KYNAR FLEX®

TECHNICAL DATA SHEET

# KYNAR FLEX® 2800-00M

## FLUORINATED COPOLYMER PELLET

Kynar Flex® resins are fluorinated thermoplastic copolymers.

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

Kynar Flex® 2800-00 resin is a standard grade of pellets, compared to the homopolymer grades, which exhibits a lower modulus, a better resistance to stress cracking in alkaline and oxidizing media, and a lower melting point.

For cable coating, extrusion of tube and plaque, compression molding of bulky parts.

Additional characteristics:
- Easily processed using conventional equipment
- Excellent thermal stability
- Retains properties after aging
- Pigmentable
- UL RTI temperature rating 125ºC
- Radiation crosslinking

UL Yellow Card

## TYPE

PVDF

## POTENTIAL APPLICATIONS

• Health - reusable - mask

## DELIVERY FORM

• Pellets

## RHEOLOGICAL PROPERTIES

| PROPERTIES | TYPICAL VALUE | UNIT | TEST STANDARD |
|---|---|---|---|
| Melt viscosity, 230°C (446°F) at 100 s-1 | 22 - 27 | kPo | ASTM D3835 |
| Melt flow index (MFR), 230°C / 5 kg (446°F / 11 lb) | 3 - 8 | g/10min | ASTM D1238 |
| Melt volume flow rate (MVR), 230°C / 5 kg (446°F / 11 lb) | 0.5 | $cm^3$/10min | ISO 1133 |

## MECHANICAL PROPERTIES

| PROPERTIES | TYPICAL VALUE | UNIT | TEST STANDARD |
|---|---|---|---|
| Yield stress, 23°C (73°F) | 20 - 34.5 | MPa | ASTM D638 |
| Stress at break, 23°C (73°F) | 17.2 - 34.5 | MPa | ASTM D638 |
| Nominal strain at break, 23°C (73°F) | >50 | % | ISO 527-1/-2 |
| Compression strength, 23°C (73°F) | 31 - 41.4 | MPa | ASTM D695 |
| Izod impact unnotched strength, 23°C (73°F) | No Break | | ASTM D256 |
| Izod impact notched strength, 23°C (73°F) | 0.534 - 1.07 | J/m | ASTM D256 |
| Charpy notched impact strength, 23°C (73°F) | No Break | | ISO 179 1eA |
| Charpy notched impact strength, -30°C (-22°F) | 5 | kJ/m2 | ISO 179 1eA |
| Hardness, shore D | 60 - 70 | | ASTM D2240 |

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| PROPERTIES | TYPICAL VALUE | UNIT | TEST STANDARD |
|---|---|---|---|
| Yield strain, 23°C (73°F) | 15 | % | ISO 527-1/-2 |
| Flexural modulus, 23°C (73°F) | 483 - 758 | MPa | ASTM D790 |
| Tensile modulus, 23°C (73°F) | 700 | MPa | ASTM D638 |
| Coefficient of friction dynamic vs steel, 23°C (73°F) | 0.33 | | ASTM D1895 |
| Coefficient of friction static vs steel, 23°C (73°F) | 0.33 | | ASTM D1894 |
| Abrasion resistance, wheel CS 17, load 1 kg, 1000 cycles | 16 - 19 | 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 | 79 | °C | ISO 306 |
| Limiting oxygen index (LOI) | 42 | % | ASTM D2863 |
| Yellow card available | Yes | | |
| Coefficient of linear thermal expansion, 23°C (73°F) | 126 - 185 | 10E-6 / °K | ASTM D696 |
| Specific heat temperature, 23°C (73°F) | 745 - 958 | | ISO 11357-1/-2 |
| Heat deflection temperature, 0.45 MPa | 68 | °C | ISO 75-1/-2 |
| Heat deflection temperature, 1.8 MPa | 48 | °C | ISO 75-1/-2 |
| Heat deflection temperature, 1.8 MPa | 40 - 55 | °C | ASTM D648 |
| Heat deflection temperature, 0.45 MPa | 60-75 | °C | ASTM D648 |
| Thermal conductivity | 0.144 - 0.18 | W/m-K | ASTM D433 |
| Melting temperature, 10°C/min | 143 | °C | ISO 11357-1/-3 |
| Burning behavior, nominal thickness 1.5 mm | V-0 | | IEC 60695-11-10 |

## ELECTRICAL PROPERTIES

| PROPERTIES | TYPICAL VALUE | UNIT | TEST STANDARD |
|---|---|---|---|
| Dielectric constant, 1kHz | 3.5 - 10.6 | | ASTM D150 |
| Surface resistivity, 23°C (73,4°F) | 5.1E+11 - 5.3E+11 | ohm/sq | ASTM D257 |
| Dielectric strength, 23°C (73,4°F) | 1.3 - 1.5 | kV/mm | ASTM D149 |
| Relative permittivity, 100Hz | 11 | | IEC 62631-2-1 |
| Relative permittivity, 1MHz | 7 | | IEC 62631-2-1 |
| Relative thermal index | 130 | | |
| Dissipation factor, 100Hz | 520 | E-4 | IEC 62631-2-1 |
| Dissipation factor, 1MHz | 2330 | E-4 | IEC 62631-2-1 |
| Dissipation factor | 0.02 - 0.21 | | ASTM D150 |

# KYNAR FLEX® 2800-00M

## OTHER PROPERTIES

| PROPERTIES | TYPICAL VALUE | UNIT | TEST STANDARD |
|---|---|---|---|
| Density, 23°C (73°F) | 1.77 - 1.8 | g/cm³ | ISO 1183-1 |
| Water absorption, at equilibrium at 23°C (73°F) / Immersion | 0.03 | % | ISO 62 |
| Water absorption, at equilibrium at 23°C (73°F) / 50%RH | 0.015 | % | ISO 62 |

## SPECIAL CHARACTERISTICS

- Flame & smoke

## REGIONAL AVAILABILITY

World



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