VITEC™ 7000

Avista™ Antiscalant/Dispersant

Product Description

VITEC 7000 is a multicomponent liquid antiscalant and dispersant which provides a high level of sulfate inhibition and allows increased reverse osmosis (RO) system recoveries in challenging waters. It prevents calcium sulfate ($CaSO_4$) scale precipitation, allowing up to 6 times saturation. The primary application of this product is brackish water or wastewater rich in sulfate, which requires a specialty product for economic membrane system recovery. It is successfully applied in both industrial and potable applications.

VITEC 7000 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 7000 is formulated to be injected neat. However, if dilution is required, use deionized water or RO permeate. If neither is available, softened water may be substituted. The dilution for VITEC 7000 should not result in a solution strength of less than 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 7000 is best for preventing fouling from:

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

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

Appearance:	Clear to Amber Liquid
Spec. Gravity (20°C):	1.15 – 1.25
Density (20°C):	10.00 lbs / gallon
pH (20°C):	5.0 – 7.0
Water Solubility:	Complete
Freeze Point:	24.8°F (-4°C)

Revision Date: April 1, 2025

Dosage and Control

VITEC 7000 protects and enhances the operation of reverse osmosis and nano-filtration systems by effectively controlling scale and deposit formation due to sulfate, carbonate and fluoride compounds. The amount of VITEC 7000 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 your specific needs. 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 upon request.

Available Packaging

Nominal pack sizes are:

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

Material Compatibility

Good chemical resistance: 316 Stainless steel, Polypropylene, Polyethylene, ABS, PVC, Viton, EPDM and PTFE.

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

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.