

## FilmTec™ Fortilife™ XC-N HP Element

Selective Ion Separation for Salt Reclamation

### Description

The FilmTec™ Fortilife™ XC-N and XC-N HP Elements allow industrial wastewaters containing salt to become a resource of purified salts for re-use and allow industries to implement circular salt principles.

When treating a water containing a mixture of mono- (e.g., chloride) and divalent (e.g., sulfate) ions, applied pressures greater than 400 psi may be needed. The FilmTec™ Fortilife™ XC-N HP Elements offer improved separation efficiency over the standard XC-N Element for systems operating between 400 - 1200 psi. The expanded pressure range of the FilmTec Fortilife™ XC-N HP Elements along with the high ion-selective membrane enables system operations that:

- Minimize monovalent ions (e.g. chloride) remaining in the concentrate water.
- Minimize divalent ion (e.g. sulfate) passage to the permeate.
- Are up to 15% smaller system when using the high active area element design.

### Product Type

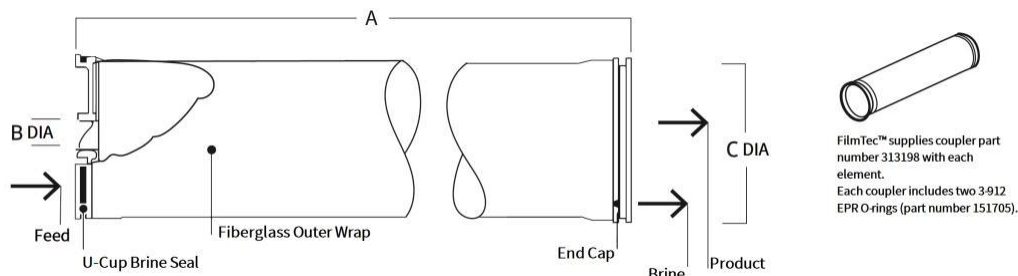
Spiral-wound element with polypiperazine thin-film composite membrane

### Typical Properties

FilmTec™ Element	Active Area		Feed Spacer Thickness (mil)	Target Permeate Flow Rate		Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)
	(ft <sup>2</sup> )	(m <sup>2</sup> )		(GPD)	(m <sup>3</sup> /d)		
FilmTec™ Fortilife™ XC-N HP	400	37	34	8,200	31	99.2	98.0

1. Permeate flow and salt rejection based on the following standard test conditions: 2,000 ppm MgSO<sub>4</sub>, 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  $\pm 20\%$ .
3. Active area guaranteed  $\pm 3\%$ . Active area as stated by DuPont Water Solutions is not comparable to nominal membrane area often stated by some manufacturers.

### Element Dimensions



Dimensions – inches (mm)						1 inch = 25.4 mm
A		B		C		
FilmTec™ Element	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
FilmTec™ Fortilife™ XC-N HP	40.0	1,016	1.125 ID	29 ID	7.9	201

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

## Operating and Cleaning Limits

Maximum Operating Temperature <sup>a</sup>	113°F (45°C)
Maximum Operating Pressure	1,200 psig (83 bar)
Maximum Element Pressure Drop	15 psig (1.0 bar)
pH Range	
Continuous Operation <sup>a</sup>	3–10
Short-Term Cleaning (30 min.) <sup>b</sup>	1–12
Maximum Feed Silt Density Index (SDI)	SDI 5
Free Chlorine Tolerance <sup>c</sup>	< 0.1 ppm

- a. Maximum pressure at 25°C. Consult tech specialist for limits at high temperatures.
- b. Refer to guidelines in [FilmTec™ Cleaning Guidelines](#) (Form No. 45-D01696-en) for more information.
- c. 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:

- I [Usage Guidelines for FilmTec™ 8" Elements](#) (Form No. 45-D01706-en)
- I [Start-Up Sequence](#) (Form No. 45-D01609-en)
- I [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.

**Have a question? Contact us at:**

[www.dupont.com/water/contact-us](http://www.dupont.com/water/contact-us)

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