



**FCT** Water Treatment

TYPE: POWDER

Cleaner for Reverse Osmosis

# MT-8100

## General Description

MT-8100 Cleaner (MT-8100) is intended for use in removing calcium sulfate, barium sulfate, and strontium sulfate scales from RO membranes. MT-8100 is also effective in removing calcium carbonate, calcium phosphate, organics, metal sulfides, and biofoulants

## Properties

- MT-8100 is a proprietary blended product supplied as a fine powder and has the following properties:

## Use Considerations

- FCT Water recommends using a 2% MT-8100 solution (1-lb product per 6-gal water or 1 kg per 50 L) for removing deposits from RO membranes. The required volume of cleaning solution and product quantity can be estimated using the mix rate above and Table 1 (see reverse). MT-8100 is suitable for cleaning most RO membranes although the pH should be adjusted for use on CA membranes (see MT Cleaner Selection Guide). FCT Water's "Directions for Use" (MT-8100-DFU) should be followed.

## Packaging

- MT-8100 is supplied in 40 lb (18.1 kg) net quantities packaged in UN specification 1H2/Y rated open-head 5-gal plastic pails with 6-mil plastic bag inserts.

## Physical Properties

Physical Properties	Values
Appearance	White powder
Bulk Density	62 lb/ft <sup>3</sup> (1.0 gm/cm <sup>3</sup> )
pH of a 2% Solution in Water	11

## FCT Water Treatment

1309 North 17th Avenue · Greeley, CO 80631  
Main (970) 346.8002 · Fax (970) 346.8331 · National (800) 686.6504  
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## MT-8100 Continued...

**Table 1**

- Cleaner Flow Rates and Volumes for Various RO/UF Diameters

Element Diameter	Element Type	High Flow (HF)*	Medium Flow (MF)*	Volume (VOL)**
2" & 2.5"	Spiral Wound	5 gpm	3 gpm	1 gal
4"	Spiral Wound	10 gpm	4 gpm	2.5 gal
4"	Spiral Wound Magnum	10 gpm	4 gpm	3.5 gal
8"	Spiral Wound	35 gpm	25 gpm	6 gal
8"	Spiral Wound Magnum	35 gpm	25 gpm	8.5 gal
4"	Hollow Fine Fiber	4.5 gpm	2 gpm	2.5 gal
8"	Hollow Fine Fiber	17 gpm	13.5 gpm	8 gal
10"	Hollow Fine Fiber	28 gpm	18 gpm	15 gal
4"	Spiral Wound Magnum	10 gpm	4 gpm	3.5 gal

\* Flow per one vessel. \*\* Volume per one element.

### Note A:

Estimate of the high total flow (HTF) or medium total flow (MTF), expressed in gpm, to the section to be treated when there are multiple pressure vessels in parallel:

$$\text{Equation 1: } \text{HTF} = \#U \times \text{HF} \quad (\text{or}) \quad \text{MTF} = \#U \times \text{MF}$$

- #U is the number of vessels in parallel.
- HF or MF is the high flow or medium flow per vessel from Table 1 above for the appropriate RO/UF diameter.

### Note B:

Estimate of the cleaning solution volume (V) expressed in gallons:

$$\text{Equation 2: } V = \#M \times \text{VOL} \times 5$$

- #M is the number of elements.
- VOL is the volume of one element from Table 1 above for the appropriate RO/UF diameter.

### Note C:

Estimate of the MT Cleaner quantity (Q) required expressed in pounds:

$$\text{Equation 3: } Q = V \times \text{MR} \times 8.34$$

- V is the cleaning solution volume defined in Equation 2 above.
- MR is the cleaner mix ratio as defined on the front side of this bulletin.

### Note D:

Estimate of flush time (t) expressed in minutes:

$$\text{Equation 4: } t = (\#EL \times \text{VOL}) / \text{HTF}$$

- #EL is the number of elements/permeators.
- VOL as defined in Note B above.
- HTF as defined in Note A above.

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