



FilmTec™ Fortilife™ XC-N Element

Selective Ion Separation for Higher Water Recovery and Waste Reclamation

Description

The FilmTec™ Fortilife™ product line offers industrial users a reliable and highly efficient option to help solve their most difficult water challenges, such as wastewater reuse and Minimal Liquid Discharge (MLD).

FilmTec™ Fortilife™ XC-N allows industrial end users to reduce costly reverse osmosis (RO) concentrate waste by converting a large fraction of RO concentrate into pure, easier-to-crystallize salt solutions.

Benefits of the FilmTec™ Fortilife™ XC-N Element include:

- Selective and high monovalent ion passage, coupled with high divalent ion and Chemical Oxygen Demand (COD) rejection, facilitate the production of high purity salt solution in permeate while reducing concentrate waste
- High permeability membrane chemistry allows for increased water recovery and/or low energy operation
- Robust membrane and reliable long-term performance

Product Type

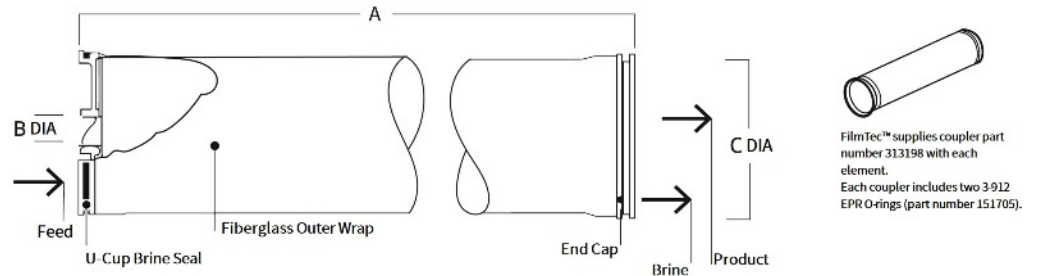
Spiral-wound element with poly(piperazine) thin-film composite membrane

Typical Properties

FilmTec™ Element	Active Area		Feed Spacer Thickness (mil)	Target Permeate Flow Rate		Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)
	(ft ²)	(m ²)		(GPD)	(m ³ /d)		
FilmTec™ Fortilife™ XC-N	365	34	34	8,375	31	99.0	98.0

1. Permeate flow and salt rejection based on the following standard test conditions: 2,000 ppm MgSO₄, 70 psi (0.48 MPa), 77°F (25°C), 15% recovery.
2. Flow rates for individual elements may vary but will be no more than ± 20%.
3. Sales specifications may vary as design revisions take place.
4. Element performance can vary more in semi- or non-aqueous feed mediums or with other specie rejections
5. Active area guaranteed ± 3%. Active area as stated by DuPont Water Solutions is not comparable to nominal membrane area often stated by some manufacturers.

Element Dimensions



FilmTec™ supplies coupler part number 313198 with each element. Each coupler includes two 3/912 EPR O-rings (part number 151705).

	Dimensions – inches (mm)				1 inch = 25.4 mm	
	A		B		C	
FilmTec™ Element	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
FilmTec™ Fortilife™ XC-N	40.0	1,016	1.125 ID	28.6 ID	7.9	201

1. Element to fit nominal 8-inch (203-mm) I.D. pressure vessel.

Operating and Cleaning Limits

Maximum Operating Temperature ^a	113°F (45°C)
Maximum Operating Pressure	600 psig (41 bar)
Maximum Element Pressure Drop	15 psig (1.0 bar)
pH Range	
Continuous Operation ^a	3 – 10
Short-Term Cleaning (30 min.) ^b	1 – 12
Maximum Feed Silt Density Index (SDI)	SDI 5
Free Chlorine Tolerance ^c	< 0.1 ppm

- Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
- Refer to guidelines in [FilmTec™ Cleaning Guidelines](#) (Form No. 45-D01696-en) for more information.
- Under certain conditions, the presence of free chlorine and other oxidizing agents will cause premature membrane failure. Since oxidation damage is not covered under warranty, DuPont Water Solutions recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to [Dechlorinating Feedwater](#) (Form No. 45-D01569-en) for more information.

Additional Important Information

- Before use or storage, review these additional resources for important information:
- [Usage Guidelines for FilmTec™ 8" Elements](#) (Form No. 45-D01706-en)
 - [Start-Up Sequence](#) (Form No. 45-D01609-en)
 - [Storage and Shipping of New FilmTec™ Elements](#) (Form No. 45-D01633-en)

Product Stewardship

DuPont has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with DuPont products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

DuPont strongly encourages its customers to review both their manufacturing processes and their applications of DuPont products from the standpoint of human health and environmental quality to ensure that DuPont products are not used in ways for which they are not intended or tested. DuPont personnel are available to answer your questions and to provide reasonable technical support. DuPont product literature, including safety data sheets, should be consulted prior to use of DuPont products. Current safety data sheets are available from DuPont.

Please be aware of the following:

- 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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