

# Tubular membrane

## 37.50 i5

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**Type of filtration:**

Ultrafiltration

**Membrane material:**

Polyethersulfon (PES)

**Membrane diameter (internal):**

5.5 mm

**General properties:**

- Asymmetric membrane structure
- Inside-out filtration
- Highly efficient hydrophilic tubular membrane
- High permeability
- Excellent anti-fouling characteristics
- High pressure stability
- Excellent chemical resistance
- Optimized for B-SMART® technology

**Fields of application:****Industrial wastewater and process stream treatment**

- Sludge separation in anaerobic and aerobic membrane bioreactors (MBRs)
- Zero Liquid Discharge (ZLD)
- RO brine treatment
- Water reuse or water recycling
- Protein concentration/separation

**Performance characteristics:**

Membrane type:	37.50 i5	Notes:
Clean water flux [ $l/m^2 \cdot h \cdot 100 \text{ kPa}$ ]	approx. 100	RO water, 25°C
Transmembrane pressure [kPa]*	-20 to +800	
Molecular weight cut-off [Da]	50,000	
pH range of application [-]	2-10	at 25°C
Max. temperature [°C]*	60 at 600 kPa	

\* **Note:** the maximum values for pressure and temperature should not be exceeded.










Membrane lifetime is influenced by:

- Operating conditions under normal operation.
- Cleaning, especially regarding the combinations of maximum values of pH, concentration, pressure and temperature.

## Chemical resistance

### Process chemicals

The chemical resistance of a membrane is strongly dependent on the process conditions. The following ratings are to be taken as general guidelines only.

	Poorly resistant	Highly resistant
Acids (pH > 2)		
Bases (pH ≤ 10)		
Oils		
Aliphatic alcohols		
Aliphatic hydrocarbons		
Halogenated hydrocarbons		
Aromatic hydrocarbons		
Polar organic solvents		
Organic esters, ether, ketones		

### Cleaning chemicals

Depending on the nature and degree of contamination, membrane cleaning may be carried out using the following chemicals. The membrane lifetime may be reduced when values [placed in brackets] are exceeded.

- Chlorine, active [max. 500 ppm]
- Chlorine exposure 250,000 ppm·h [at 25°C]
- Hydrogen peroxide [max. 1000 ppm]
- Sodium hydroxide [pH ≤ 11]
- Nitric acid [pH ≥ 2]
- Phosphoric acid [pH ≥ 2]
- Citric acid
- Oxalic acid
- Enzymes

### Membrane storage

See *operation manual*. New membranes can be stored in their original delivered condition for up to two years.

Membrane must be stored dry, well-packed in a cool, frost-free, dark place.

Used membranes must be preserved in a clean state.

See *operation manual*.

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