KYNAR®

TECHNICAL DATA SHEET

# KYNAR® 740 HDP

## FLUORINATED HOMOPOLYMER PELLET

KYNAR® resins are fluorinated thermoplastic homopolymers.
Outstanding characteristics: chemical resistance, resistance to UV, high barrier properties, high purity, good mechanical and thermo-mechanical properties.
KYNAR® 740 HDP resin is a stabilized grade of pellets for extrusion of tubes and plaques, compression and transfer molding.

### TYPE

PVDF

### MAIN APPLICATIONS

- hi purity
- cpi - stock shape

### DELIVERY FORM

- Pellets

## RHEOLOGICAL PROPERTIES

| PROPERTIES | TYPICAL VALUE | UNIT | TEST STANDARD |
|---|---|---|---|
| Melt viscosity, 230°C (446°F) at 100 s-1 | 16 - 22 | kPo | ASTM D3835 |
| Shrinkage, normal (t+24h) | 2 | % | ISO 294-4 |
| Shrinkage, parallel (t+24h) | 2 | % | ISO 294-4 |
| Melt flow index (MFR), 230°C / 5 kg (446°F / 11 lb) | 1.5 - 3 | g/10min | ASTM D1238 |
| Melt volume flow rate (MVR), 230°C / 5 kg (446°F / 11 lb) | 1.1 | $cm^3$/10min | ISO 1133 |

## MECHANICAL PROPERTIES

| PROPERTIES | TYPICAL VALUE | UNIT | TEST STANDARD |
|---|---|---|---|
| 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) | 1070-4270 | J/m | ASTM D256 |
| Izod impact notched strength, 23°C (73°F) | 96-214 | J/m | ASTM D256 |
| Charpy unnotched impact strength, 23°C (73°F) | 244 | kJ/m2 | ISO 179 1eU |
| Charpy unnotched impact strength, -30°C (-22°F) | 186 | kJ/m2 | ISO 179 1eU |
| Charpy notched impact strength, 23°C (73°F) | 14 | 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 | % | ISO 527-1/-2 |
| Yield strain, 23°C (73°F) | 7 | % | ISO 527-1/-2 |
| Flexural modulus, 23°C (73°F) | 1380 - 2310 | MPa | ASTM D790 |
| Tensile modulus, 23°C (73°F) | 1800 | MPa | ASTM D638 |

# KYNAR® 740 HDP

| PROPERTIES | TYPICAL VALUE | UNIT | TEST STANDARD |
|---|---|---|---|
| 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 |

## THERMAL PROPERTIES

| PROPERTIES | TYPICAL VALUE | UNIT | TEST STANDARD |
|---|---|---|---|
| Glass transition temperature, 10°C/min | -40 | °C | ISO 11357-1/-2 |
| Vicat softening temperature, 50N at 50°C/h | 135 | °C | ISO 306 |
| Limiting oxygen index (LOI) | 44 | % | ASTM D2863 |
| Yellow card available | yes | | |
| Coefficient of linear thermal expansion, 23°C (73°F) | 119 - 144 | 10E-6 / °K | ASTM D696 |
| Specific heat temperature, 23°C (73°F) | 745 - 958 | | ISO 11357-1/-2 |
| Heat deflection temperature, 0.45 MPa | 135 | °C | ISO 75-1/-2 |
| Heat deflection temperature, 1.8 MPa | 105 | °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 |
| Thermal conductivity | 0.17 - 0.19 | W/m-K | ASTM D433 |
| Melting temperature, 10°C/min | 168 | °C | ISO 11357-1/-3 |

## ELECTRICAL PROPERTIES

| PROPERTIES | TYPICAL VALUE | UNIT | TEST STANDARD |
|---|---|---|---|
| Comparative tracking index | 600 | | IEC 60112 |
| Dielectric constant, 1kHz | 4.5 - 9.5 | | ASTM D150 |
| Relative permittivity, 100Hz | 11 | | IEC 62631-2-1 |
| Relative permittivity, 1MHz | 8 | | IEC 62631-2-1 |
| Relative thermal index | 150 | | |
| Dissipation factor, 100Hz | 260 | E-4 | IEC 62631-2-1 |
| Dissipation factor, 1MHz | 2310 | E-4 | IEC 62631-2-1 |
| Dissipation factor | 0.01 - 0.21 | | ASTM D150 |

## OTHER PROPERTIES

| PROPERTIES | TYPICAL VALUE | UNIT | TEST STANDARD |
|---|---|---|---|
| Density, 23°C (73°F) | 1.77 - 1.79 | g/cm³ | ISO 1183-1 |
| Water absorption, at equilibrium at 23°C (73°F) / Immersion | 0.03 | % | ISO 62 |

## PROCESSING CONDITIONS:

- Typical melt temperature (Min / Recommended / Max) - Injection Molding: 180°C / 210°C / 240°C (355°F / 410°F / 465°F)
- Typical mold temperature - Injection molding: 20-80°C (70-175°F)

# KYNAR® 740 HDP

## SPECIAL CHARACTERISTICS

- Flame & smoke

**Headquarters: Arkema France**
51, Esplanade du Général de Gaulle
92800 Puteaux – France
T +33 (0)1 49 00 80 80



Disclaimer - Please consult Arkema's disclaimer regarding the use of Arkema's products on https://www.arkema.com/global/en/products/product-safety/disclaimer/ which is incorporated herein by reference and made a part hereof.
Arkema France, a French société anonyme registered at the Trade and Companies Register of Nanterre under the number 319 632 790
**arkema.com**