

TECHNICAL DATA SHEET

KYNAR FLEX[®] 2850-02

FLUORINATED COPOLYMER PELLET

KYNAR FLEX[®] resins are fluorinated thermoplastic copolymers.

KYNAR FLEX[®] 2850-02 has been specifically designed for use in wire and cable constructions which require an Underwriters Laboratories temperature of 150°C and a Limiting Oxygen Index (LOI) of at least 75.

KYNAR FLEX[®] 2850-02 is easily processed and has excellent physical, mechanical, thermal and flame resistant characteristics. KYNAR FLEX[®] 2850-02 meets the smoke and flame requirements of UL 910 and ASTM E84 (the Modified Steiner Tunnel Test). This copolymer is commonly used for pipe, wire jacketing, conduits, and in injection molded parts.

ADDITIONAL CHARACTERISTICS:

- Excellent thermal stability
- Excellent abrasion resistance
- Impervious to UV degradation
- Self extinguishing material
- Extremely low smoke emission characteristics
- 0/0 rating in ASTM E-84/UL 723

DESIGNATION

PVDF

MAIN APPLICATIONS

- Plenum Conduit
- Plenum Cable

DELIVERY FORM

- Pellets

RHEOLOGICAL PROPERTIES

| プロパティ | 価値 | テスト基準 |
|---|---------------------------|------------|
| Melt viscosity, 230°C (445°F) at 100 s-1 | 4 - 8 kPo | ASTM D3835 |
| Melt flow index (MFR), 235°C / 5 kg (455°F / 11 lb) | 17 - 20 g/10min | ASTM D1238 |
| Melt volume flow rate (MVR) | 15 cm ³ /10min | ISO 1133 |

MECHANICAL PROPERTIES

| プロパティ | 価値 | テスト基準 |
|---|---------------------|--------------|
| Yield stress, 23°C (73°F) | 31 - 41.4 MPa | ASTM D638 |
| Yield strain, 23°C (73°F), 50 mm/min | 10 % | ISO 527-1/-2 |
| Stress at break, 23°C (73°F) | 27.6 - 48.3 MPa | ASTM D638 |
| Nominal strain at break, 23°C (73°F), 50 mm/min | >50 % | ISO 527-1/-2 |
| Compression strength, 23°C (73°F) | 41.4 - 58.6 MPa | ASTM D695 |
| Izod impact unnotched strength, 23°C (73°F) | No Break | ASTM D256 |
| Izod impact notched strength, 23°C (73°F) | 0.107 - 0.427 J/m | ASTM D256 |
| Charpy notched impact strength, 23°C (73°F) | 8 kJ/m ² | ISO 179 1eA |

KYNAR FLEX® 2850-02

| プロパティ | 価値 | テスト基準 |
|--|-----------------|---------------|
| Hardness, Shore D | 70 - 75 | ASTM D2240 |
| Flexural modulus, 23°C (73°F) | 1030 - 1240 MPa | ASTM D790 |
| Tensile modulus, 23°C (73°F) | 1300 MPa | ASTM D638 |
| Coefficient of friction dynamic vs steel, 23°C (73°F) | 0.19 | ASTM D1895 |
| Coefficient of friction static vs steel, 23°C (73°F) | 0.26 | ASTM D1894 |
| Abrasion resistance, Wheel CS 17, load 1 kg, 1000 cycles | 6 - 9 mg | ASTM G195-13A |

THERMAL PROPERTIES

| プロパティ | 価値 | テスト基準 |
|--|----------------------|----------------|
| Glass transition temperature, 10°C/min | -40 °C | ISO 11357-1/-2 |
| Limiting oxygen index (LOI) | 43 % | 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, 1.8 MPa | 46 °C | ISO 75-1/-2 |
| Heat deflection temperature, 1.8 MPa, 138°C/h | 37.8 - 55 °C | ASTM D648 |
| Heat deflection temperature, 0.45 MPa, 138°C/h | 60-75 °C | ASTM D648 |
| Thermal conductivity | 0.144 - 0.18 W/m-K | ASTM D433 |
| Melting temperature, 10°C/min | 157 °C | ISO 11357-1/-3 |

ELECTRICAL PROPERTIES

| プロパティ | 価値 | テスト基準 |
|--|-----------------|-----------|
| Dielectric constant, 1kHz | 3.5 - 10.2 | ASTM D150 |
| Dielectric strength, 23°C (73°F) | 1.3 - 1.6 kV/mm | ASTM D149 |
| Volumic (transversal) resistivity, DC, 20°C (68°F)/50%RH | 2.0E+12 ohm*m | ASTM D257 |
| Relative thermal index | 140 | |
| Dissipation factor | 0.01 - 0.22 | ASTM D150 |

OTHER PROPERTIES

| プロパティ | 価値 | テスト基準 |
|---|------------------|-----------|
| Specific gravity, 23°C (73°F) | 1.77 - 1.8 g/cm³ | |
| Water absorption, Saturated in water at 23°C (73°F) | 0.04 % | ASTM D570 |

SPECIAL CHARACTERISTICS

- Flame & smoke

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