

KYNAR FLEX® 2800-20

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.

Kynar Flex® resin is a standard grade of granules, compared to the homopolymer grades, which exhibits a lower modulus, a better resistance to stress cracking in alkaline and oxidizing media, and a lower melting point.

For cable coating, extrusion of tube and plaque, injection molding.

Additional characteristics:

- Easily processed using conventional equipment
- Excellent thermal stability
- Retains properties after aging
- Pigmentable
- UL RTI temperature rating 125°C

MAIN CHARACTERISTICS

PROPERTIES	VALUE	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	4.5	cm ³ /10min	ISO 1133
Temperature	230	°C	-
Load	5	kg	-
Melt Flow Rate	1 - 8	g/10min	ASTM D1238
Temperature	230	°C	-
Load	5	kg	-
Melt Viscosity, 230°C, 100 s ⁻¹	12 - 20	kPoise	ASTM D3835
MECHANICAL PROPERTIES			
Tensile Modulus	700	MPa	ISO 527-1/-2
Tensile Modulus, 73 °F	552 - 896	MPa	ASTM D638
Yield stress	27	MPa	ISO 527-1/-2
Tensile Strength at Yield, 73 °F	20 - 34.5	MPa	ASTM D638
Yield strain	15	%	ISO 527-1/-2
Nominal Strain at Break	>50	%	ISO 527-1/-2
Tensile Strength at Break, 73 °F	17.2 - 34.5	MPa	ASTM D638
Elongation at Break, 73 °F	100 - 300	%	ASTM D638
Taber Abrasion, CS 17 1000g:pad	16 - 19	mg/1000 cycles	ASTM-G195-13A
Hardness, Shore D, 73 °F	60 - 70	-	ASTM D2240
Flexural Modulus, 73 °F	483 - 758	MPa	ASTM D790
Compressive Strength, 73 °F	31 - 41.4	MPa	ASTM D695
Charpy Impact Strength, +23°C	177	kJ/m ²	ISO 179/1eU
Charpy Impact Strength, -30°C	235	kJ/m ²	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	60	kJ/m ²	ISO 179/1eA

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Charpy Notched Impact Strength, -30°C	5	kJ/m ²	ISO 179/1eA
Unnotched Impact Strength, 73 °F	No Break	kJ/m	ASTM D256
Notched Impact Strength, 73 °F	0.534 - 1.07	kJ/m	ASTM D256
Coefficient of Friction, Static vs. Steel, 73 °F	0.33	-	ASTM D1894
Coefficient of Friction, Dynamic vs. Steel, 73 °F	0.33	-	ASTM D1894
THERMAL PROPERTIES			
Melting Temperature, 10°C/min	143	°C	ISO 11357-1/-3
Melting Point, 73 °F	140 - 145	°C	ASTM D3418
Glass Transition Temperature, 10°C/min	-40	°C	ISO 11357-1/-2
Glass Transition Temperature (T _g)	-41.1 - -39.4	°C	ASTM D7028
Temperature Rating	130	°C	UL RTI
Temp. of Deflection Under Load, 1.80 MPa	48	°C	ISO 75-1/-2
Heat Deflection Temperature, 264 Psi, 248 °F/hr	40 - 55	°C	ASTM D648
Temp. of Deflection Under Load, 0.45 MPa	68	°C	ISO 75-1/-2
Heat Deflection Temperature, 66 Psi, 248 °F/hr	60 - 75	°C	ASTM D648
Vicat Softening Temperature, 50°C/h 50N	76	°C	ISO 306
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
Burning Behav. at 1.5 mm Nominal Thickness	V-0	class	IEC 60695-11-10
Thickness Tested	1.6	mm	-
Burning Behav. at Thickness h	V-0	class	IEC 60695-11-10
Thickness Tested	0.8	mm	-
Oxygen Index	42	%	ISO 4589-1/-2
Limiting Oxygen Index, 73 °F	42	%	ASTM D2863
Thermal Conductivity	0.144 - 0.18	W/(m K)	ASTM D433
Specific Heat	745 - 958	J/(kg K)	DSC
Thermal Decomposition TGA, in air	375	°C	1% wt. loss
Thermal Decomposition TGA, in nitrogen	410	°C	1% wt. loss
Relative Thermal Index, Mechanical	130	°C	UL 746B
Relative Thermal Index, Electrical	130	°C	UL 746B
ELECTRICAL PROPERTIES			
Relative Permittivity, 100Hz	11	-	IEC 60250
Relative Permittivity, 1MHz	6	-	IEC 60250
Dielectric Constant, 1 kHz	3.5 - 10.6	-	ASTM D150
Dissipation Factor, 100Hz	570	E-4	IEC 60250
Dissipation Factor, 1MHz	2340	E-4	IEC 60250
Dissipation Factor, 100 kHz	0.02 - 0.21	-	ASTM D150

