Kynar® resins are fluorinated thermoplastic homopolymers.

Kynar® MG15 resin is a crystalline high viscosity polymer of polyvinylidene difluoride. It is an engineering polymer with an outstanding balance of physical strength and high chemical resistance which make it ideal for micro and ultra-filtration membranes for durable water purification and other applications.

Kynar® MG15 resin is soluble in selected solvents and can be used in solution processing applications. It is especially recommended for hollow fiber and flat sheet membranes.

Kynar® MG15 resin has NSF, FDA, and USP Class VI certifications for use in potable water, food processing, and bio-pharma applications.

### MAIN CHARACTERISTICS

<table>
<thead>
<tr>
<th>PROPERTIES</th>
<th>VALUE</th>
<th>UNIT</th>
<th>TEST STANDARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melt Viscosity, 230°C, 100 s⁻¹</td>
<td></td>
<td>kPoise</td>
<td>ASTM D3835</td>
</tr>
<tr>
<td>Tensile Modulus, 73 °F</td>
<td></td>
<td>psi</td>
<td>ASTM D638</td>
</tr>
<tr>
<td>Tensile Strength at Yield, 73 °F</td>
<td></td>
<td>psi</td>
<td>ASTM D638</td>
</tr>
<tr>
<td>Flexural Modulus, 73 °F</td>
<td></td>
<td>psi</td>
<td>ASTM D790</td>
</tr>
<tr>
<td>Melting temperature, 10°C/min</td>
<td>334</td>
<td>°F</td>
<td>ISO 11357-1/3</td>
</tr>
<tr>
<td>Melting Point, 73 °F</td>
<td>324 - 342</td>
<td>°F</td>
<td>ASTM D3418</td>
</tr>
<tr>
<td>Glass transition temperature, 10°C/min</td>
<td>-40</td>
<td>°F</td>
<td>ISO 11357-1/2</td>
</tr>
<tr>
<td>Water Absorption</td>
<td>≤ 0.04</td>
<td>%</td>
<td>ASTM D570</td>
</tr>
<tr>
<td>Density</td>
<td>1.78</td>
<td>g/cm³</td>
<td>ISO 1183</td>
</tr>
<tr>
<td>Specific Gravity, 73 °F</td>
<td>1.77 - 1.79</td>
<td>-</td>
<td>ASTM D792</td>
</tr>
<tr>
<td>Refractive Index @ sodium D line</td>
<td>1.42</td>
<td>-</td>
<td>ASTM D542</td>
</tr>
<tr>
<td>Solution Viscosity, 20°C, #3 Brookfield</td>
<td>≥ 1500</td>
<td>cps</td>
<td>10% NMP Solution Spindle@20 RPM Spindle Viscometer</td>
</tr>
</tbody>
</table>

### Processing

- Casting

### Delivery form

- Powder

### Chemical Media Resistance

#### Acids

- Acetic Acid (5% by mass) (23°C)
- Citric Acid solution (10% by mass) (23°C)
- Lactic Acid (10% by mass) (23°C)
- Hydrochloric Acid (36% by mass) (23°C)
- Nitric Acid (40% by mass) (23°C)

KYNAR® MG15

- Sulfuric Acid (38% by mass) (23°C)
- Sulfuric Acid (5% by mass) (23°C)
- Chromic Acid solution (40% by mass) (23°C)

Bases
- Sodium Hydroxide solution (35% by mass) (23°C)
- Sodium Hydroxide solution (1% by mass) (23°C)
- Ammonium Hydroxide solution (10% by mass) (23°C)

Alcohols
- Isopropyl alcohol (23°C)
- Methanol (23°C)
- Ethanol (23°C)

Hydrocarbons
- n-Hexane (23°C)
- Toluene (23°C)
- iso-Octane (23°C)

Ketones
- Acetone (23°C)

Ethers
- Diethyl ether (23°C)

Mineral oils
- SAE 10W40 multigrade motor oil (23°C)
- SAE 10W40 multigrade motor oil (130°C)
- SAE 80/90 hypoid-gear oil (130°C)
- Insulating Oil (23°C)

Standard Fuels
- ISO 1817 Liquid 1 (60°C)
- ISO 1817 Liquid 2 (60°C)
- ISO 1817 Liquid 3 (60°C)

- ISO 1817 Liquid 4 (60°C)
- Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)
- Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)
- Diesel fuel (pref. ISO 1817 Liquid F) (23°C)
- Diesel fuel (pref. ISO 1817 Liquid F) (90°C)
- Diesel fuel (pref. ISO 1817 Liquid F) (>90°C)

Salt solutions

- Sodium Chloride solution (10% by mass) (23°C)
- Sodium Hypochlorite solution (10% by mass) (23°C)
- Sodium Carbonate solution (20% by mass) (23°C)
- Sodium Carbonate solution (2% by mass) (23°C)
- Zinc Chloride solution (50% by mass) (23°C)

Other

- Ethyl Acetate (23°C)
- Hydrogen peroxide (23°C)
- Ethylene Glycol (50% by mass) in water (108°C)
- Water (23°C)
- Deionized water (90°C)
- Phenol solution (5% by mass) (23°C)


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