

The Lewabrane® RO B400 FR elements are spiral wound, composite polyamide membrane elements designed for industrial water treatment applications. The Lewabrane® FR elements are designed to provide more turbulence in the feedwater spacer in combination with the high crosslinked low surface charge Lewabrane membrane. These new RO elements are recommended for brackish and low salinity feedwaters that are expected to have higher biological and organic fouling tendencies.

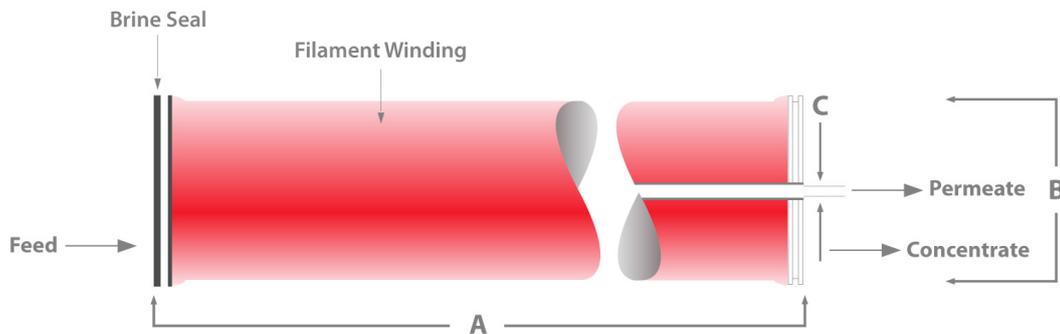
### General Information

|                          | Metric Units           | US Units            |
|--------------------------|------------------------|---------------------|
| Feed spacer thickness    | 0.86 mm                | 34 mil              |
| Membrane area            | 37.2 m <sup>2</sup>    | 400 ft <sup>2</sup> |
| Salt rejection, av.      | 99.5 %                 | 99.5 %              |
| Salt rejection, min.     | 99.0 %                 | 99.0 %              |
| Permeate flow rate, av.  | 39.9 m <sup>3</sup> /d | 10500 gpd           |
| Permeate flow rate, min. | 31.9 m <sup>3</sup> /d | 8400 gpd            |

Element is tested under the following conditions: applied pressure 225 psi (15.5 bar), NaCl concentration 2000 mg/l, operating temperature 77 °F (25 °C), pH 7 and recovery rate 15 %.

These items are provided as general information only. They are approximate values and are not considered part of the product specifications.

### Element Dimension



|              | A (Length) | B (Diameter) | C (ID)     |
|--------------|------------|--------------|------------|
| Metric Units | 1016 mm    | 201 mm       | 29 mm      |
| US Units     | 40 inch    | 7.9 inch     | 1.125 inch |

## Application Data

|                                 | Metric units | US units |
|---------------------------------|--------------|----------|
| Operating pressure, max.        | 41 bar       | 600 psi  |
| Operating temperature, max.     | 45 °C        | 113 °F   |
| Feed water SDI, max.            | 5            | 5        |
| pH range during operating       | 2 - 11       | 2 - 11   |
| pH range during cleaning        | 1 - 12       | 1 - 12   |
| Pressure drop per element, max. | 1.0 bar      | 15 psi   |
| Pressure drop per vessel, max.  | 3.5 bar      | 50 psi   |
| Chlorine concentration, max.    | 0.1 ppm      | 0.1 ppm  |

As with any product, use of the products mentioned in this publication in a given application must be tested (including field testing, etc.) by the user in advance to determine suitability.

## Additional Information

- Treat RO Elements with care; do not drop the element.
- Each RO Element is wet tested, preserved in a 1% weight sodium bisulfite solution, and vacuum packed in oxygen barrier bags.
- During storage, avoid freezing and direct sunlight. The temperature should be below 35 °C (95 °F).

## After Installation

- Keep the RO Elements wet, and use a compatible preservative for storage duration longer than 7 days.
- During the initial start up, discharge the first permeate to drain for 30 min.
- Permeate back pressure should not exceed feed pressure at any time.
- The RO Elements shall be maintained in a clean condition, unfouled by particulate matter or precipitates or biological growth.
- Consider cleaning, if the pressure drop increases by 20% or water permeability decreases by 10%.
- Use only chemicals which are compatible with the membrane.
- For additional information consult the Lewabrane® technical information available at [www.lpt.lanxess.com](http://www.lpt.lanxess.com).

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling the LANXESS Sybron Chemicals Inc. products mentioned in this publication. For materials mentioned which are not LANXESS Sybron Chemicals Inc. products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be followed. Before working with any of these products, you must read and become familiar with the available information on their hazards, proper use, and handling. This cannot be overemphasized. Information is available in several forms. Consult your LANXESS Sybron Chemicals Inc. representative or contact the Product Safety and Regulatory Affairs Department at LANXESS Corporation at 1-800-526-9377.

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact granted under the claims of any patent.

NOTE: The information contained in this publication is current as of the edition date. Please contact LANXESS Sybron Chemicals Inc. to determine if this publication has been revised.

LANXESS Sybron Chemicals Inc.  
[www.lpt.lanxess.com](http://www.lpt.lanxess.com)  
[www.lanxess.com](http://www.lanxess.com)  
[www.US.lanxess.com](http://www.US.lanxess.com)

**Contact:**  
200 Birmingham Road  
Birmingham, NJ 08011