



Product Data Sheet

FilmTec™ Fortilife™ CR50 Element

Durable, Contaminant Resistant Brackish Water RO Element with Reduced Fouling

Description

The FilmTec™ Fortilife™ CR series of reverse osmosis elements apply contaminant resistant membrane and module features to enable industrial water users access to reliable, clean water producing systems when treating difficult waters, such as industrial and municipal wastewaters and high COD surface waters, that are prone to fouling.



The FilmTec™ Fortilife™ CR50 reverse osmosis element is the base element in the CR series which includes our latest innovations in fouling/contaminant resistant and durable membrane chemistry.

The Fortilife™ CR50 element is designed for long lifetime and reliable performance in fouling prone waters and features:

- High rejecting membrane with the ability to clean using one of the widest pH cleaning ranges in the industry (pH 1-13) allowing for effective cleaning of scale, organic fouling and biofilm.
- Wide 34 mil feed channel and high active area (400 ft²) design for easy element upgrade to enjoy reduced fouling and improved cleaning without impacting operating flux.
- Automated, precision fabrication with membrane leaf efficiencies optimized to reduce the overall effect of fouling.

Product Type

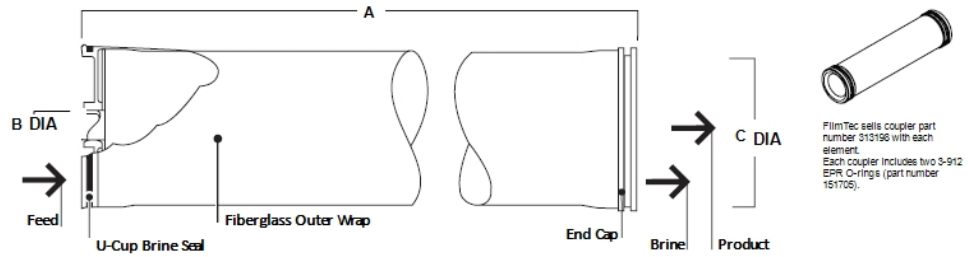
Spiral-wound element with polyamide thin-film composite membrane

Typical Properties

FilmTec™ Element	Active Area		Feed Spacer Thickness (mil)	Permeate Flow Rate		Typical Stabilized Salt Rejection (%)	Minimum Salt Rejection (%)
	(ft ²)	(m ²)		(GPD)	(m ³ /d)		
Fortilife™ CR50	400	37	34	11,000	42	99.6	99.2

1. Permeate flow and salt (NaCl) rejection is based on the following standard test conditions: 2,000 ppm NaCl, 225 psi (15.5 bar), 77°F (25°C), pH 8, and 15% recovery.
2. Flow rates for individual elements may vary but will be no more than ± 15%.
3. Stabilized salt rejection is generally achieved within 24-48 hours of continuous use; depending upon feedwater characteristics and operating conditions.
4. Sales specifications may vary as design revisions take place.
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™ Element	Dimensions – inches (mm)				1 inch = 25.4 mm	
	A		B		C	
	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
Fortilife™ CR50	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	600 psig (41 bar)
Maximum Element Pressure Drop	15 psig (1.0 bar)
pH Range	
Continuous Operation ^a	2 – 11
Short-Term Cleaning (30 min.) ^b	1 – 13
Maximum Feed Silt Density Index (SDI)	SDI 5
Free Chlorine Tolerance ^c	< 0.1 ppm

- a. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
- b. Refer to [Cleaning Guidelines](#) (Form No. 45-D01696-en).
- 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:

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

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

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