

KYNAR FLEX®

2850-00

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**.

[UL Yellow Card](#)

PROPERTIES	VALUE	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	1.1	cm ³ /10 min	ISO 1133
Temperature	230	°C	-
	446	°F	-
Load	5	kg	-
	11	lb	-
Melt Flow Rate	3 - 8	g/10min	ASTM D1238
Temperature	230	°C	-
Load	12.5	kg	-
Melt Viscosity, 230°C, 100 s ⁻¹	23 - 27	kPoise	ASTM D3835
MECHANICAL PROPERTIES			
Tensile Modulus	1300	MPa	ISO 527-1/-2
	189000	psi	
Tensile Modulus, 73 °F	1030 - 1520	MPa	ASTM D638
	150000 - 220000	psi	
Yield Stress	40	MPa	ISO 527-1/-2
	5800	psi	
Tensile Strength at Yield, 73 °F	31 - 41.4	MPa	ASTM D638
	4500 - 6000	psi	
Yield Strain	11	%	ISO 527-1/-2
Elongation at Yield, 73 °F	5 - 15	%	ASTM D638
Nominal Strain at Break	>50	%	ISO 527-1/-2
Tensile Strength at Break, 73 °F	27.6 - 48.3	MPa	ASTM D638
	4000 - 7000	psi	

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Source: automatically generated TDS from Material Database on 12-08-2024

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Elongation at Break, 73 °F	30 - 200	%	ASTM D638
Taber Abrasion, CS 17 1000g:pad	6 - 9	mg/1000 cycles	ASTM-G195-13A
Hardness, Shore D, 73 °F	70 - 75	-	ASTM D2240
Flexural Modulus, 73 °F	1030 - 1240	MPa	ASTM D790
	150000 - 180000	psi	
Flexural Strength @ 5% Strain, 73 °F	20.7 - 34.5	MPa	ASTM D790
	3000 - 5000	psi	
Compressive Strength, 73 °F	41.4 - 58.6	MPa	ASTM D695
	6000 - 8500	psi	
Tensile Creep Modulus, 1h	508	MPa	ISO 899-1
	73700	psi	
Tensile Creep Modulus, 1000h	210	MPa	ISO 899-1
	30500	psi	
Charpy Notched Impact Strength, +23°C	No Break	kJ/m ²	ISO 179/1eA
Charpy Notched Impact Strength, -30°C	5	kJ/m ²	ISO 179/1eA
	2.38	ftlb/in ²	
Unnotched Impact Strength, 73 °F	No Break	kJ/m	ASTM D256
Notched Impact Strength, 73 °F	≥0.214	kJ/m	ASTM D256
	≥4	ftlb/in	
Coefficient of Friction, Static vs. Steel, 73 °F	0.26	-	ASTM D1894
Coefficient of Friction, Dynamic vs. Steel, 73 °F	0.19	-	ASTM D1894
THERMAL PROPERTIES			
Melting Temperature, 10°C/min	158	°C	ISO 11357-1/-3
Melting Point	155 - 160	°C	ASTM D3418
Glass Transition Temperature, 10°C/min	-43	°C	ISO 11357-1/-2
	-45.4	°F	
Glass Transition Temperature (Tg)	-40.6 - -38.3	°C	ASTM D7028
	-41 - -37	°F	
Temperature Rating	140	°C	UL RTI
	284	°F	
Temp. of Deflection Under Load, 1.80 MPa	46	°C	ISO 75-1/-2
	115	°F	
Heat Deflection Temperature, 264 Psi, 248 °F/hr	37.8 - 55	°C	ASTM D648
	100 - 131	°F	

