



Product Data Sheet

FilmTec™ Fiberglassed Elements for Light Industrial Systems

Description

FilmTec™ brackish water reverse osmosis membrane elements provide consistent system performance in light industrial applications.

- FilmTec™ BW30-4040 is an industry standard for reliable operation and production of high quality water.
- FilmTec™ BW30-2540 Elements are designed for systems smaller than 1 gpm (0.2 m³/h) offering a hard shell exterior for extra strength.

Elements with a hard shell exterior are recommended for systems with multiple-element housings containing three or more membranes, as they are designed to withstand higher pressure drops.

Product Type

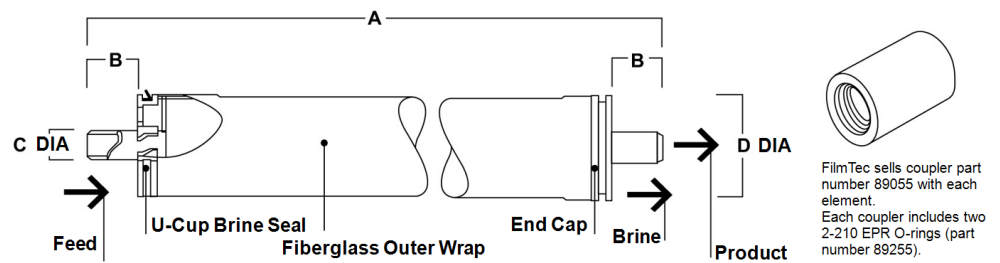
Spiral-wound element with polyamide thin-film composite membrane

Typical Properties

| Product | Part Number | Feed Spacer Thickness (mil) | Permeate Flow Rate gpd (m ³ /d) | Stabilized Salt Rejection % |
|-----------|-------------|-----------------------------|--|-----------------------------|
| BW30-4040 | 80783 | 34 | 2,400 (9.1) | 99.5 |
| BW30-2540 | 80766 | 28 | 1,000 (3.8) | 99.5 |

1. Permeate flow and salt rejection based on the following test conditions: 2,000 ppm NaCl and 225 psig (15.5 bar), pH 8, 77°F (25°C) and 15% recovery.
2. Minimum salt rejection is 98.0%.
3. Permeate flows for individual elements may vary +/-20%.

Element Dimensions



FilmTec sells coupler part number 89055 with each element. Each coupler includes two 2-210 EPR O-rings (part number 89255).

| Product | Dimensions – inches (mm) | | | 1 inch = 25.4 mm |
|-----------|--------------------------|-------------|-----------|------------------|
| | A | B | C | |
| BW30-4040 | 40.0 (1,016) | 1.05 (26.7) | 0.75 (19) | 3.9 (99) |
| BW30-2540 | 40.0 (1,016) | 1.19 (30.2) | 0.75 (19) | 2.4 (61) |

1. Refer to [FilmTec™ Design Guidelines for multiple-element systems of midsize elements](#) (Form No. 45-D01588-en).
2. BW30-2540 Elements fit nominal 2.5-inch I.D. pressure vessel. BW30-4040 Elements fit nominal 4-inch I.D. pressure vessel.

Operating and Cleaning Limits

| | |
|--|--------------------------------|
| Membrane Type | Polyamide Thin-Film Composite |
| Maximum Operating Temperature ^a | 113°F (45°C) |
| Maximum Operating Pressure | 600 psi (41 bar) |
| Maximum Feed Flow Rate | |
| 4040 Elements | 16 gpm (3.6 m ³ /h) |
| 2540 Elements | 6 gpm (1.4 m ³ /h) |
| Maximum 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) | SDI5 |
| Free Chlorine Tolerance ^c | <0.1 ppm |

- Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
- Refer to [Cleaning Guidelines](#) (Form No. 45-D01696-en).
- 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, it is recommended that residual free chlorine be removed by pretreatment prior to membrane exposure. Please refer to [Dechlorinating Feedwater](#) (Form No. 45-D01569-en) for more information

Important Information

Proper start-up of reverse osmosis water treatment systems is essential to prepare the membranes for operating service and to prevent membrane damage due to overfeeding or hydraulic shock. Following the proper start-up sequence also helps ensure that system operating parameters conform to design specifications so that system water quality and productivity goals can be achieved.

Before initiating system start-up procedures, membrane pretreatment, loading of the membrane elements, instrument calibration and other system checks should be completed.

Please refer to the application information literature entitled [Start-Up Sequence](#) (Form No. 45-D01609-en) for more information.

Operation Guidelines

Avoid any abrupt pressure or cross-flow variations on the spiral elements during start-up, shutdown, cleaning or other sequences to prevent possible membrane damage. During start-up, a gradual change from a standstill to operating state is recommended as follows:

- Feed pressure should be increased gradually over a 30-60 second time frame.
- Cross-flow velocity at set operating point should be achieved gradually over 15-20 seconds.

Please refer to the [FilmTec™ Reverse Osmosis Membranes Technical Manual](#) (Form No. 45-D01504-en).

General Information

- Keep elements moist at all times after initial wetting
- If operating limits and guidelines given in this bulletin are not strictly followed, the limited warranty will be null and void. Refer to [FilmTec™ Reverse Osmosis and Nanofiltration Three-Year Prorated Limited Warranty](#) (Form No. 45-D00903-en)
- To prevent biological growth during prolonged system shutdowns, it is recommended that membrane elements be immersed in a preservative solution
- The customer is fully responsible for the effects of incompatible chemicals and lubricants on elements
- Maximum pressure drop across an entire pressure vessel (housing) is 50 psi (3.4 bar)
- Avoid static permeate-side backpressure at all times

Storage

Refer to [Storage and Shipping of New FilmTec™ Elements](#) (Form No. 45-D01633-en) for further information.

Product Stewardship

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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.
- Permeate obtained from the first hour of operation should be discarded.

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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