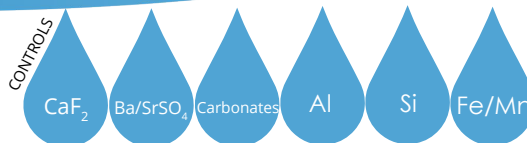


Classics

Pretreat Plus® 0100 Conc.

Antiscalant/Dispersant/Antifoulant



Pretreat Plus® 0100 Conc. is provided as an eight (8) fold concentrate. The concentrate is diluted with seven (7) equal volumes of purified water to form Pretreat Plus® 0100, which is a powerful broad spectrum antiscalant, specially formulated for feedwaters with high levels of scale-forming minerals, as well as metal oxides and silica. It is effective over a wide range of concentrations, and does not flocculate dissolved polymers such as residual coagulants or iron- or aluminum-rich silica. Use of this product is recommended for reducing the operating and capital costs of reverse osmosis (RO) and nanofiltration (NF) systems.

Features

- Controls inorganic scale over a large concentration range.
- Controls polymerization and precipitation of silica.
- Decreases precipitation of aluminum, iron, and heavy metal salts.
- Compatible with RO, NF, and UF membranes from all major manufacturers.
- Liquid formulation is convenient and easy to use.
- Certified under NSF/ANSI Standard 60 for drinking water production.



Dosage

In the typical dosage range of 1–10 mg/L (as mixed), control of a wide range of inorganic scales at up to 100x saturation values or higher is possible. By monitoring the concentrate stream and trend charts using iWater-PRO™, optimal dosage can be achieved for the control of scales.



Specs

Appearance: Clear, Colorless Liquid	Product pH (1%): ≤ 2.0
Specific Gravity: 1.45 ± 0.10	Feedwater pH: 5.0-10.0

Application

Pretreat Plus® 0100 should be injected into the feed stream prior to the static mixer and cartridge filter. Effective pH range is 5.0-10.0. If frozen, may be thawed and mixed before use.



Packaging

5 gal (27 kg), 55 gal (295 kg)



NSF/ANSI 60

SDS available at kingleetechnology.com

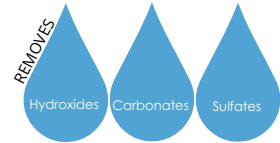
8949 Kenamar Drive Bld.107 San Diego, CA 92121 USA. Ph (800) 800-9019 Fx (858) 693-4917 www.kingleetechnology.com



Classics

KL™ LpH

Membrane Cleaner



KL™ LpH is a heavy duty action low pH powder cleaner that quickly and easily mixes with water to make an easy-to-use cleaning solution that effectively removes a wide range of inorganic scale such as metal hydroxides, carbonates, phosphates and inorganic membrane foulants from reverse osmosis (RO), nanofiltration (NF), and ultrafiltration (UF) membrane elements. Use alongside KL™ HpH for a comprehensive cleaning. If a more aggressive low pH cleaner is needed, try Diamite™ LpH Plus.

Features

- Removes scale due to hardness.
- Heavy duty action broad spectrum cleaning.
- Ideal for the removal of acid-soluble scale including iron, calcium carbonate and metal oxides.
- Powder formulation for efficient shipping and handling.
- Compatible with RO, NF, and UF membranes from all major manufacturers.
- Certified under NSF/ANSI Standard 60 for drinking water production.



Dilution Ratio

Prepare each cleaning solution using a ratio of 1 lb of cleaning powder to 10 gallons of permeate or DI water. If the system is not drained before cleaning, assume that approximately 4 gallons of water is present in each 8"x40" membrane element and 1 gallon of water is present in each 4"x40" membrane element after a thorough system flush.



Specs

Appearance: Colorless Crystals Product pH (1%): 2.0 ± 1.2

Application

Clean when the train's normalized productivity has decreased 15% from clean operation. Soak and circulation times will vary based on membrane condition. Monitor and maintain recommended pH throughout cleaning by adding neat chemical, if necessary. Document each step with results to empirically fine-tune your procedure.