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Temp. of Deflection Under Load, 0.45 MPa	114	°C	ISO 75-1/-2
	237	°F	
Heat Deflection Temperature, 66 Psi, 248 °F/hr	60 - 75	°C	ASTM D648
	140 - 167	°F	
Vicat Softening Temperature, 50°C/h 50N	107	°C	ISO 306
	225	°F	
Coeff. of Linear Thermal Expansion, parallel	160	E-6/K	ISO 11359-1/-2
Coefficient of Thermal Expansion, 73 °F	12.6 - 18.5	10E-5/ °C	ASTM D696
	7 - 10.3	10E-5/ °F	
Burning Behav. at 1.5 mm Nominal Thickness	V-0	class	IEC 60695-11-10
Thickness Tested	1.5	mm	-
	0.0591	in	
Yellow Card available	yes	-	-
Burning Behav. at Thickness h	V-0	class	IEC 60695-11-10
Thickness Tested	0.8	mm	-
	0.0315	in	
Oxygen Index	43	%	ISO 4589-1/-2
Limiting Oxygen Index	43	%	ASTM D2863
Thermal Decomposition TGA, in air	375	°C	1% wt. loss
	707	°F	
Thermal Decomposition TGA, in nitrogen	410	°C	1% wt. loss
	770	°F	
Relative Thermal Index, Mechanical	140	°C	UL 746B
	284	°F	
Relative Thermal Index, Electrical	140	°C	UL 746B
	284	°F	
ELECTRICAL PROPERTIES			
Relative Permittivity, 100Hz	10.5	-	IEC 60250
Relative Permittivity, 1MHz	6.5	-	IEC 60250
Dielectric Constant, 1 kHz	3.5 - 10.2	-	ASTM D150
Dissipation Factor, 100Hz	380	E-4	IEC 60250
Dissipation Factor, 1MHz	2340	E-4	IEC 60250
Dissipation Factor, 100 kHz	0.01 - 0.22	-	ASTM D150
Volume Resistivity	2E12	Ohm* m	IEC 62631-3-1

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Volume Resistivity, DC 68 °F, 65% R.H.	2.9E14 - 3.2E14	Ohm*c m	ASTM D257
Surface Resistivity	1E13	Ohm	IEC 62631-3-2
Dielectric (Electric) Strength	21	kV/mm	IEC 60243-1
	533	kV/in	
Dielectric (Electric) Strength, 73°F	1.3 - 1.6	kV/mil	ASTM D149
Comparative Tracking Index	600	-	IEC 60112
OTHER PROPERTIES			
Water Absorption, 23°C, immersion, equilibrium	0.03	%	ISO 62
Water Absorption	0.03 - 0.05	%	ASTM D570
Humidity Absorption, 23°C, RH50%, equilibrium	0.015	%	ISO 62
Density	1770	kg/m ³	ISO 1183
	1.77	g/cm ³	
Specific Gravity, 73 °F	1.77 - 1.8	-	ASTM D792
OPTICAL PROPERTIES			
Refractive Index @ sodium D line	1.42	-	ASTM D542

MAIN APPLICATIONS:

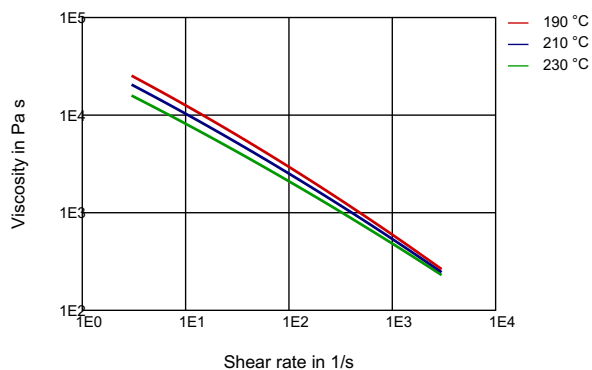
- piping systems
- corrosion protection in the chemical industry and lined pipe
- off shore
- wire and cable

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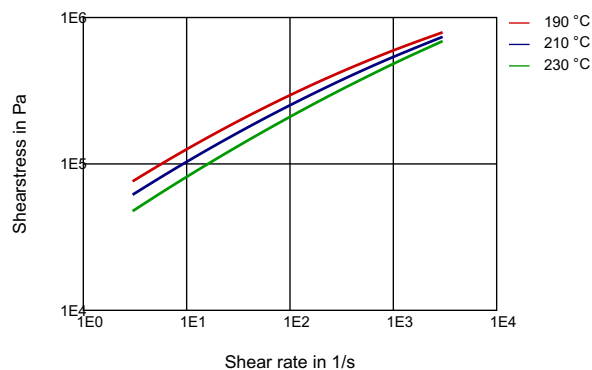
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DIAGRAMS

