



Product Data Sheet

FilmTec™ Fortilife™ XC80 Reverse Osmosis Element

Extend to higher brine concentration

Description

The FilmTec™ Fortilife™ XC80 element is designed for high water recovery operations of feed waters with moderate TDS levels. The high productivity, durable and fouling resistant membrane and high mixing module design offers industrial users a reliable and highly efficient option to stretch the water recovery of Minimal Liquid Discharge (MLD) to reject TDS levels of >80,000 mg/L.

Key benefits of the FilmTec™ Fortilife™ XC80 Element:

- Reaching system reject total dissolved solids (TDS) levels >80,000 mg/L and reduced concentrate stream volume within standard RO system operation.
- Robust membrane and high mixing module design for reliable long-term performance.
- A wide pH range for cleanings (pH 1 – 13) allows effective cleaning in severe fouling.

Product Type

Spiral-wound element with polyamide thin-film composite membrane

Exemplary Brine Concentration Projections

FilmTec™ Elements	Feed Pressure (bar)	Feed TDS (ppm)	Concentrate TDS (ppm)	Ave Op. flux (LMH)	Recovery (%)
FilmTec™ Fortilife™ XC80	70	60,000	80,955	11	26

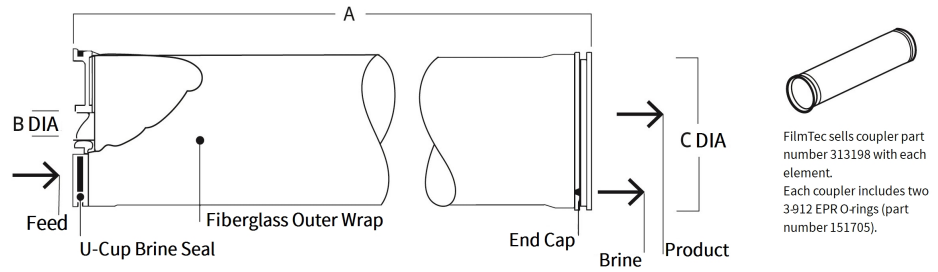
1. Results are according to a WAVE simulation of a 6-element pressure vessel treating water containing sodium chloride at 25 °C, pH 8, and flow factor = 0.85.
2. No warranty is provided for the application of this information since use conditions and applicable laws may differ from one location to another and may change with time.

Typical Properties

FilmTec™ Elements	Active Area		Feed Spacer	Permeate Flow Rate		Typical Stabilized	Minimum Salt
	(ft ²)	(m ²)	Thickness (mil)	(GPD)	(m ³ /d)	Salt Rejection (%)	Rejection (%)
FilmTec™ Fortilife™ XC80	440	41	28	9,050	34.2	99.47	99.25

1. Permeate flow and salt (NaCl) rejection based on the following standard test conditions: 32,000 ppm NaCl, 600 psi (41.3 bar), 77°F (25°C), pH 8, 8% recovery.
2. Flow rates for individual elements may vary but will be no more than ± 15%.
3. 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™ Elements	Dimensions – inches (mm)				1 inch = 25.4 mm	
	A		B		C	
	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
FilmTec™ Fortilife™ XC80	40.0	1,016	1.125 ID	29 ID	7.9	201

1. Refer to [FilmTec™ Design Guidelines for multiple-element systems of 8-inch elements](#) (Form No. 45-D01695-en).
2. 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 ^b	1,200 psig (83 bar)
Maximum Element Pressure Drop	15 psig (1.0 bar)
pH Range	
Continuous Operation ^a	2 – 11
Short-Term Cleaning (30 min.) ^c	1 – 13
Maximum Feed Silt Density Index (SDI)	SDI 5
Free Chlorine Tolerance ^d	< 0.1 ppm

- a. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
- b. Maximum pressure at 25 °C. Consult tech service specialist for limits at high temperature.
- c. Refer to guidelines in [Cleaning Guidelines](#) (Form No. 45-D01696-en) for more information.
- d. 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.

Regulatory Note

This product may be subject to drinking water application restrictions in some countries; please check the application status before use and sale.

Have a question? Contact us at:

www.dupont.com/water/contact-us

All information set forth herein is for informational purposes only. This information is general information and may differ from that based on actual conditions. Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where DuPont is represented. The claims made may not have been approved for use in all countries. Please note that physical properties may vary depending on certain conditions and while operating conditions stated in this document are intended to lengthen product lifespan and/or improve product performance, it will ultimately depend on actual circumstances and is in no event a guarantee of achieving any specific results. DuPont assumes no obligation or liability for the information in this document. References to "DuPont" or the "Company" mean the DuPont legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED. No freedom from infringement of any patent or trademark owned by DuPont or others is to be inferred.

© 2021 DuPont. DuPont™, the DuPont Oval Logo, and all trademarks and service marks denoted with ™, SM or ® are owned by affiliates of DuPont de Nemours Inc., unless otherwise noted.

