

NanoPro™ B-4022

Base Stable Membrane Data Sheet

Product description

| | |
|----------------------------|--|
| Membrane Chemistry: | Proprietary Composite Nanofiltration Membrane |
| Membrane Type: | Base Stable Nanofiltration Membrane 8040 Spiral Wound Element |
| Construction*: | Feed Spacer: 31 mil, 46 mil Permeate Tube: Polysulfone; Stainless Steel |

*For special requests, please contact AMS

Specifications

| Model | Rejection % | | | Flux LMH (GFD) | Membrane Area m ² (ft ²) | Feed Spacer mil |
|-----------------|-------------|------|-------------------|-------------------|--|--------------------|
| | Glucose | NaCl | MgSO ₄ | | | |
| B-4022-8040-31P | ≥96 | 40 | ≥96 | 90 (53) | 29 (312) | 31 |
| B-4022-8040-31S | | | | | | |
| B-4022-8040-46P | | | | | 23 (248) | 46 |
| B-4022-8040-46S | | | | | | |

Test Conditions: 40 bar (580 psi), 30°C (86°F), Flux measured with RO water, Feed solutions for rejection tests are 3% glucose / 3.2% NaCl/ 0.2% MgSO₄ in RO water. Permeate flux may vary for individual element but it will no more than 20% below the above value.

Operating Information(*)

| | |
|--------------------------------------|---|
| Maximum Operating Pressure: | 40 (580 psi) |
| Maximum Operating Temperature: | 60°C (140°F) |
| Maximum Cleaning Temperature: | 60°C (140°F) |
| Allowable pH – Continuous Operation: | 3-14 |
| Allowable pH – Clean in Place (CIP): | 2-14 |
| Maximum Pressure Drop per Element: | 0.5 bar (7.2 psi) |
| Recirculation Flow Rate | 8040: Minimum 90 L/min (24 gpm), Maximum 280 L/min (74 gpm) |

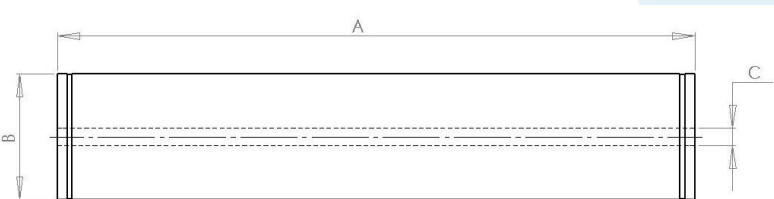
(*) Consult AMS Technologies for specific information

Recommended cleaning materials

- Depending on the nature of the feed material, a choice can be made from the following cleaning agents:
 - Sodium hydroxide at pH 10-12, 40°C (104°F)
 - Nitric or hydrochloric acid at pH 1-2, 40°C (104°F)
 - 0.2-1% w/w Na-EDTA, pH 10.5-13, 35°C (91°F)
 - 0.5% anionic surfactant (such as SDS), pH 10.5-13, 35°C (91°F)
- Water quality for cleaning:
 - Maximum turbidity is 1 NTU

Nominal Product Dimensions

For 8040:



| Size | A | | B | | C | |
|------|----------|------|----------|------|----------|------|
| | (Inches) | (mm) | (Inches) | (mm) | (Inches) | (mm) |
| 8040 | 40 | 1016 | 7.9 | 200 | 1.122 | 28.5 |

Lubricants:

For element installation, use only water or glycerin to lubricate seals. The use of petroleum or vegetable-based oils or solvents may damage the element and void any warranty.

Preservation

- Short Term (up to four weeks): 1% w/w sodium metabisulfite.
- Long Term: Please refer to the AMS element storage and handling instructions.

Storage

- The membrane should not be allowed to dry. It should be stored in a sealed bag, at 4°-30°C (39-86°F).

Typical Process Streams

| | |
|----------|----------|
| 4% NaOH | 10% NaOH |
| 20% NaOH | 10% KOH |

Our membranes run at high and stable fluxes in very caustic environment for 12 months and more.

Other

- Do not expose the membrane to chlorine or other oxidants.
- Sodium metabisulfite (without catalysts such as cobalt) is the preferred chemical to eliminate free chlorine or other oxidizers in the feed.