DELEMIL-AR-S SERIES
Acid Resistance NF Membrane

The NF membrane of AR-S series (Acid Resistant) can concentrate 20% or less sulfuric acid and 10% or less phosphoric acid in the acid solution. It can also be used for the purification of acid solution. The membrane can maintain high flow and stable operation in a strong acid condition for more than 12 months.

### Membrane Parameters

<table>
<thead>
<tr>
<th>Product Models</th>
<th>Average Flow Rate GPD (m³/h)</th>
<th>Average Rejection Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR-S 01</td>
<td>4300 (96.5)</td>
<td>96%</td>
</tr>
<tr>
<td>AR-S 02</td>
<td>3400 (12.4)</td>
<td>96%</td>
</tr>
<tr>
<td>AR-S 03</td>
<td>4000 (16.2)</td>
<td>96%</td>
</tr>
<tr>
<td>AR-S 04</td>
<td>3000 (14.4)</td>
<td>96%</td>
</tr>
<tr>
<td>AR-S 10</td>
<td>18200 (99.6)</td>
<td>96%</td>
</tr>
<tr>
<td>AR-S 20</td>
<td>20400 (97.2)</td>
<td>96%</td>
</tr>
<tr>
<td>AR-S 40</td>
<td>16000 (90.5)</td>
<td>96%</td>
</tr>
</tbody>
</table>

Note: The average degradation rate is tested after 24 hours operation.
Flow fluctuation range of single membrane could be ±20%.
Test Condition: 200mg/L of H₂SO₄, 150 psi operating pressure, 35°C temperature, pH 4.7, and 95% recovery rate.

### Parameters of Membrane Operating and Cleaning

<table>
<thead>
<tr>
<th>Product Models</th>
<th>Max Cleaning Pressure</th>
<th>Maximum Cleanable Area of Single Membrane</th>
<th>Recovery Rate</th>
<th>Max Operating Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR-S 01</td>
<td>1200psi (8psi)</td>
<td>1.0 m²</td>
<td>96%</td>
<td>60°C</td>
</tr>
</tbody>
</table>

#### Typical Application
- Purify acid solution, remove metal ions
- Acid recovery from leachate
- Decolorization treatment of inorganic acid
- Dissolved chemical recovery
- Concentration and recovery of diluent ions in acid solution
- Some regular applications that require corrosive-resistant cleaning

#### Typical Acid Solution
- 2% H₂SO₄
- 2% HNO₃
- 4% H₂SO₄
- 35%-45% Organic Acid

### Membrane Schematics

[Diagram of Membrane Schematics]

- Male Joint Membrane with ATD
- Flat Joint Membrane with ATD

### Specifications and Parameters

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Joint</th>
<th>Diametral Inch (cm)</th>
<th>Package Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male Joint</td>
<td>40.0 (1016)</td>
<td>2.4 (63)</td>
</tr>
<tr>
<td></td>
<td>Male Joint</td>
<td>60.0 (1523)</td>
<td>2.9 (74)</td>
</tr>
<tr>
<td></td>
<td>Flat Joint</td>
<td>40.0 (1016)</td>
<td>2.1 (53)</td>
</tr>
</tbody>
</table>

**Special Notice:**
- All membrane components are packed under the dry-seal-dry conditions.
- Each membrane element is equipped with an accessory kit, fitted with a connector and 4 O-rings.

### Storage Conditions
- Before the first use, all membrane elements must be stored under the original packaging conditions.
- The membrane is best kept in the original packaging and opened before the use of water treatment system.
- The transport temperature below 30°C may cause irreversible membrane damage, and the transport temperature above 30°C may cause membrane degradation and deterioration of the protection solution.
- Store in a cool, dry condition and the place where is not directly exposed to sunlight or artificial lighting. Storage temperature stays of 0°C to 35°C, and the longest storage time is 6 months.

### General Information
- Once wetted, the membrane element must always be wet.
- The limited warranty we promised will expire due to the fact that the user does not strictly follow the operational restrictions and guidelines set forth in this Code.
- If the system is in a shut down state for a long time, the membrane element is advised to be placed in the protective solution to prevent the growth of microorganisms.
- It is the user's responsibility if use on incompatible chemical and lubricant, and cause undue influence on the original.
- The maximum allowable pressure drop of single pressure vessel is 52 psi (4 bars).
- At no time can the backpressure be produced on the side of producing water to avoid the occurrence of harmful problems.