

TECHNICAL DATA SHEET

KYNAR FLEX® 2850-00

FLUORINATED COPOLYMER PELLETT

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

MAIN APPLICATIONS

- Plenum Conduit
- Plenum Cable

DELIVERY FORM

- Pellets

RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
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

PROPERTIES	VALUE	TEST STANDARD
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
Abrasion resistance, Wheel CS 17, load 1 kg, 1000 cycles	6 - 9 mg	ASTM G195-13A

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THERMAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
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

ELECTRICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
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

PROPERTIES	VALUE	TEST STANDARD
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/cm ³	
Water absorption, Saturated in water at 23°C (73°F)	0.03 %	ISO 62

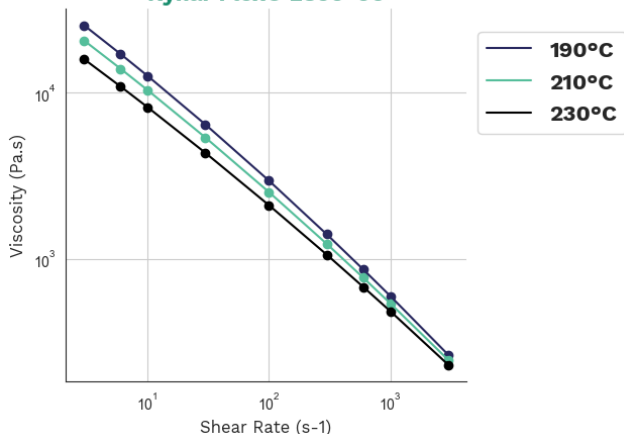
SPECIAL CHARACTERISTICS

- Flame & smoke

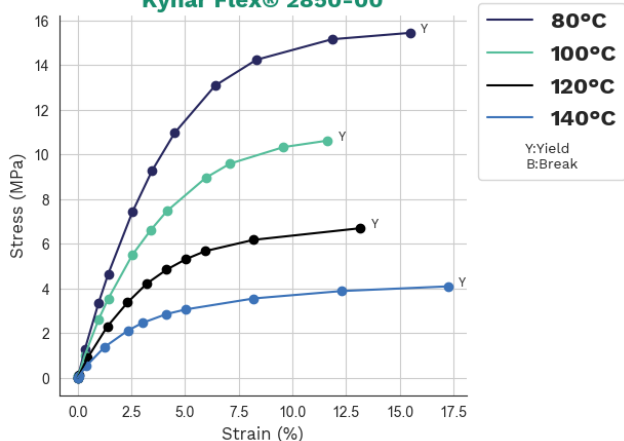
KYNAR FLEX® 2850-00

DIAGRAMS

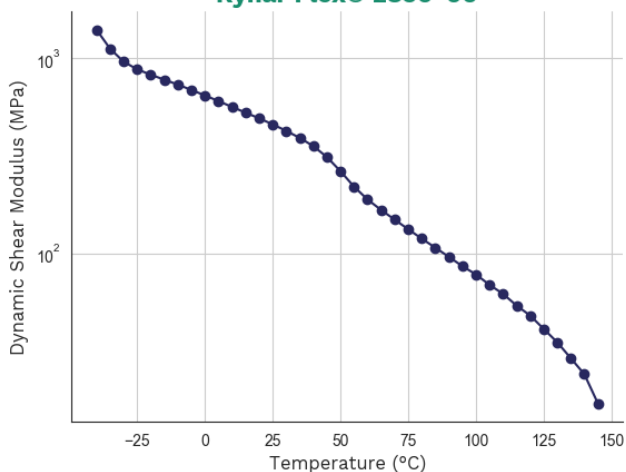
Viscosity-shear rate
Kynar Flex® 2850-00



Stress-strain
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Dynamic Shear modulus-temperature
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