



Invest to Save with DuPont Seawater Reverse Osmosis technology

Innovation beyond product specifications

www.dupontwatersolutions.com/desal

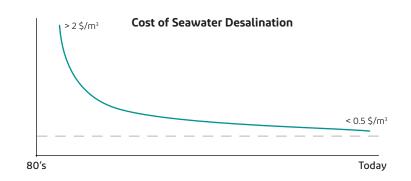


# The rise of seawater desalination

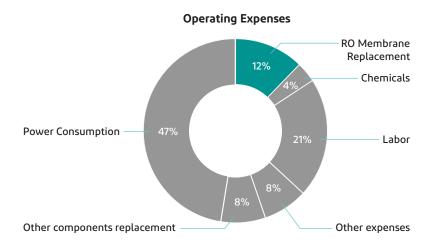
Advancements in membrane technology have made seawater desalination an economically feasible option in the search for new water sources. Over the last three decades, the cost of desalination has dropped by more than half, and now over 300 million people globally get their water from desalination plants, according to the International Desalination Association. Ongoing innovation will continue to improve the efficiency and sustainability of the process over the long run, and desalination is fast becoming a safer investment for securing water supply.

#### DuPont FilmTec™ Reverse Osmosis

Membrane replacement can account for up to 5% of the total cost of water and 12% of the operating cost.

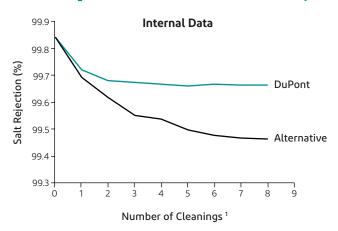


Durable membranes yield significant operational savings





## DuPont shows exceptional Durability



### Proven durability in large desalination plants:

San Pedro del Pinatar II Desalination Plant (Murcia, Spain)

### **14 years** without replacement **6,000 membranes**

Alicante II Desalination Plant (Valencia, Spain)

### **12 years** without replacement **6,000 membranes**

Perth Seawater Desalination Plant (Perth, Australia)

### **10+ years** without replacement **18,000 membranes**

Torrevieja Seawater Desalination Plant (Torrevieja, Spain)

### **7+ years** in operation **25,000 membranes**

Águilas Seawater Desalination Plant (Águilas, Spain)

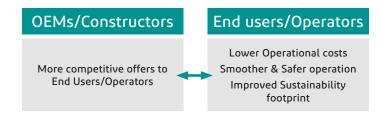
**7+ years** in operation **>20,000 membranes** 

#### The DuPont difference

FilmTec SWRO **enhanced durability** enables a reduction of: <sup>2</sup>

- 5% in total cost of water
- 50% in membrane cost

DuPont offers more attractive warranties based on superior durability



#### **Economic benefits**



- Up to 50% lower membrane cost<sup>3</sup>
- · Decreased downtime
- Man-power cost reduction
- · Reduced membranes disposal cost

#### **Operation benefits**



- · Non interrupted production
- Disruption elimination
- · Hazard & operational risks decrease
- · Enhanced system predictability
- · Smoother & continuous operation downstream

#### Sustainability benefits



· Improved sustainability footprint

Cleanings based on standard procedures described in FilmTec™ manual consisting in multiple cycles of caustic cleaning (pH 13 at 35°C), acid cleaning (pH 1 at room temperature) and stabilized standard test. Spiral wound 8-inch commercial membranes operated side by side at the same permeate flow, recovery feed flow, water composition and temperature

<sup>&</sup>lt;sup>2,3</sup> Assumptions: 20 years installation lifetime: includes New & Replacement membranes cost

#### Contact us

DuPont's global network of accessible knowledge and market-leading portfolio of purification and separation technologies enables the water productivity from which health, profits and possibilities spring. From manufacturers to municipalities, we help our customers to confidently explore new opportunities and shape the future.

Contact us today at 833-338-7668 (833-3-DUPONT) and invest to save.



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