

**TUBULAR MEMBRANE**

**MEMBRANE TYPE:** 66.03 I8  
**MEMBRANE MATERIAL:** Polyvinylidene fluoride  
**MEMBRANE INNER DIAMETER:** 8 mm  
**MEMBRANE SUPPORT:** Polyester/Polyester

**MAIN APPLICATIONS**

- ⊗ Membrane bioreactor
- ⊗ Purification
- ⊗ Separation of biomass
- ⊗ Waste water treatment
- ⊗ Prefiltration
- ⊗ Separation of enzymes
- ⊗ Oil/water separation
- ⊗ Concentration
- ⊗ Filtration of fermentation waste water

**BASIC CHARACTERISTICS**

- ⊗ Highly efficient hydrophilic tubular membrane
- ⊗ High chemical stability and high pressure stability
- ⊗ Membrane layer is inside
- ⊗ High performance and very good antifouling behaviour
- ⊗ Asymmetric membrane made of polyvinylidene fluoride
- ⊗ Filtration from inside to outside
- ⊗ Optimized for Cross-Flow-application
- ⊗ Singly used in Compact Modules

**PERFORMANCE DATA**

Parameter [unit] \ Membrane type	Type 66.03 I8	Remarks
Clean water flux [l/m <sup>2</sup> ·h·100kPa]	> 750	RO-water, 25°C
Transmembrane Pressure [kPa]*	-20 ... +800	
Mean pore size [nm]	approx. 30	Dextrane mix
pH Range of Application	2 - 10	At 25 °C
Temperature max. [°C]*	60	60°C (600kPa) / 40°C (800kPa)
Chlorine Exposure [ppm·h]	250,000	At 25°C

\* The maximum values for pressure and temperature must not be exceeded.

The lifetime of the membranes will be severely influenced (reduced) by operating the membranes at any combination of maximum limits of pH-value, of concentration, of pressure or of temperature during cleaning or during application in the production process.

Since the conditions under which our products may be used are beyond our control, this information does not imply any guarantee of final product performance and we cannot accept any liability with respect of our products. All information are based on our general experiences and are intended to provide a guideline for the selection and use of products. The quality of our products is guaranteed under our conditions of sale. We reserve the right to make modifications as a result of new developments.

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**MEMBRANE TYPE:**

**66.03 I8**

**RESISTANCE AGAINST CHEMICALS**

**CLEANING CHEMICALS:**

Depending on the nature and the intensity of contamination membrane cleaning could be done with the following chemicals, the maximum concentrations put in parantheses must not be exceeded (q.v. special, separate recommendations for membrane cleaning).

- |                                     |                           |
|-------------------------------------|---------------------------|
| ⊗ Chlorine, active (500 ppm, max.)  | ⊗ Sodiumtriphosphate      |
| ⊗ Hydrogenperoxide (1000 ppm, max.) | ⊗ Citric acid             |
| ⊗ Sodiumhydroxide (pH 11, max.)     | ⊗ Oxalic acid             |
| ⊗ Nitric acid (pH 1, min.)          | ⊗ Enzymes                 |
| ⊗ Phosphoric acid (pH 1, min.)      | ⊗ EDTA, NTA (pH 11, max.) |

Berghof recommends to keep the pH-value between 1 and 11 and to keep the temperature below 40°C during cleaning and disinfection. If those standard cleaning procedures fail in removing the foulants from the membrane, please contact Berghof for further recommendations. Berghof emphatically accents, that no warranty can be given on the efficiency of any cleaning nor on the membrane performance after such cleaning attempts.

Before using a new membrane or a membrane which has been put out of operation for a certain time, Berghof recommends to carry out a cleaning procedure or a disinfection.

After the cleaning procedure it is suggested to discharge approximately 25 l permeate per 1 m<sup>2</sup> membrane area, if the running process doesn't discharge the produced permeate which contains rests of cleaning agents.

**SOLVENTS:**

Since the resistance of the membranes to solvents strongly depends on the actual operation conditions, the indications given below should only be considered as guidelines.

- |                                   |      |                            |      |
|-----------------------------------|------|----------------------------|------|
| ⊗ Acids, pH > 2                   | +++  | ⊗ Halogenated Hydrocarbons | ++++ |
| ⊗ Bases, pH < 11                  | +++  | ⊗ Aromatic Hydrocarbons    | +++  |
| ⊗ Organic Esters, Ethers, Ketones | +    | ⊗ Polar organic Solvents   | +    |
| ⊗ Aliphatic Alcohols              | ++++ | ⊗ Oils                     | ++++ |
| ⊗ Aliphatic Hydrocarbons          | ++++ |                            |      |

+ = very weak resistance

++++ = very good resistance

**MEMBRANE STORAGE:**

New membranes in the delivered state (dry, cool, free of freezing temperatures, dark, packed) can be stored for more than 3 years. After use the membranes must be cleaned properly and must be preserved (q.v. cleaning and conservation instructions).

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