

# PRODUCT INFORMATION LEWABRANE® RO B400 ULP ASD



The Lewabrane® spiral wound reverse osmosis (RO) element RO B400 ULP ASD has a highly permeable composite polyamide (PA) membrane. It is designed for low salinity water to operate at ultra low pressure (ULP). The high permeability results in up to 40% lower energy consumption compared to standard elements like the RO B400 HP. The ASD ( Alternating Strand Design) feed spacer offers a lower fouling tendency to improve the RO lifetime cost performance. The elements are characterized by

- High rejection of organic compounds
- Low energy demand
- Low fouling tendency due to ASD feed spacer

## General Information

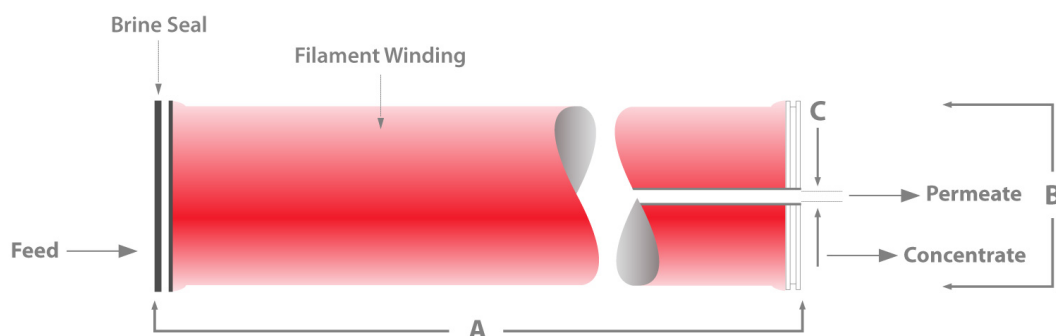
	Metric units	US units
Permeate flow, ave.	38.6 m <sup>3</sup> /d	10200 gpd
Salt rejection, ave.	99.5 %	99.5 %
Membrane area	37.2 m <sup>2</sup>	400 ft <sup>2</sup>
Feed spacer thickness	0.86 mm (ASD spacer)	34 mil (ASD spacer)

Minimum element performance: 31.1 m<sup>3</sup>/d (8200 gpd) permeate flow and 99.0% salt rejection.

Element test conditions: applied pressure 7.6 bar (110 psi), NaCl concentration 500 mg/l, temperature 25 °C (77 °F), 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)
Dimension inches (mm)	40 (1016)	7.9 (201)	1.125 (29)

This document contains important information and must be read in its entirety.

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## 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 <sup>1</sup>	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

<sup>1</sup>Please check the cleaning guidelines for details.

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).

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**Health and Safety Information:** Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling the LANXESS products mentioned in this publication. For materials mentioned which are not LANXESS 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, e.g., material safety data sheets, product information and product labels. Consult your LANXESS representative in Germany or contact the Regulatory Affairs and Product Safety Department of LANXESS Deutschland GmbH or - for business in the USA - the LANXESS Corporation Product Safety and Regulatory Affairs Department in Pittsburgh, PA, USA.

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## LANXESS Corporation

111 RIDC Park West Dr  
12275-1112 Pittsburgh-Allegheny  
USA

+1-800-678-0020  
lewatit@lanxess.com

www.lanxess.com  
www.lpt.lanxess.com

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