



FILMTEC Membranes

Water Chemistry and Pretreatment: Guidelines for Feedwater Quality

Guidelines for Feedwater Quality

Table 2.10 summarizes the limits of quality parameters of the feed water. It is recommended to respect these limits to ensure successful operation of the membrane system. Otherwise, more frequent cleaning and/or sanitization may become necessary. The concentrations correspond to the entry to the membrane for a continuous feed stream, including any influences to the feed water from dosing chemicals or piping materials in the pretreatment line.

Table 2.10 Guidelines for feedwater quality

Component	Unit	Max. level	Comments & conditions
SDI	1	5	See System Design Guidelines (Section 3.9)
MFI _{0.45}	1	4	Target: <1
Oil and grease	mg/L	0.1	See Prevention of Fouling by Organics (Section 2.7)
TOC	mg/L	3	Synthetic organic compounds (SOC) have generally more adverse effects on RO/NF membranes compared with natural organic matters (NOM). - See Prevention of Fouling by Organics (Section 2.7)
COD	mg/L	10	
AOC	µg/l Ac-C	10	Target: <5
BFR	pg/cm ² ATP	5	Target: <1
Free chlorine	mg/L	0.1	Under certain conditions, the presence of chlorine and other oxidizing agents will cause premature membrane failure. Since oxidation is not covered under warranty, FilmTec recommends removing residual free chlorine by pretreatment prior to membrane exposure. - See Chlorination / Dechlorination (Section 2.6.3)
Ferrous iron	mg/L	4	pH <6, oxygen <0.5 ppm
Ferric iron	mg/L	0.05	
Manganese	mg/L	0.05	
Aluminum	mg/L	0.05	

FILMTEC™ Membranes
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Notice: The use of this product in and of itself does not necessarily guarantee the removal of cysts and pathogens from water. Effective cyst and pathogen reduction is dependent on the complete system design and on the operation and maintenance of the system.

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