



KL™ Series

Powder Membrane Cleaners

KL™ Series are heavy duty action cleaners that quickly and easily mix with water to make an easy to use cleaning solution that safely and effectively remove a wide range of membrane foulants from polyamide thin film (TF), cellulose acetate (CA) and ultrafiltration (UF) membrane elements.

Product	For Removing	Membrane Type	Solution pH
1000	Hardness Scale	TFC, CA & UF	2
1010	Metallic Oxide Scale	TFC, CA & UF	2
1050	Silica	TFC, CA & UF	4
2000	Organics	TFC & UF	11
2010	Biofoulants	TFC & UF	11
2020	Barium/Strontium Sulfate Scale	TFC & UF	11
2030	Calcium Sulfate Scale	TFC & UF	11
2040	Sulfur	TFC & UF	11
3000	Iron	TFC, CA & UF	6
3030	Hardness Scale	TFC, CA & UF	2
7000	Biofoulants	TFC, CA & UF	8
7020	Barium/Strontium Sulfate Scale	TFC, CA & UF	4
7330	Organics	TFC, CA & UF	7

*MSDS available upon request.

Cleaning Procedure

1. A) When the system's normalized flow and/or salt rejection has decreased up to 15% or delta P has increased up to 15%; mix cleaner in the ratio of *1lb to 15 gallons of clean water*.
B) When the system's normalized flow and/or salt rejection has decreased by more than 15% or delta P has increased by more than 15%; mix cleaner in the ratio of *1lb to 10 gallons of clean water*.
2. Cleaning solution temperature must not exceed the maximum allowed by the membrane manufacturer. The minimum temperature for maximum effectiveness is 86°F (30°C).
3. Recirculate cleaning solution through each section of system for a minimum of 50 minutes. For heavily fouled membranes a static soak is beneficial.
4. Cleaning pump pressure: less than 60 psi
Flow rates per element: 4 inch diameter @ 7 – 12 gpm
8 inch diameter @ 25 – 35 gpm
5. Flush system after cleaning with feed or permeate water. Typical rinse time is 15 to 30 minutes.

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