

Vitec^ä 4000 is a proprietary liquid antiscalant designed to inhibit silica and other scales and disperse colloidal particles in cellulose acetate and thinfilm membrane separation systems. This formulation is unique in that it inhibits silica scaling at higher concentrations than typical antiscalants. This feature may allow increased RO system recoveries in feedwaters containing high levels of silica. It retains its performance even in RO concentrate streams containing up to 4 ppm of ferrous iron.

Performance:

VitecTM 4000 antiscalant offers a variety of critical performance and application benefits:

- Protects membranes from silica scale when used in accordance with published limitations of 250 ppm of SiO₂ in the RO concentrate.
- Powerful inhibitor against RO membrane scaling caused by the following:
 - ✓ calcium carbonate (CaCO₃)
 - ✓ calcium sulfate (CaSO₄)
 - ✓ barium sulfate (BaSO₄)
 - ✓ strontium sulfate (SrSO₄)
- Dispersant qualities reduce colloid and silt fouling of membrane surfaces
- Excellent dispersant for alum particles
- Compatible with all leading RO membranes.
- Effective over a wide pH range

Application:

Optimum Vitec 4000 performance is achieved when the chemical is injected downstream of multimedia filters and upstream of cartridge filters. In systems using sulfuric acid (H₂SO₄), the best results are obtained when the acid is injected far enough upstream to ensure it is adequately mixed prior to the Vitec 4000 injection point.

Dilution:

The maximum dilution for Vitec 4000 should not exceed 10%. This guideline will protect the effectiveness of the internal bacteriostat, which inhibits bacterial growth within the drum and feed tank.

Dosing Guidelines:

Typical dosage ranges are between 2 to 5 ppm. A site-specific dose can be determined using the Avista computer program.

Like any injected chemical, over or underdosing may cause unnecessary membrane system fouling. Please contact the Avista customer service department for customized dosing instructions.

Packaging and Storage:

Vitec 4000 is available in 45 pound (5 gallon) pails, 500 pound (55 gallon) plastic drums, and 2000 pound (200 gallon) tote bins.

This product should be protected from freezing during storage as the active ingredients may separate under extreme temperatures. If freezing occurs, warm the chemical until it returns to the liquid state and stir to recombine.

Properties

Appearance	: Colorless to amber liquid	Freeze Point	: -8°C (18°F)
pH	: 6.0 - 6.5	Specific Gravity	: 1.15 to 1.25
Viscosity	: 13 cp at 25°C		

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Classified by Underwriters Laboratories, Inc.[®] (UL) to ANSI/NSF 60 for use in reverse osmosis systems.