



A3-USA
Water and Wastewater Membranes

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Checklist for Membrane Bioreactor (MBR) - Municipal & Industrial Wastewater

Company

Company / Municipality:

Address:

.....

Contact Person:

Phone: E-Mail:

Fax: Internet:

Mobile:

1. General Information

1.1 What is the source of the wastewater?

.....
.....

For industrial application: Please attach process diagram if available.

1.2 Is there more than one source? If yes, please specify.

.....
.....

1.3 Do you want to re-use the treated wastewater?

Yes

No

What are the requirements?

.....

For industrial applications:

1.4 Please specify processes that generate wastewater.

.....

.....

.....

1.5 What process water is used?

In-house ground water well

Municipal drinking water

Other (please note):

.....

.....

What is the cost of process water (\$/gallon)?

.....

2. Quality and Quantity of wastewater to be treated

2.1 Do you have a wastewater analysis?

Yes No

Please attach data, if available

2.2 Wastewater flow

Wastewater flow (Hours/Day): Days/Week:

(gal/hour): min

..... max

(gal/day): min
..... max
..... average
(gal/week): min
..... max
..... average

Are there large month to month changes in flow?

If so, please list monthly flows:

.....
.....

2.3 Do you have existing holding tanks to buffer peak flows?

.....
.....

2.4 COD of wastewater

following specifications refer to:

- Homogenized wastewater sample
- Settled / filtered wastewater sample

COD- Average (mg/l):

COD- Maximum mg/l):

COD- Minimum (mg/l):

Length of COD-min / max occurrences?

2.5 BOD₅ of wastewater

following specifications refer to:

- Homogenized wastewater sample
- Settled / filtered wastewater sample

BOD₅ – Average (mg/l):

BOD₅ – Maximum (mg/l):

BOD₅ – Minimum (mg/l):

Length of BOD-min / max occurrences?

2.6 pH-value

Average: Max: Min:

2.7 Temperature of wastewater (°F)

Average: Max: Min:

2.8 Solids and suspended solids

Is a solids separation device present (e.g. settling tank, screen, rake etc.)?

Yes No In construction / design

If yes, which solids are separated (e.g. fibers,mineral material)?

.....

Character of solids: (e.g. particle size, decantation process, origin)

.....

.....

Solids content of wastewater:

Settleable solids ml/l - Average: Max: Min:

Filterable solids mg/l - Average: Max: Min:

Solids content after solids separation:

Settleable solids ml/l - Average: Max: Min:

Filterable solids mg/l - Average: Max: Min:

2.9 Other biodegradable components

Carbohydrate, e.g. sucrose, starch (mg/l):

Average: Max: Min:

Cellulose, hemicellulose, lignin (mg/l)

Average: Max: Min:

Proteins (mg/l)

Average: Max: Min:

Grease (mg/l)

Average: Max: Min:

Other organic compounds in higher concentration, e.g. solvents (mg/l):

Average: Max: Min:

2.10 Inorganic components

Chloride – Cl – (mg/l):

Average: Max: Min:

Sulfate – SO₄ – (mg/l):

Average: Max: Min:

Other sulfur compounds (mg/l):

○ Sulfide ○ Sulfite ○ Organic linked sulfur

Average: Max: Min:

Phosphate, measured as PO₄ – (mg/l):

Average: Max: Min:

Orthophosphate (mg/l)

Average: Max: Min:

Total phosphate (measured as P in mg/l):

Average: Max: Min:

Ammonium - NH₄ - , measured as NH₄-N – (mg/l)

Average: Max: Min:

Kjeldahl Nitrogen – TKN - (mg/l):

Average: Max: Min:

Total Nitrogen (mg/l):

Average: Max: Min:

Nitrate - NO₃, measured as NO₃-N – (mg/l):

Average: Max: Min:

Nitrite - NO₂, measured as NO₂-N –(mg/l):

Average: Max: Min:

Calcium, measured as Ca²⁺ (mg/l):

Average: Max: Min:

Magnesium, measured as Mg²⁺ (mg/l)

Average: Max: Min:

Other salts in higher concentration (mg/l):

Yes No

If yes, please specify:

.....

Average: Max: Min:

Heavy metals in higher concentrations (mg/l):

If yes, please specify:

.....

Average: Max: Min:

2.11 Other known components

e.g. herbicides, oils, silicones, titanium dioxide etc.

Component:

Average: Max: Min:

Component:

Average: Max: Min:

Component:

Average: Max: Min:

3. Other specifications

3.1 Is the wastewater/process water treated in-house?

Yes No

If yes, please specify:
.....
.....

Please attach process diagram.

3.2 Where is the effluent discharged?

.....

3.3 What are the permitted effluent discharge limits?

.....
.....

Please attach table, if available.

3.4 Please specify discharge fee (\$/gal):

3.5 The excess sludge is / can be disposed at:

Maximum total solid concentration for sludge:

Can the excess sludge be re-used in the production/process?

Yes No

3.6 Do you use bactericidal chemicals in the production (e.g. bactericides, disinfectant, chlorinated compounds, Sulfite, Nitrite etc.)?

Yes No

If yes, please specify quantity and concentration?

.....
.....

3.7 Do you use silicone oil as anti-foaming agents or other separating agents?

Yes No

If yes, please specify the chemicals?

.....

Concentration of agents:

Concentration of agents in waste water:

3.8 Please provide plan dimensions for existing and proposed new equipment.

.....

3.9 Are there cranes or other lifting machinery on-site?

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