

## Using Flocon & Flocon Dosing Calculations

### Dosing Information

The amount of Flocon required to inhibit scale formation depends on the degree of supersaturation of the insoluble salts at the point of highest concentration in the system. The degree of supersaturation in turn depends on the concentration of the ionic species in the feedwater, the overall salinity of the feed, the temperature of the feedwater, the percentage of the feedwater recovered as permeate and the type of membrane used for the application.

Flocon Solution Concentration*%	Amount of Solution to be Injected per 1,000 Gallons of Feed Water, In Gallons	
	3 ppm	5 ppm
100	0.003	0.005
50	0.006	0.010
20	0.015	0.025
10	0.030	0.050

\* Use soft water or RO permeate to mix with Flocon.

### Dose Method

Flocon should be added to a membrane system prior to the final cartridge filter. If media filtration or activated carbon is used, Flocon should be applied after these treatment stages.

Flocon should be delivered by dosing pump from a dilution tank, direct from the drum or from a bulk storage facility, into the feedwater at a rate that is determined by the size of the membrane system, the recommended dose rate and the delivery range of the dosing pump. It is recommended that the dosing pump be adjusted by the stroke length, while maintaining stroke frequency at a high level as possible to achieve even distribution of the Flocon in the membrane system feedwater.

### CAUTION - Biological Activity:

Flocon contains a preservative that is effective up to a dilution of 1 part Flocon to 15 parts of system permeate water. General periodic cleaning of the dosing system is recommended as part of the planned maintenance program.

### Flocon Dosing Calculations & Metering Pump Settings

About 5 PPM of antiscalant is injected into the feed water to minimize the fouling of membranes by Calcium Carbonate scaling. Dosing and metering pump settings for injection of 5ppm at various feed flows is given below, along with recommended solution % to use.

Feed Flow Rate	% Solution*	Amount of Solution Used per Day	Approx. Daily Tank Level Drop	Metering Pump Settings	
				Stroke	Frequency
20,000 GPD	10%	1 Gallon	1"	40%	50%
50,000 GPD	10%	2.5 Gallons	2"	40%	80%
100,000	10%	5 Gallons	5"	60%	100%
200,000	50%	2 Gallons	1.6"	40%	75%
400,000	100%	2 Gallons	1.6"	40%	80%
500,000	100%	2.5 Gallons	1.6"	40%	90%
1,000,000	100%	5 Gallons	1.6"	60%	100%

\* **FLOCON®** may be used as neat product or as a dilute solution. RO permeate is recommended for dilution. Do not use solution of less than 10% concentration. Recommended solution is listed above.

The recommended injection point is into the feed water downstream of any filtration equipment or cartridges

Visit us on the web for our complete product line and in-depth technical information. [www.appliedmembranes.com](http://www.appliedmembranes.com)



(760) 727-3711 • FX: (760) 727-4427  
sales@appliedmembranes.com

## Using Flocon & Flocon Dosing Calculations

### Setting the Metering Pump:

- Set the frequency as high as possible, say (80%).
- Adjust the stroke so that desired amount of flow is obtained.

For example:

If the amount of chemical to be injected = 2 Gal/day

Stroke \* Frequency \* max pump flow rating = 2 Gal/day

Say stroke length = L, Max pump flow rating = 10 Gal/day

$$L * .8 * 10 = 2 \text{ Gal/day}$$

$$\text{Or } L = 2 / 8 = 25\%$$

Thus when the frequency of pump is set at 80% and the stroke length set at 25% the injection rate will be 2 Gals/day. The actual tank level should be monitored to confirm the injection rate of chemicals. If not, adjust the stroke length to get desired amount.

### Flocon Antiscalant Product Selection Guide

All Flocon products listed carry Potable Approval (NSF) and Membrane Manufacturer Approval.

Product	Description	Feed Water	Product Effective Against*													
			CaCO <sub>3</sub> LSI	CaCO <sub>3</sub> SDI	CaSO <sub>4</sub>	BaSO <sub>4</sub>	SrSO <sub>4</sub>	CaF <sub>2</sub>	Ca(PO <sub>4</sub> ) <sub>3</sub>	Silica	Iron	Heavy Metals	Organics	Polymeric Coagulants	Silt/Clay	
Flocon 260	Premium Product, anti-foulant for unit operating at high recovery.	Brackish Water Sea Water Waste Water	E	E	E	E	E	E	E	E	E	E	E	E	G	E
Flocon 135	Scale inhibitor for unit operating at high recovery	Brackish Water Sea Water	E	E	E	E	G	G			E	G				E
Flocon Plus N	Inorganic scale inhibitor for SWRO	Sea Water	E	E	G	G	G	G			G	G				G
Flocon 190	Non Polymeric inorganic scale inhibitor	Sea Water, Waste Water	E	E	G	G	G	G			G	G			G	

E = Excellent

G = Good

\* Flocon Products are not effective against Mg(OH)<sub>2</sub> or Boron

Visit us on the web for our complete product line and in-depth technical information. [www.appliedmembranes.com](http://www.appliedmembranes.com)