

RO ANTISCALANT



Z E E L C H E M
TM

— 9003 —

ANTISCALANT

(EXPORT QUALITY)

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Antiscalant is a pretreatment water additive for reverse osmosis system that is highly effective in preventing the membranes from scaling. Before the feed water enters the reverse osmosis membrane, an antiscalant is injected into the water and sent through the system.





Information About Antiscalant:



What is RO Antiscalant chemical?



Antiscalants are a family of **chemicals** designed to inhibit the formation and precipitation of crystallized mineral salts that form scale. **RO antiscalant** helps to control inorganic scales of calcium, magnesium, barium, strontium, fluoride, iron and silica.

What chemicals are used in reverse osmosis?



ZEEL PRODUCT's range of high-performance **reverse osmosis chemicals** are based on advanced formulations and include **RO** membrane cleaners and detergents, scale inhibitors and antiscalants, corrosion inhibitors, biocides, antifoulants, de-chlorinators, and flocculants.

What is anti scaling?



An **anti-scaling** agent is one that protected against **scaling**. A descaling agent is a chemical that removes scale. **Anti-scaling** may be an important topic but descaling is more significant.

What is the use of RO Antiscalant?



Antiscalant is a pretreatment water additive for **reverse osmosis** system that is highly effective in preventing the membranes from scaling. Before the feed water enters the **reverse osmosis** membrane, an **antiscalant** is injected into the water and sent the through the system.

What is the scaling?



Scaling is the procedure of measuring and assigning the objects to the numbers according to the specified rules. In other words, the process of locating the measured objects on the continuum, a continuous sequence of numbers to which the objects are assigned is called as **scaling**.



RO Antiscalant

There are Three types of Product Used in Reverse Osmosis

1. RO Antiscalant

2. RO Cleaner

3. RO Biocide

OVER VIEW:

ZEELCHEM™ 9003 antiscalant chemical offers superior quality performance characteristics over a wide range of applications. The antiscalant chemical from ZEEL PRODUCT. is designed to eliminate scale and reduce fouling in membrane systems. **ZEELCHEM™ 9003** is a liquid antiscalant/dispersant blended to inhibit scale and disperse colloidal particles in cellulose acetate and thin film membrane separation systems.

Applications:

ZEELCHEM™ 9003 performance is optimized when the chemical is injected upstream of the membrane system and cartridge filters.

Dosing:

The typical dosing range is between 2 to 10 ppm

Dilutions:

If dilution is required, **ZEELCHEM™ 9003** should be diluted with de-mineralized water or RO permeate. If neither of these water sources is available, softened water may be substituted. **ZEELCHEM™ 9003** should not be diluted to less than 10% by weight.

Packing And Storage:

Standard regional pack sizes are 25 Kg, 35 Kg, 50 Kg Carboy. Custom packaging can be provided worldwide to meet customer's needs.

Chemical Specifications:

- Appearance: Clear Yellow Liquid
- Odor: Mild Odor
- PH (1% Solution): 2.0 to 4.0
- Specific Gravity: 1.10 to 1.15





Performance Powerful inhibitor against a variety of scales including:

- CaCO_3 CCPP ≤ 900 (LSI ≤ 2.8)
- CaSO_4 $3.0 \times K_{\text{sp}}$ BaSO_4 $105 \times K_{\text{sp}}$
- SrSO_4 $20 \times K_{\text{sp}}$
- CaF_2 $1000 \times K_{\text{sp}}$
- SiO_2 120 ppm.

Highly effective at low dose rates in a wide range of feed water types and pH ranges Compatible with polyelectrolytes Provides both scale and inorganic fouling control Compatible with all membrane types.

ZEELCHEM™ 9003 improves the performance and solves fouling problems in your membrane system. **ZEELCHEM™ 9003** antiscalant is very versatile and will control scale in most applications treating naturally occurring feed water. Contact ZEEL PRODUCT with your water chemistry and operating conditions to determine & solve the membrane fouling issues.

Advantages of using **ZEELCHEM™ 9003** antiscalant: Reduces membrane cleaning frequency Eliminates acid injection Controls iron, silica, and mineral scale Extends membrane life Lower operating and capital costs Does not react with other chemicals

ZEELCHEM™ 9003 antiscalant is used to process very poor quality feed water at very high rates of recovery. When used properly, **ZEELCHEM™ 9003** extends the time between membrane cleanings from a few weeks to years in some cases. Without antiscalant, membrane systems would not be as successful serving the water treatment industry.

Other RO Chemicals from ZEEL PRODUCT Membrane Cleaners R Regular chemical cleaning of RO membranes will ensure that they continue to perform and extend their useful life. The key factor with cleaning is to do it before the situation gets too bad, because if you wait too long, the membrane may become irretrievably fouled. Cleaning should be undertaken when either the normalized permeate flux is reduced by 10 – 15% or, when the differential pressure decreases. Depending on the characteristics of the water supply, membrane fouling may be inorganic, organic, colloidal or microbiological in nature and often a combination. Each type of fouling or scaling requires a different cleaning strategy. ZEELCHEM-HPH is an alkaline reverse osmosis membrane cleaner for removing fouling caused by organic, biological and colloidal fouling of RO and UF membranes. ZEELCHEM-LPH is a mildly-acidic RO membrane cleaner for removing fouling caused by iron salts, oxides and hydroxides. It can also be used to remove calcium carbonate scaling.

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