

TECHNICAL DATA SHEET

KYNAR FLEX® 2850-00

FLUORINATED COPOLYMER PELLET

KYNAR FLEX® resins are fluorinated thermoplastic copolymers.

Outstanding characteristics: chemical resistance, imperviousness to UV, high barrier properties, high purity, good mechanical and thermo-mechanical properties. This product is NSF/ANSI/CAN 61 certified.

KYNAR FLEX® 2850-00 resin is a standard grade of granules less flexible than the grade KYNAR FLEX® 2800-00 resin with a higher melting point. For extrusion, wire and cable constructions which require an UL wire ratings to 150 degrees C.

Also for applications requiring a UL RTI temperature rating of 140 degrees C.

A powder form is available as KYNAR FLEX® 2851-00 resin.

DESIGNATION

PVDF

DELIVERY FORM

- Pellets

RHEOLOGICAL PROPERTIES

| 속성 | 값 | 테스트 표준 |
|---|---------------|------------|
| Melt viscosity, 230°C (445°F) at 100 s-1 | 23 - 27 kPo | ASTM D3835 |
| Melt flow index (MFR), 235°C / 5 kg (455°F / 11 lb) | 3 - 8 g/10min | ASTM D1238 |
| Melt volume flow rate (MVR), 230°C / 5 kg (446°F / 11 lb) | 1.1 cm³/10min | ISO 1133 |

MECHANICAL PROPERTIES

| 속성 | 값 | 테스트 표준 |
|---|-----------------|--------------|
| Yield stress, 23°C (73°F) | 31 - 41.4 MPa | ASTM D638 |
| 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) | 0.214 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 | 70 - 75 | ASTM D2240 |
| Yield strain, 23°C (73°F), 50 mm/min | 11 % | ISO 527-1/-2 |
| 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 |

KYNAR FLEX® 2850-00

| 속성 | 값 | 테스트 표준 |
|--|----------------------|----------------|
| Abrasion resistance, Wheel CS 17, load 1 kg, 1000 cycles | 6 - 9 mg | ASTM G195-13A |
| 속성 | 값 | 테스트 표준 |
| Glass transition temperature, 10°C/min | -43 °C | ISO 11357-1/-2 |
| Vicat softening temperature, 50N at 50°C/h | 107 °C | ISO 306 |
| 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 |
| Heat deflection temperature, 0.45 MPa | 114 °C | ISO 75-1/-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 |
| Melting temperature, 10°C/min | 158 °C | ISO 11357-1/-3 |

THERMAL PROPERTIES ELECTRICAL PROPERTIES

| 속성 | 값 | 테스트 표준 |
|------------------------------|-------------|-----------|
| Comparative tracking index | 600 | IEC 60112 |
| Dielectric constant, 1kHz | 3.5 - 10.2 | ASTM D150 |
| Relative permittivity, 100Hz | 10.5 | IEC 60250 |
| Relative permittivity, 1MHz | 6.5 | IEC 60250 |
| Relative thermal index | 140 | |
| Dissipation factor, 100Hz | 380 E-4 | IEC 60250 |
| Dissipation factor, 1MHz | 2340 E-4 | IEC 60250 |
| Dissipation factor | 0.01 - 0.22 | ASTM D150 |

OTHER PROPERTIES

| 속성 | 값 | 테스트 표준 |
|--|------------------|--------|
| Moisture absorption, At equilibrium at 23°C (73°F) / 50%HR | 0.015 % | ISO 62 |
| Specific gravity, 23°C (73°F) | 1.77 - 1.8 g/cm³ | |
| Water absorption, Saturated in water at 23°C (73°F) | 0.03 % | ISO 62 |

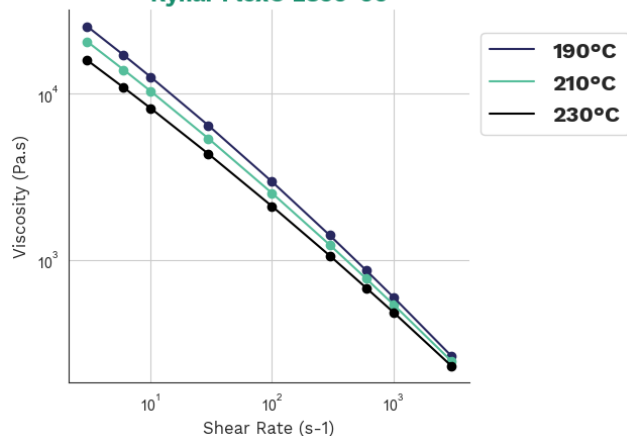
SPECIAL CHARACTERISTICS

- Flame & smoke

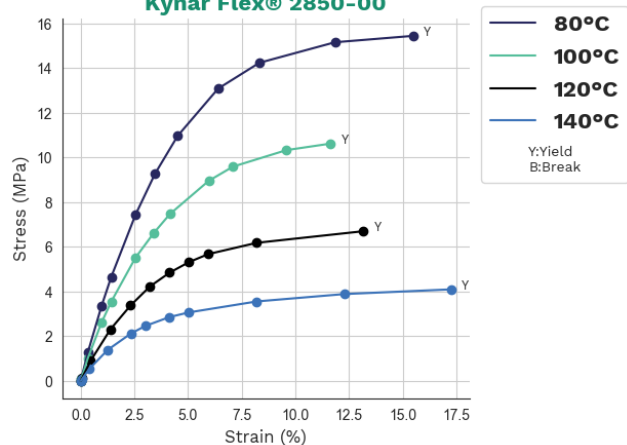
KYNAR FLEX® 2850-00

DIAGRAMS

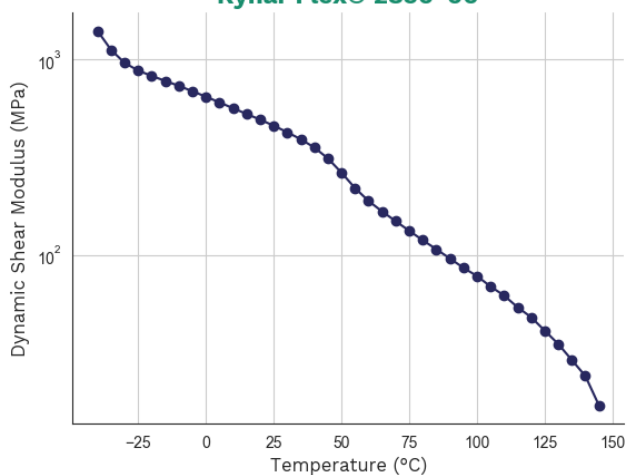
Viscosity-shear rate
Kynar Flex® 2850-00



Stress-strain
Kynar Flex® 2850-00



Dynamic Shear modulus-temperature
Kynar Flex® 2850-00



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