

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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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/	ASTM D696
	7 - 10.3	10E-5/ °C	
Burning Behav. at 1.5 mm Nominal Thickness	V-0	°F 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:

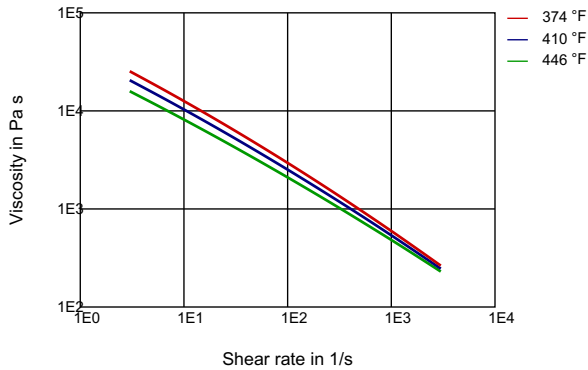
- piping systems
- corrosion protection in the chemical industry and lined pipe
- off shore
- wire and cable

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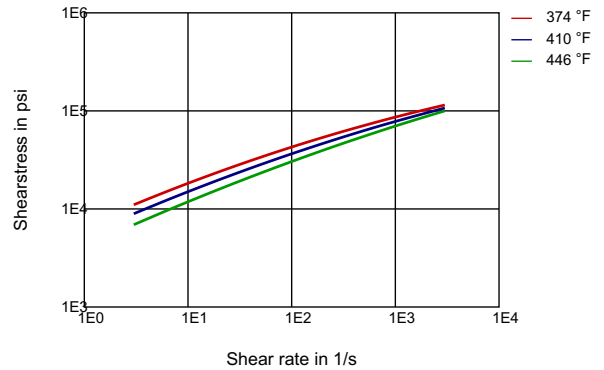
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DIAGRAMS

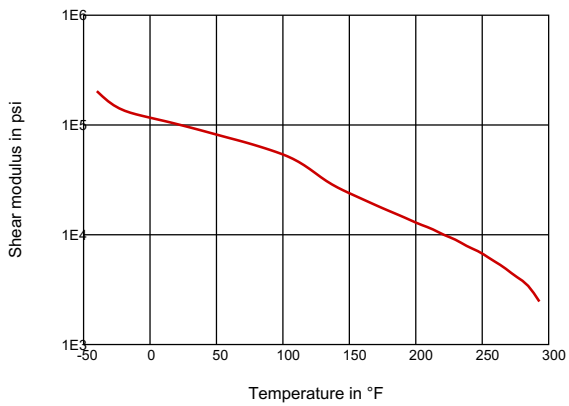
VISCOSITY-SHEAR RATE



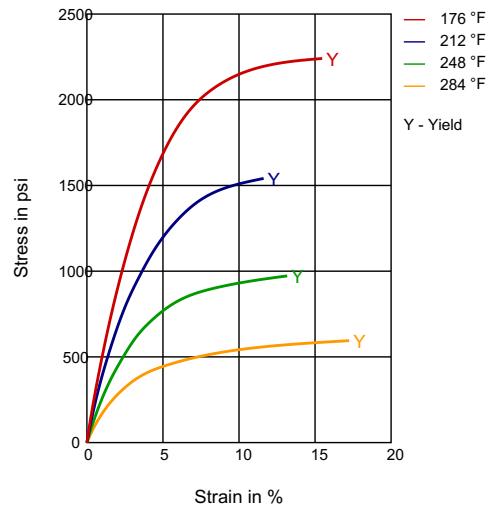
SHEARSTRESS-SHEAR RATE



DYN. SHEAR MODULUS-TEMPERATURE



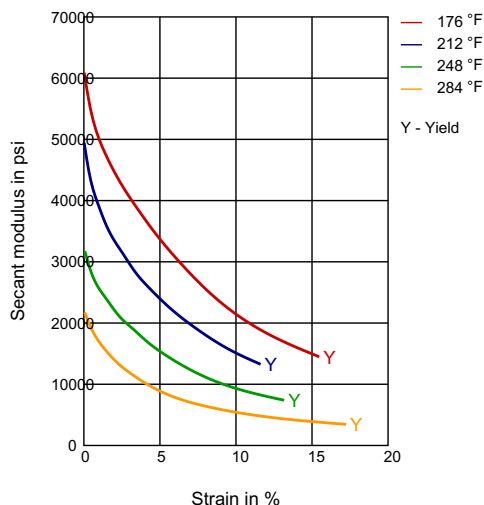
STRESS-STRAIN



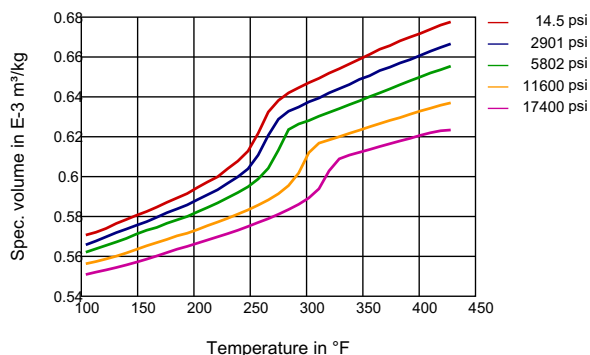
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SECANT MODULUS-STRAIN



SPECIFIC VOLUME-TEMPERATURE (PVT)



<p>PROCESSING</p> <p>Profile Extrusion, Other Extrusion, Transfer Molding</p>	<p>Headquarters:</p> <p>Arkema France 420 rue d'Estienne d'Orves 92705 Colombes Cedex France T +33 (0)1 49 00 80 80 hpp.arkema.com</p> <p>Arkema Inc. – High Performance Polymers</p> <p>900 First Avenue King of Prussia, PA 19406 Tel.: +1 610 205 7000 hpp.arkema.com</p>
<p>DELIVERY FORM</p> <p>Pellets</p>	
<p>SPECIAL CHARACTERISTICS</p> <p>Heat Stabilized, Light Stabilized</p>	
<p>REGIONAL AVAILABILITY</p> <p>North America, Europe, Asia Pacific, South and Central America, Near East/Africa</p>	

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