

OptiClean™ S is a low pH (acidic), low foaming powder cleaner formulated to remove silica and other inorganic scales present on MF/UF modules or NF/RO membranes. Silica is inherently difficult to remove, but OptiClean™ S targets and removes tough silica scale, while helping remove other inorganic scale present. For systems where predominate inorganic scale is not silica, it is best to use a broad spectrum low pH cleaner (Lavasol™ 1 or OptiClean™ A) prior to OptiClean™ S.

### Features / Benefits

- Readily dissolvable powdered cleaner provides efficient shipping and handling
- Phosphate-free formula to reduce negative impact on the environment
- Buffered pH to maintain optimum cleaning performance throughout cleaning cycle
- Best results when used in a program that includes either OptiClean™ B or Lavasol™ 7
- Classified for use in membrane systems producing drinking water (ANSI/NSF Standard 60)

### Uses

- For use on reverse osmosis (RO), nanofiltration (NF), ultrafiltration (UF), and micro-filtration (MF) membranes
- Removal of silica precipitation

### Specifications

|                  |              |
|------------------|--------------|
| Appearance       | White powder |
| pH (1% solution) | 3.00 – 4.50  |



Certified to  
NSF/ANSI 60

### Packaging

Pail: 25 lbs

Pail: 45 lbs

Pail: 55 lbs

Pail: 10 kg

Pail: 25 kg

Bulk Bag: 1000 kg

*For special packaging options, please contact PWT or your local distributor.*

**OptiClean™ S**  
POWDER MEMBRANE CLEANER

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## General Mixing & Application Instructions for OptiClean™ S

1. Inspect all cleaning system components to include CIP tank, hoses, and cartridge filters. Flush or replace if necessary. Fill cleaning tank with RO permeate or DI water. Turn on agitator or tank recirculation pump.
2. Slowly add OptiClean™ to cleaning tank (1 pound [0.45 kg] of OptiClean™ for every 12 gal [45 L] of water) and mix thoroughly. The solution pH should match product specification. If necessary, adjust pH with a membrane-approved chemical such as caustic, citric, sulfuric, or hydrochloric acid. The solution should be heated up to 45°C to improve cleaning efficacy.
3. Circulate solution in the same direction as the feed flow. Typical circulation times are 30-90 minutes.\* PWT recommends cleaning each stage of the system separately. Maximum flow rate per pressure vessel is 40 gpm (152 Lpm) for 8-inch elements and 10 gpm (38 Lpm) for 4-inch elements. Maximum pressure for cleaning is 60 psig (4.2 kg/cm<sup>2</sup>).
4. In cases of heavy fouling, divert the first 10-20% of cleaning solution to drain to prevent re-deposition of removed solids.
5. Rinse with RO permeate before returning system to service. When returning unit to service, divert product water to drain until any residual cleaning solution has been rinsed from system.

\*Depending on the nature of the fouling, a soak period may be necessary for optimum results. Please contact PWT or your local distributor for custom cleaning procedure, or consult PWT's Technical Bulletin 503 for further cleaning recommendations.

## ProDose XPRT™ – Scaling Prediction Software

ProDose XPRT™ uses the most accurate scaling prediction calculations available to accurately determine effective antiscalant dosage, and cleaning chemical usage. The user can enter multiple cases to study various operating conditions, directly enter concentrate analysis, and select the best PWT product and dosage for the application.

*ProDose XPRT™ is available upon request only. Please contact your PWT representative for more information.*

The screenshot displays the PWT ProDose software interface. At the top, there is a navigation bar with various parameters: UNITS (US), TEMPERATURE (Fahrenheit), PERMEATE FLOW (81.00), RECOVERY (75.0%), ANTISCALANT (SpectraGuard Liquid), DOSAGE (2.95 PPM), SOURCE (Well Water), PROJECT NAME (Project 1), and CASE (1). Below this, a sidebar on the left contains icons for PROJECT INFORMATION, WATER QUALITY, SYSTEM INFORMATION, CHEMICAL SELECTION, CALCULATIONS, and REPORT. The main content area is divided into several sections: OVERVIEW (CLIENT NAME: City of San Diego, PROJECT NAME: Project 1, LOCATION, PREPARED BY, DATE: 5/11/2016, WATER TYPE: Well Water), MEASUREMENTS (PRESET UNITS: CGS, Metric, U.S.; TEMPERATURE: Deg F; FLOW RATES: Gal/min; MASS UNITS: lb), COMMENTS (OPTIONAL) (a large text input area), and TOTAL CASES (1 AVAILABLE) (Max 9). A table below shows one case with ID 1 and Modified Date 5/27/2016. Below the table is a field for Selected Case Description.



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