

KYNAR® 740 RED

Kynar® resins are fluorinated thermoplastic homopolymers.

Outstanding characteristics: chemical resistance, imperviousness to UV, high barrier properties, high purity, good mechanical and thermo-mechanical properties.

Kynar® 740 resin is a standard grade of granules for extrusion of tubes and plaques, compression and transfer molding. This product is NSF/ANSI/CAN 61 certified.

PROPERTIES	VALUE	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	1.1	cm ³ /10min	ISO 1133
Temperature	230	°C	-
	446	°F	-
Load	5	kg	-
	11	lb	-
Melt Flow Rate	1.5 - 3	g/10min	ASTM D1238
Temperature	230	°C	-
Load	5	kg	-
Molding Shrinkage, parallel	2.0	%	ISO 294-4, 2577
Molding Shrinkage, normal	2.0	%	ISO 294-4, 2577
Melt Viscosity, 230°C, 100 s-1	16 - 22	kPoise	ASTM D3835
MECHANICAL PROPERTIES			
Tensile Modulus	1700	MPa	ISO 527-1/-2
	247000	psi	
Tensile Modulus, 73 °F	1380 - 2310	MPa	ASTM D638
	200000 - 335000	psi	
Yield stress	50	MPa	ISO 527-1/-2
	7250	psi	
Tensile Strength at Yield, 73 °F	44.8 - 55.2	MPa	ASTM D638
	6500 - 8000	psi	
Yield strain	7	%	ISO 527-1/-2
Elongation at Yield, 73 °F	5 - 10	%	ASTM D638
Nominal Strain at Break	>50	%	ISO 527-1/-2
Tensile Strength at Break, 73 °F	34.5 - 55.2	MPa	ASTM D638
	5000 - 8000	psi	
Elongation at Break, 73 °F	20 - 100	%	ASTM D638

KYNAR® 740 RED

Taber Abrasion, CS 17 1000g:pad	5 - 9	mg/1000 cycles	ASTM-G195-13A
Hardness, Shore D, 73 °F	76 - 80	-	ASTM D2240
Flexural Modulus, 73 °F	1380 - 2310	MPa	ASTM D790
	200000 - 335000	psi	
Flexural Strength @ 5% Strain, 73 °F	58.6 - 75.8	MPa	ASTM D790
	8500 - 11000	psi	
Compressive Strength, 73 °F	68.9 - 103	MPa	ASTM D695
	10000 - 15000	psi	
Tensile Creep Modulus, 1h	1050	MPa	ISO 899-1
	152000	psi	
Tensile Creep Modulus, 1000h	570	MPa	ISO 899-1
	82700	psi	
Charpy Impact Strength, +23°C	244	kJ/m²	ISO 179/1eU
	116	ftlb/in²	
Charpy Impact Strength, -30°C	186	kJ/m²	ISO 179/1eU
	88.5	ftlb/in²	
Charpy Notched Impact Strength, +23°C	14	kJ/m²	ISO 179/1eA
	6.66	ftlb/in²	
Charpy Notched Impact Strength, -30°C	5	kJ/m²	ISO 179/1eA
	2.38	ftlb/in²	
Unnotched Impact Strength, 73 °F	1.07 - 4.27	kJ/m	ASTM D256
	20 - 80	ftlb/in	
Notched Impact Strength, 73 °F	0.0961 - 0.214	kJ/m	ASTM D256
	1.8 - 4	ftlb/in	
Coefficient of Friction, Static vs. Steel, 73 °F	0.2	-	ASTM D1894
Coefficient of Friction, Dynamic vs. Steel, 73 °F	0.14	-	ASTM D1894
THERMAL PROPERTIES			
Melting Temperature, 10°C/min	168	°C	ISO 11357-1/-3
Melting Point, 73 °F	165 - 172	°C	ASTM D3418
Glass Transition Temperature, 10°C/min	-40	°C	ISO 11357-1/-2
Glass Transition Temperature (Tg)	-40.6 - -38.3	°C	ASTM D7028
	-41 - -37	°F	
Temperature Rating	150	°C	UL RTI
	302	°F	

