Solvay’s sulfone polymers have been used to produce membranes for over 25 years. They are soluble in conventional processing solvents and used to make hollow fiber, flat sheet and tubular membranes. Low cyclic dimer grades improve the stability of dope solutions, reduce filter clogging, and minimize manufacturing defects.

**Key features**
- Excellent mechanical properties
- Outstanding hydrolytic stability
- Stable at pH levels from 2 to 13
- Excellent biocompatibility
- Easy to form MF and UF membranes
- Low level of insolubles and extractables
- Sterilizable by steam, ethylene oxide and gamma radiation
- Global agency approvals

**Sulfone Polymers**

Solvay’s sulfone polymers have been used to produce membranes for over 25 years. They are soluble in conventional processing solvents and used to make hollow fiber, flat sheet and tubular membranes. Low cyclic dimer grades improve the stability of dope solutions, reduce filter clogging, and minimize manufacturing defects.

**Membrane Grades**

<table>
<thead>
<tr>
<th></th>
<th>Pellets</th>
<th>Powders</th>
<th>Typical Mol. Wt. [Mw (x10^3)]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Udel® PSU polysulfone</strong></td>
<td>P-1700 LCD</td>
<td>P-3500 LCD</td>
<td>67 – 72</td>
</tr>
<tr>
<td><strong>Veradel® PESU polyether-sulfone</strong></td>
<td>3000MP</td>
<td>3000P</td>
<td>64 – 68</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3100P</td>
</tr>
<tr>
<td><strong>Radel® PPSU polyphenylsulfone</strong></td>
<td>R-5000</td>
<td>R-5500</td>
<td>52 – 55</td>
</tr>
</tbody>
</table>

Additional grades are available upon request.
**Solef® PVDF**

Solef® PVDF homopolymers are made using a suspension-type polymerization process which provides a linear, gel-free product. These materials are soluble in conventional processing solvents to make hollow fiber and flat sheet membranes by DIPS and TIPS processes.

**Key features**
- Excellent toughness and durability
- Easy to form MF and UF membranes
- Stable at pH levels from 1 to 11
- Outstanding chlorine and UV resistance
- High purity and high crystallinity
- Global agency approvals

### Membrane Grades

<table>
<thead>
<tr>
<th>Pellets</th>
<th>Powders</th>
<th>Typical Mol. Wt. [Mw (KDa)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solef® PVDF homopolymer</td>
<td>6010</td>
<td>6010</td>
</tr>
<tr>
<td>polyvinylidene fluoride</td>
<td>6012</td>
<td>6012</td>
</tr>
<tr>
<td></td>
<td>1015</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6015</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6020</td>
<td></td>
</tr>
</tbody>
</table>

Additional grades are available upon request.

**Halar® ECTFE**

The molecular structure that gives Halar® ECTFE its exceptional chemical resistance is not compatible with solution phase inversion processing. The polymer must be processed at temperatures close to its melting point (200°C - 240°C) using a TIPS process for hollow fibers. Grades with differing molecular weights and melt temperatures are available.

**Key features**
- Outstanding resistance to ozone and chlorine
- Stable at pH levels from 1 to 14
- Limited solubility in organic solvents
- Very good tensile properties
- High purity resins
- FDA compliance for selected grades

### Membrane Grades

<table>
<thead>
<tr>
<th>Pellets</th>
<th>Melt Flow Index, g/10 min ASTM D1238, 275°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halar® ECTFE</td>
<td>901</td>
</tr>
<tr>
<td>ethylene chlorotrifluoroethylene</td>
<td>902</td>
</tr>
</tbody>
</table>

Typical properties reported. Actual properties of individual batches will vary within specification limits.

**Customer Service and Technical Support**

At Solvay, we place a high value on establishing close working relationships with our customers. We believe that the better we know our customers, the better we can serve them. That’s why we have a global network of sales representatives and technical support dedicated to serving the membranes industry. We maintain and regularly update our status with global regulatory agencies and specifications. Please contact your Solvay representative for details.
Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

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