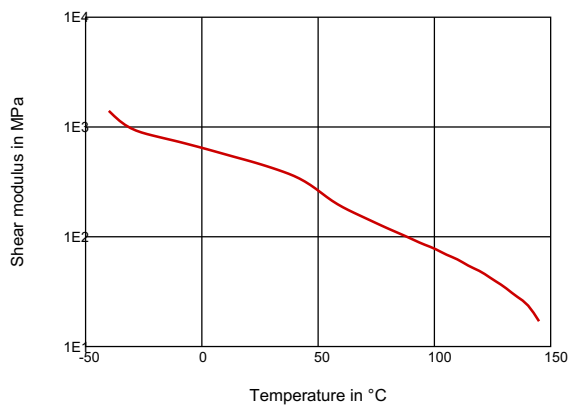
VISCOSITY-SHEAR RATE



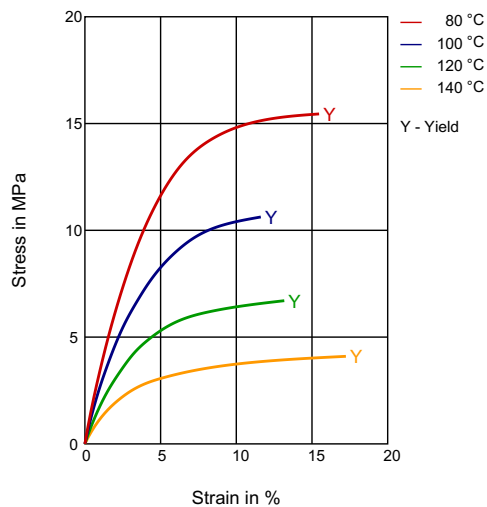
SHEARSTRESS-SHEAR RATE



DYN. SHEAR MODULUS-TEMPERATURE



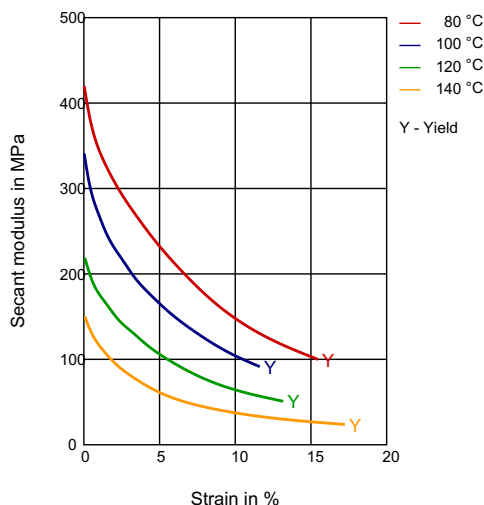
STRESS-STRAIN



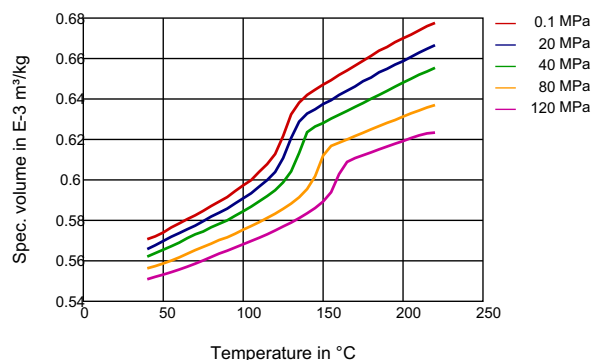
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SECANT MODULUS-STRAIN



SPECIFIC VOLUME-TEMPERATURE (PVT)



PROCESSING

Profile Extrusion, Other Extrusion, Transfer Molding

DELIVERY FORM

Pellets

SPECIAL CHARACTERISTICS

Heat Stabilized, Light Stabilized

REGIONAL AVAILABILITY

North America, Europe, Asia Pacific, South and Central America, Near East/Africa

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