Packaging

2 lb (0.9 kg), 4 lb (1.8kg),
25 lb (11.3 kg), 45 lbs (20.4 kg)



NSF/ANSI 60

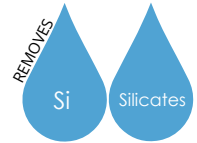
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Targeted

KL™ Silica
Membrane Cleaner



KL™ Silica is a targeted powder cleaner that quickly and easily mixes with water to make an easy to use cleaning solution that is specifically formulated for removing aluminum, iron, and other metal silicates, including reactive and colloidal foulants and coagulated polymers. Compatible with thin film composite, cellulose acetate, and polysulfone membranes. Use alongside our Pretreat Plus® line of antiscalants for comprehensive membrane protection.

Features

- Targeted performance silica cleaner.
- Specifically formulated for removing aluminum, iron, and other metal silicates.
- Removes reactive and colloidal silicate foulants and coagulated polymers.
- Powder formulation makes shipping and handling more efficient.
- Compatible with RO, NF, and UF membranes from all major manufacturers.
- Certified under NSF/ANSI Standard 60 for drinking water production.



Dilution Ratio

Prepare each cleaning solution using a ratio of 1 lb of cleaning powder to 10 gallons of permeate or DI water. If the system is not drained before cleaning, assume that approximately 4 gallons of water is present in each 8"x40" membrane element and 1 gallon of water is present in each 4"x40" membrane element after a thorough system flush.



Specs

Appearance:	Product pH (1%):
Colorless to Tan Crystals	4.1 ± 1.1

Application

Clean in the following order or as recommended by a KLT team member: KL™ LpH, KL™ Silica, KL™ HpH. Clean when the train's normalized productivity has decreased 15% from clean operation. Soak and circulation times will vary based on membrane condition. Monitor and maintain recommended pH throughout cleaning by adding neat chemical, if necessary. Document each step with results to empirically fine-tune your procedure.



Packaging

2 lb (0.9 kg), 4 lb (1.8kg),
25 lb (11.3 kg), 45 lbs (20.4 kg)



NSF/ANSI 60

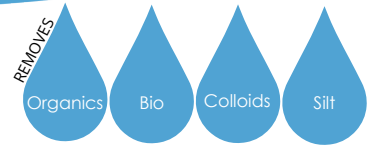
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Classics

KL™ HpH
Membrane Cleaner



KL™ HpH is a heavy-duty action high pH powder cleaner that quickly and easily mixes with water to make an easy to use cleaning solution that effectively removes a wide range of organic particulates such as silt, colloids, organics, biogrowth, and other acid-insoluble foulants from reverse osmosis (RO), nanofiltration (NF), and ultra-filtration (UF) membrane elements. Use alongside KL™ LpH for a comprehensive cleaning. If a more aggressive high pH cleaner is needed, try Diamite™ HpH Plus.

Features

- Removes organics and particulates.
- Heavy-duty action broad spectrum cleaning.
- Effectively removes silt, colloids, organics, bio-growth, and other alkali soluble foulants.
- Powder formulation for efficient shipping and handling.
- Compatible with RO, NF, and UF membranes from all major manufacturers.
- Certified under NSF/ANSI Standard 60 for drinking water production.



Dilution Ratio

Prepare each cleaning solution using a ratio of 1 lb of cleaning powder to 10 gallons of permeate or DI water. If the system is not drained before cleaning, assume that approximately 4 gallons of water is present in each 8"x40" membrane element and 1 gallon of water is present in each 4"x40" membrane element after a thorough system flush.



Specs

Appearance:	Product pH (1%):
Colorless to Tan Powder	11.2 ± 1.5

Application

Clean when the train's normalized productivity has decreased 15% from clean operation. Soak and circulation times will vary based on membrane condition. Monitor and maintain recommended pH throughout cleaning by adding neat chemical, if necessary. Document each step with results to empirically fine-tune your procedure.



Packaging

2 lb (0.9 kg), 4 lb (1.8kg),
25 lb (11.3 kg), 45 lbs (20.4 kg)



NSF/ANSI 60

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