KYNAR® 740 RED

Temp. of Deflection Under Load, 1.80 MPa	105	°C	ISO 75-1/-2
	221	°F	
Heat Deflection Temperature, 264 Psi, 248 °F/hr	105 - 115	°C	ASTM D648
	221 - 239	°F	
Temp. of Deflection Under Load, 0.45 MPa	135	°C	ISO 75-1/-2
	275	°F	
Heat Deflection Temperature, 66 Psi, 248 °F/hr	125 - 140	°C	ASTM D648
	257 - 284	°F	
Vicat Softening Temperature, 50°C/h 50N	135	°C	ISO 306
	275	°F	
Coeff. of Linear Thermal Expansion, parallel	150	E-6/K	ISO 11359-1/-2
Coefficient of Thermal Expansion, 73 °F	11.9 - 14.4	10E-5/°C	ASTM D696
	6.6 - 8	10E-5/°F	
Burning Behav. at 1.5 mm Nominal Thickness	V-0	class	IEC 60695-11-10
Thickness Tested	1.6	mm	-
	0.0630	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, 73 °F	44	%	ASTM D2863
Thermal Conductivity	0.17 - 0.19	W/(m K)	ASTM D433
	1.18 - 1.32	BTU in /(hr ft2 F)	
Specific Heat	745 - 958	J/(kg K)	DSC
	0.28 - 0.36	BTU/(lb·°F)	
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	150	°C	UL 746B
	302	°F	
Relative Thermal Index, Electrical	150	°C	UL 746B
	302	°F	

KYNAR® 740 RED

ELECTRICAL PROPERTIES

Relative Permittivity, 100Hz	11	-	IEC 60250
Relative Permittivity, 1MHz	8	-	IEC 60250
Dielectric Constant, 1 kHz	4.5 - 9.5	-	ASTM D150
Dissipation Factor, 100Hz	260	E-4	IEC 60250
Dissipation Factor, 1MHz	2310	E-4	IEC 60250
Dissipation Factor, 100 kHz	0.01 - 0.21	-	ASTM D150
Volume Resistivity	2E12	Ohm*m	IEC 60093
Volume Resistivity, DC 68 °F, 65% R.H.	2E14	Ohm*cm	ASTM D257
Surface Resistivity	>1E15	Ohm	IEC 60093
Dielectric (Electric) Strength	21	kV/mm	IEC 60243-1
	533	kV/in	
Dielectric (Electric) Strength, 73°F	1.7	kV/mil	ASTM D149
Comparative Tracking Index	600	-	IEC 60112

OTHER PROPERTIES

Water Absorption	0.03	%	Sim. to ISO 62
Water Absorption	0.01 - 0.03	%	ASTM D570
Humidity Absorption	0.015	%	Sim. to ISO 62
Density	1780	kg/m³	ISO 1183
	1.78	g/cm³	
Specific Gravity, 73 °F	1.77 - 1.79	-	ASTM D792

OPTICAL PROPERTIES

Refractive Index @ sodium D line	1.42	-	ASTM D542
----------------------------------	------	---	-----------

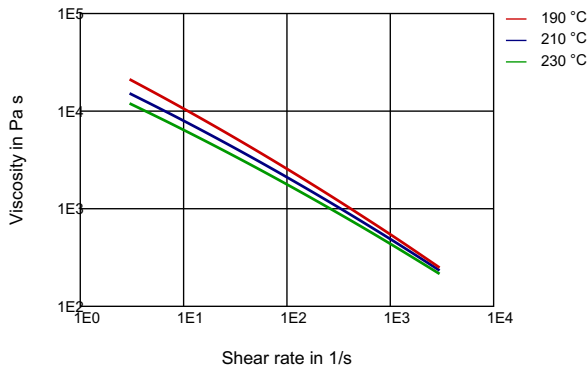
MAIN APPLICATIONS:

