# VITEC™ 3000

Avista™ Antiscalant/Dispersant

## Product Description

**VITEC 3000** is a powerful, broad spectrum liquid antiscalant and dispersant. It is highly effective at low dose rates in preventing scales occurring in a wide range of feedwater such as brackish, wastewater and seawater.

VITEC 3000 is used in multiple industries including, semiconductor, food and beverage, power and oil and gas. It contains high and low molecular weight components which are proven to prevent scale and disperse fine particles.

VITEC 3000 is NSF certified. It is compatible with polyamide membranes from all major manufacturers.

It is also compatible with Avista coagulants.

## Injecting

The product should be injected, continuously, far enough upstream of the RO membranes to ensure full mixing with the feedwater. Injection can be upstream of the RO feed pump to take advantage of the turbulence created there or the guard cartridge filter (if installed) for additional residence time.

## Feed and Dilution

VITEC 3000 is formulated to be continuously injected as supplied. However, if dilution is required, use deionized water or RO permeate. If neither is available, softened water may be substituted. The dilution for VITEC 3000 should not result in a solution strength of less than 1%, and DI-quality water must be used for dilutions below 10%. This guideline protects the effectiveness of the internal bacteriostat, which inhibits bacterial growth in the product packaging and feed tank.

## Features & Benefits

***Effective*** – Effective dispersant for most RO deposits. VITEC 3000 is best for preventing fouling from:

- $CaCO_3$
- $CaSO_4$
- $BaSO_4$
- $SrSO_4$
- $CaF_2$

***NSF/ANSI 60*** – Approved for use as an additive for reverse osmosis membrane treatment where the permeate is intended for potable or drinking water use.

NSF
Certified to NSF/ANSI/CAN 60

## Physical Characteristics

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|---|---|
| **Appearance:** | Clear to Amber Liquid |
| **Spec. Gravity (20°C):** | 1.2 – 1.3 |
| **Density (20°C):** | 10.43 lbs / gallon |
| **pH (20°C):** | 10.0 – 11.8 |
| **Water Solubility:** | Complete |
| **Freeze Point:** | 21°F (-6.1°C) |

**Revision Date: April 1, 2025**

## Dosage and Control

VITEC 3000 protects and enhances the operation of reverse osmosis and nano-filtration systems by effectively controlling scale and deposit formation due to carbonate, sulfate and other common scaling compounds. The amount of VITEC 3000 required to inhibit scale formation depends on the degree of super saturation of the insoluble salts at the point of highest concentration in the system. The degree of super saturation in turn depends on concentration of the ionic species in the feedwater, the relation of the ionic species towards each other, alkalinity, temperature of the feedwater, recovery rates, membrane configuration and membrane type.

Consult your Kurita representative for optimum dosage for the supersaturations that occur in your systems. The Avista Advisor™ Ci program can be used to find the optimum dosage for a particular water and application. Typical dosing rates are 2 – 5 mg/l in the supply water.

Verification of product dosage can be performed by testing for phosphonate using the Hach UV digestion method. Details will be provided on request.

## Available Packaging

Net weight:

Tote: 2500 pounds
Drum: 500 pounds
Pail: 45 pounds

## Material Compatibility

Good chemical resistance: Stainless steel (304 & 316), Polypropylene, Polyethylene, ABS, PVC, Viton, EPDM, Buna N and PTFE.

Acceptable chemical resistance: PVDF

Aluminum, brass, copper and mild steel are **not recommended** for use with this product.

Further details available on request.

## Storage and Handling

When stored at a temperature between 45 - 100°F (7 - 35°C), unopened containers have a shelf life of 12 months from date of purchase.

Harmful if swallowed. Avoid contact with skin, eyes and clothing. Keep container closed when not in use. Read SDS prior to opening container.

## Certification

Our quality management system (ISO 9001) is successfully certified by DNV.