

Tubular membrane

37.03 i5

Document No.

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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:	37.03 i5	Notes:
Clean water flux [l/m ² ·h· 100 kPa]	>300	RO water, 25°C
Transmembrane pressure [kPa]*	-20 to +800	
Molecular weight cut-off [Da]	100,000	
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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