

PRODUCT INFORMATION LEWABRANE® RO B440 HP



The Lewabrane® RO B440 HP reverse osmosis (RO) membrane element consists of a polyamide, thin film composite membrane prepared in a mechanically stable spiral wound element format. The RO element offers high performance (HP) in water productivity and high rejection, and is widely applied in standard pressure BWRO applications. The membrane chemistry consists of a highly cross-linked polyamide membrane, which offers the following benefits:

- Stable permeate flow and rejection over the membrane element lifetime
- Higher rejection of critical ions, such as boron, nitrate and silica, than conventional PA membranes
- High rejection of organic compounds

General Information

	Metric units	US units
Permeate flow, ave.	43.9 m ³ /d	11600 gpd
Salt rejection, ave.	99.7 %	99.7 %
Membrane area	40.9 m ²	440 ft ²
Feed spacer thickness	0.7 mm	28 mil

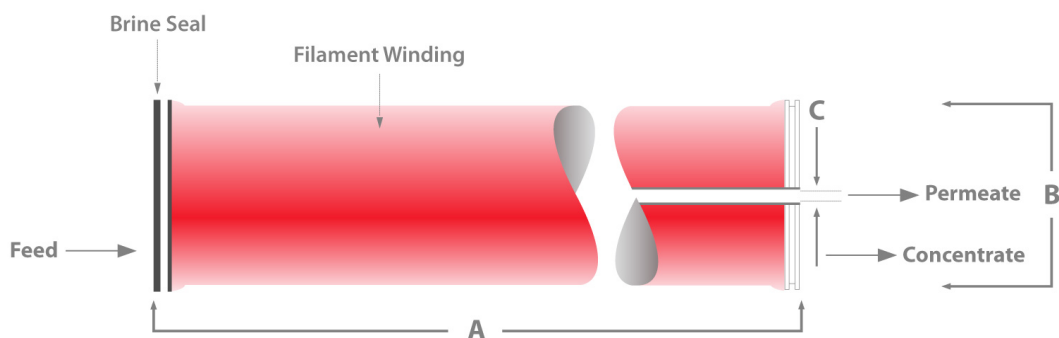
Minimum element performance: 35.1 m³/d (9200 gpd) permeate flow and 99.3% salt rejection.
 Element test conditions: applied pressure 15.5 bar (225 psi), NaCl concentration 2000 mg/l, temperature 25 °C (77 °F), pH 7 and recovery rate 15%.
 An NaCl feed concentration of 1500 mg/l will increase the permeate flow productivity to approx. 45.4 m³/d (12,000 gpd).

Rejection Data

	NO ₃ ⁻	SiO ₂	IPA	Boron
Typical rejection	98.5 %	99.7 %	95.0 %	80.0 %

Typical rejection performance for specific ions based on the above test condition, plus 50 mg/l SiO₂, or 5 mg/l B, or 100 mg/l NO₃⁻. Isopropyl alcohol (IPA) testing at 100 mg/l IPA without NaCl.

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.

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

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.

This information and our technical advice – whether verbal, in writing or by way of trials – are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery.

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