KYNAR FLEX®

TECHNICAL DATA SHEET

KYNAR FLEX® 2850-00

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. This product is NSF/ANSI/CAN 61 certified.
KYNAR FLEX® 2850-00 resin is a standard grade of pellets 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.

TYPE

PVDF

MAIN APPLICATIONS

- plenum conduit
- plenum cable

DELIVERY FORM

- Pellets

RHEOLOGICAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Melt viscosity, 230°C (446°F) at 100 s-1	23 - 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)	1.1	cm^3/10min	ISO 1133

MECHANICAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	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	%	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)	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

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

THERMAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	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
Burning behavior, nominal thickness 1.5 mm	V-0		IEC 60695-11-10

ELECTRICAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Comparative tracking index	600		IEC 60112
Dielectric constant, 1kHz	3.5 - 10.2		ASTM D150
Relative permittivity, 100Hz	10.5		IEC 62631-2-1
Relative permittivity, 1MHz	6.5		IEC 62631-2-1
Relative thermal index	140		
Dissipation factor, 100Hz	380	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	2340	E-4	IEC 62631-2-1
Dissipation factor	0.01 - 0.22		ASTM D150

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

PACKAGING

Available packaging:
- 1000 kg / 2205 lb rigid container
- 25 kg / 55 lb bags
- 25 kg / 55 lb rigid container
- 680 kg / 1500 lb big bag
- 680 kg /1500 lb rigid container

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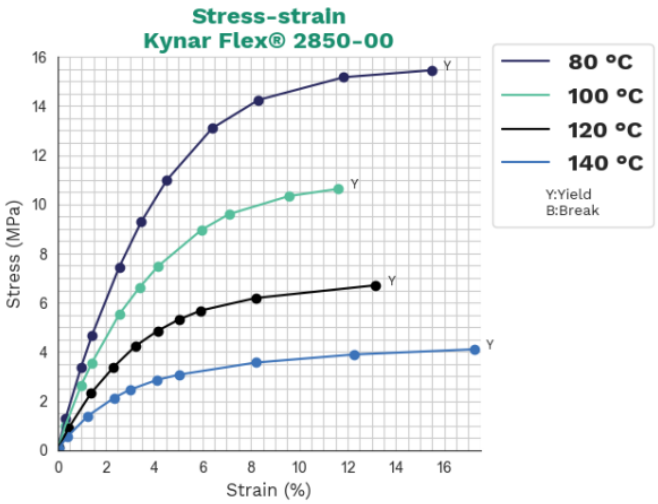
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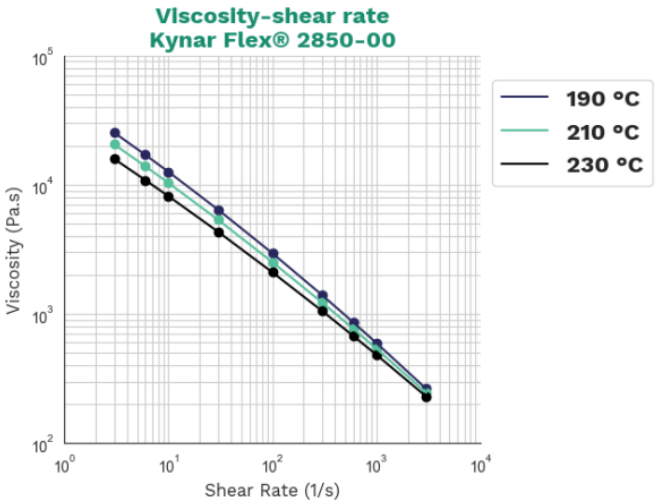
- Typical melt temperature (Min / Recommended / Max) - Injection Molding: 180°C / 210°C / 240°C (355°F / 410°F / 465°F)
- Typical mold temperature - Injection molding: 20-80°C (70-175°F)

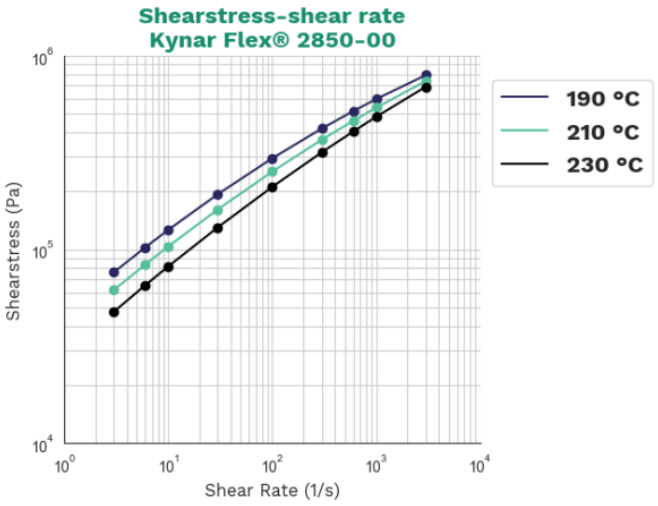
SPECIAL CHARACTERISTICS

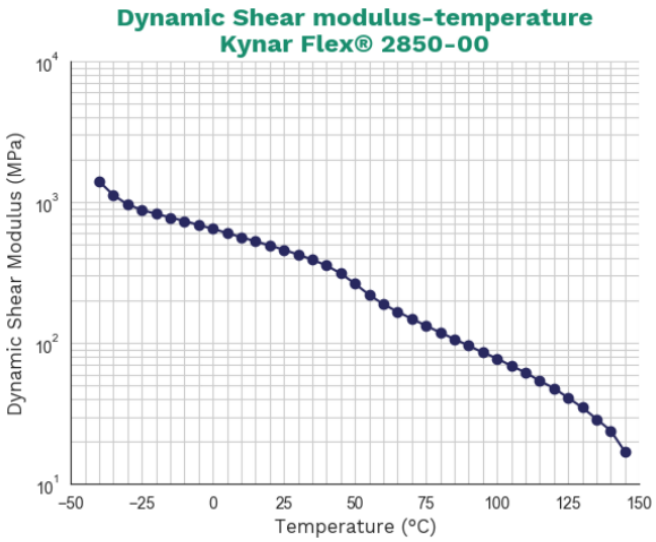
- Flame & smoke

DIAGRAMS









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