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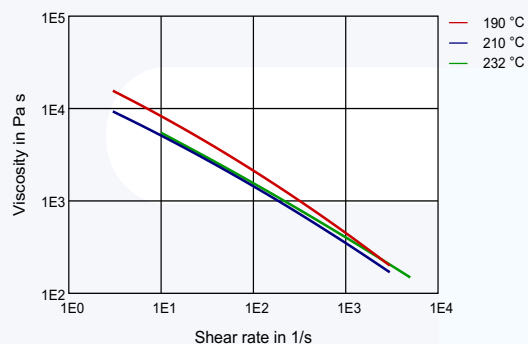
Volume Resistivity	2E12	Ohm*m	IEC 60093
Volume Resistivity, DC 68 °F, 65% R.H.	2E14	Ohm*cm	ASTM D257
Dielectric (Electric) Strength, 73°F	1.3 - 1.5	kV/mil	ASTM D149
OTHER PROPERTIES			
Water Absorption	0.03	%	Sim. to ISO 62
Density	1.780	kg/m³	ISO 1183
Specific Gravity, 73 °F	1.77 - 1.8	-	ASTM D792
OPTICAL PROPERTIES			
Refractive Index @ sodium D line	1.41	-	ASTM D542

MAIN APPLICATIONS:

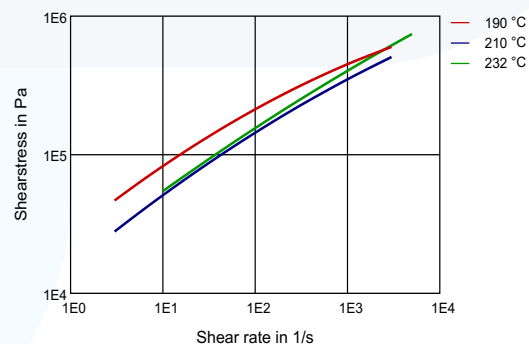
- flexible tubing
- corrosion protection in the chemical industry
- coating (painting, co-extrusion)
- off shore
- wire and cable jacketing with and without cross-linking

DIAGRAMS

VISCOSITY-SHEAR RATE



SHEARSTRESS-SHEAR RATE



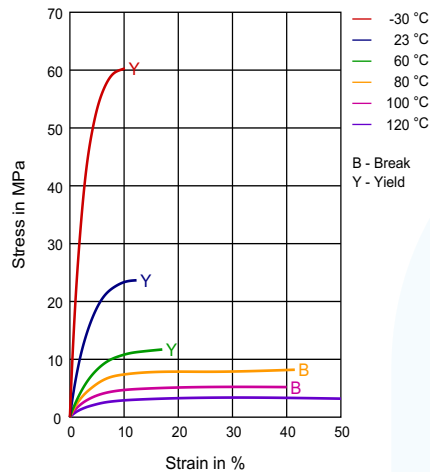
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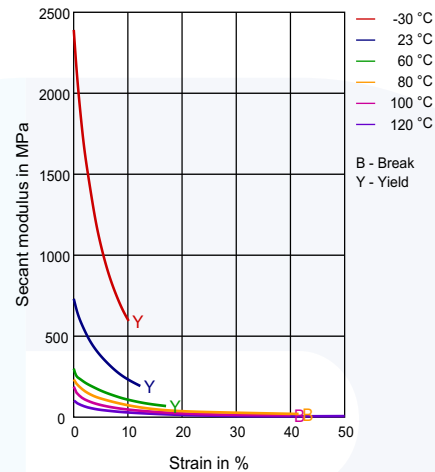
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KYNAR FLEX® 2800-20

STRESS-STRAIN



SECANT MODULUS-STRAIN



PROCESSING

Injection Molding, Film Extrusion, Profile Extrusion, Sheet Extrusion, Other Extrusion

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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