



## FILMTEC Membranes

### Basics of RO and NF: Historical Background

#### Historical Background

Since the development of reverse osmosis (RO) and ultrafiltration (UF) as practical unit operations in the late 1950's and early 1960's, the scope for their application has been continually expanding. Initially, reverse osmosis was applied to the desalination of seawater and brackish water. Increased demands on the industry to conserve water, reduce energy consumption, control pollution and reclaim useful materials from waste streams have made new applications economically attractive. In addition, advances in the fields of biotechnology and pharmaceuticals, coupled with advances in membrane development, are making membranes an important separation step, which, compared to distillation, offers energy savings and does not lead to thermal degradation of the products.

Basic membrane research is the foundation of FilmTec Corporation and the creation of the FILMTEC™ FT30 membrane in 1963.

Since then, new products have been developed and existing products have undergone improvements in their ability to improve permeate quality and lower the total cost of water.

In general, RO membranes now offer the possibility of higher rejection of salts at significantly reduced operating pressures, and therefore, reduced costs. Nanofiltration membrane technology provides the capability of some selectivity in the rejection of certain salts and compounds at relatively low operating pressures.

FilmTec Corporation was founded in Minneapolis USA in 1977. After important and dramatically evolving product changes and company development between 1981 and 1984, the FilmTec Corporation became a wholly owned subsidiary of The Dow Chemical Company in August 1985.

To assure a continuous, consistent, high quality supply of FILMTEC products to the rapidly growing reverse osmosis and nanofiltration markets, Dow has committed significant capital and other resources to upgrade and expand its manufacturing capabilities at FilmTec. The adoption of ISO quality assurance programs coupled with investment in advanced manufacturing techniques and equipment, ensure the highest levels of product performance and consistency.

Through the combination of selling only to approved water treatment companies and Dow's sales network sustained by Technical Service Centers, Dow assures the technical success of its FILMTEC products and the commercial and technical success of its customers.

**FILMTEC Membranes**

**For more information about FILMTEC membranes, call the Dow Liquid Separations business:**

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