

TECHNICAL DATA SHEET KYNAR® 9000 HDP

FLUORINATED HOMOPOLYMER PELLET

Kynar® resins are fluorinated thermoplastic homopolymers.

Outstanding characteristics: chemical resistance, imperviousness to UV, high barrier properties, high purity, good mechanical and thermo-mechanical properties.

Kynar® 9000 HDP resin is a standard grade of granules for injection molding of thin walled parts and multifilament extrusion.

DESIGNATION

PVDF

DELIVERY FORM

• Pellets

RHEOLOGICAL PROPERTIES

| 속성 | 값 | 테스트 표준 |
|---|-----------------|------------|
| Melt viscosity, 230°C (445°F) at 100 s-1 | 5 - 8 kPo | ASTM D3835 |
| Shrinkage, Normal (t+24h) | 2.0 % | ISO 294-4 |
| Shrinkage, Parallel (t+24h) | 2.0 % | ISO 294-4 |
| Melt flow index (MFR), 235°C / 5 kg (455°F / 11 lb) | 16 - 30 g/10min | ASTM D1238 |
| Melt volume flow rate (MVR), 230°C / 5 kg (446°F / 11 lb) | 10 cm³/10min | ISO 1133 |

MECHANICAL PROPERTIES

| 속성 | 값 | 테스트 표준 |
|---|--------------------|--------------|
| Yield stress, 23°C (73°F) | 44.8 - 55.2 MPa | ASTM D638 |
| Stress at break, 23°C (73°F) | 34.5 - 55.2 MPa | ASTM D638 |
| Compression strength, 23°C (73°F) | 68.9 - 103 MPa | ASTM D695 |
| Izod impact unnotched strength, 23°C (73°F) | 1.07 - 4.27 kJ/m2 | ASTM D256 |
| Izod impact notched strength, 23°C (73°F) | 0.0961 - 0.214 J/m | ASTM D256 |
| Charpy unnotched impact strength, 23°C (73°F) | 232 kJ/m2 | ISO 179 1eU |
| Charpy unnotched impact strength, -30°C (-22°F) | 218 kJ/m2 | ISO 179 1eU |
| Charpy notched impact strength, 23°C (73°F) | 11 kJ/m2 | ISO 179 1eA |
| Charpy notched impact strength, -30°C (-22°F) | 5 kJ/m2 | ISO 179 1eA |
| Hardness, Shore D | 76 - 80 | ASTM D2240 |
| Nominal strain at break, 23°C (73°F), 50 mm/min | 40 % | ISO 527-1/-2 |
| Yield strain, 23°C (73°F), 50 mm/min | 8 % | ISO 527-1/-2 |
| Flexural modulus, 23°C (73°F) | 1380 - 2310 MPa | ASTM D790 |
| Tensile modulus, 23°C (73°F) | 2310 MPa | ASTM D638 |

KYNAR® 9000 HDP

| 속성 | 값 | 테스트 표준 |
|--|----------------------|----------------|
| Coefficient of friction dynamic vs steel, 23°C (73°F) | 0.14 | ASTM D1895 |
| Coefficient of friction static vs steel, 23°C (73°F) | 0.2 | ASTM D1894 |
| Abrasion resistance, Wheel CS 17, load 1 kg, 1000 cycles | 5 - 9 mg | ASTM G195-13A |
| 속성 | 값 | 테스트 표준 |
| Glass transition temperature, 10°C/min | -40 °C | ISO 11357-1/-2 |
| Vicat softening temperature, 50N at 50°C/h | 141 °C | ISO 306 |
| Limiting oxygen index (LOI) | 60 % | ASTM D2863 |
| Coefficient of linear thermal expansion, 23°C (73°F) | 119 - 144 10E-6 / °K | ASTM D696 |
| Heat deflection temperature, 1.8 MPa | 110 °C | ISO 75-1/-2 |
| Heat deflection temperature, 1.8 MPa, 138°C/h | 105 - 115 °C | ASTM D648 |
| Heat deflection temperature, 0.45 MPa, 138°C/h | 125-140 °C | ASTM D648 |
| Melting temperature, 10°C/min | 171 °C | ISO 11357-1/-3 |

THERMAL PROPERTIES ELECTRICAL PROPERTIES

| 속성 | 값 | 테스트 표준 |
|--|---------------|-----------|
| Dielectric constant, 1kHz | 0.5 - 4.5 | ASTM D150 |
| Volumic (transversal) resistivity, DC, 20°C (68°F)/50%RH | 2.0E+12 ohm*m | ASTM D257 |
| Relative permittivity, 100Hz | 10 | IEC 60250 |
| Relative permittivity, 1MHz | 7.5 | IEC 60250 |
| Dissipation factor, 100Hz | 310 E-4 | IEC 60250 |
| Dissipation factor, 1MHz | 2160 E-4 | IEC 60250 |
| Dissipation factor | 0.01 - 0.21 | ASTM D150 |

SPECIAL CHARACTERISTICS

- Flame & smoke

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