, 11th Com. Street,
Phase II Ext. DHA, Karachi-Pakistan
UAN: 111 111 600
Tel: (92-21) 35384420 - 22, 35899295-98,
Fax: (92-21) 35892455
E-mail: karachi@sosafe.com
Web: www.sosafe.com



So~Safe International
Consumer Products Division



ISO 9001 : 2000 Company