

## NanoPro™ A-3012

### Acid Stable Membrane Data Sheet

#### Product description

<b>Membrane Chemistry:</b>	Proprietary Composite Nanofiltration Membrane
<b>Membrane Type:</b>	Acid Stable Nanofiltration Membrane
	8040 Spiral Wound Element
<b>Construction*:</b>	Feed Spacer: 31 mil, 46 mil
	Permeate Tube: Polysulfone

\*For special requests, please contact AMS

#### Specifications

Model	Rejection %			Flux LMH (GFD)	Membrane Area m <sup>2</sup> (ft <sup>2</sup> )	Feed Spacer mil
	Glucose	NaCl	MgSO <sub>4</sub>			
A-3012-8040-31P	≥96	40	≥96	85 (50)	31 (333)	31
A-3012-8040-46P						46

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% MgSO<sub>4</sub> in RO water. Permeate flux may vary for individual element but it will no more than 20% below the above value.

### **Operating Information(\*)**

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Maximum Operating Pressure:	70 bar (1015 psi)
Maximum Operating Temperature:	80°C (176°F)
Maximum Cleaning Temperature:	80°C (176°F)
Allowable pH – Continuous Operation:	0-12
Allowable pH – Clean in Place (CIP):	0-13
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)

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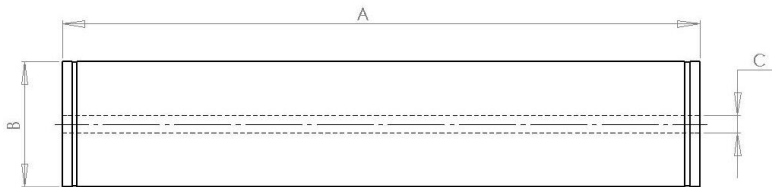
(\*) Consult AMS Technologies for specific information

### **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 10.5-11, 35°C (91°F)
  - 0.5% anionic surfactant (such as SDS), pH 10.5-11, 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).

### **Acid Stability:**

Typical solutions include:

20% H<sub>2</sub>SO<sub>4</sub>                      20% HCl                      4% HNO<sub>3</sub>  
30% H<sub>3</sub>PO<sub>4</sub>                      15% Acetic acid

Our membranes run at high and stable fluxes in very acidic 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.