



OptiClean™ B+ is an aggressive high pH (alkaline) powdered cleaner ideal for removing organic, biological, silt, particulate, and other acid insoluble foulants from thin-film composite, ultrafiltration, and microfiltration membranes. Combining select water activated chelants, and solubilizing agents, OptiClean™ B+ provides outstanding cleaning capabilities. Ideal for membrane systems troubled by high organic and/or biological loading.

### Features / Benefits

- Readily dissolvable powdered cleaner provides efficient shipping and handling
- Highly effective against organic and biological foulants
- Buffered pH to maintain optimum cleaning performance throughout cleaning cycle
- Best results when used in a program that includes OptiClean™ A+
- 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
- Formulated to dissolve organic foulants from the membrane surface
- To aid in the removal of particulate, colloidal, microbiological and other acid insoluble foulants from the membrane surface

### Specifications

Appearance	White powder
pH (1% solution)	11.50 - 12.50



### 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.*

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POWDER MEMBRANE CLEANER

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## General Mixing & Application Instructions for OptiClean™ B+

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™ B+ to cleaning tank (1 pound [0.45 kg] of OptiClean™ B+ 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 the PWT logo and several tabs: 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, there is a sidebar with icons for PROJECT INFORMATION, WATER QUALITY, SYSTEM INFORMATION, CHEMICAL SELECTION, CALCULATIONS, and REPORT. The main content area is divided into several sections: OVERVIEW, MEASUREMENTS, COMMENTS (OPTIONAL), and TOTAL CASES (1 AVAILABLE). The OVERVIEW section contains fields for CLIENT NAME (City of San Diego), PROJECT NAME (Project 1), LOCATION, PREPARED BY, DATE (5/1/2016), and WATER TYPE (Well Water). The MEASUREMENTS section includes PRESET UNITS (CGS, Metric, U.S.), TEMPERATURE (Deg F), FLOW RATES (Gal/min), and MASS UNITS (lb). The TOTAL CASES section shows a table with one case, with columns for Cases and Modified Date (5/27/2016). Below the table is a field for Selected Case Description.



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