- corrosion protection in the chemical industry
- wire and cable
- coating (painting, co-extrusion)
- off-shore

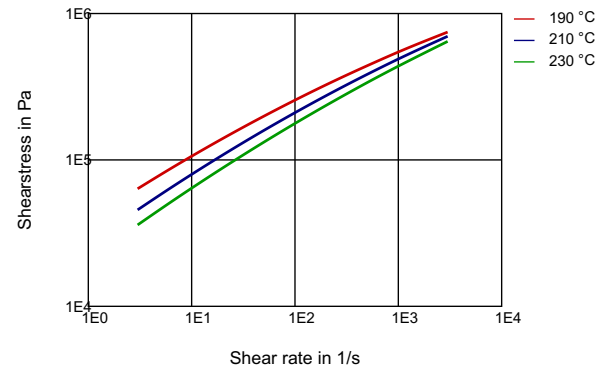
KYNAR[®] 740 RED

DIAGRAMS

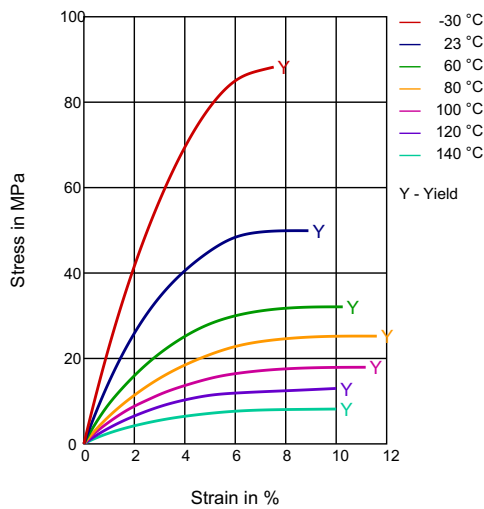
VISCOSITY-SHEAR RATE



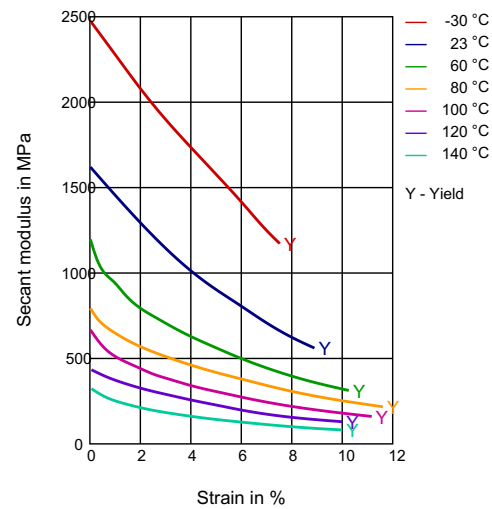
SHEARSTRESS-SHEAR RATE



STRESS-STRAIN

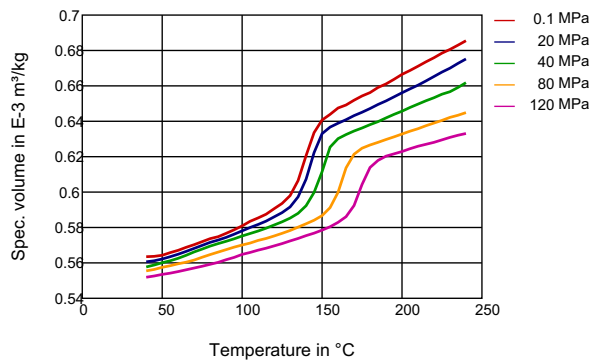


SECANT MODULUS-STRAIN



KYNAR® 740 RED

SPECIFIC VOLUME-TEMPERATURE (PVT)



PROCESSING

Profile Extrusion, Sheet Extrusion, Other Extrusion,
Transfer Molding, Thermoforming

DELIVERY FORM

Pellets

SPECIAL CHARACTERISTICS

Heat Stabilized, Light Stabilized

REGIONAL AVAILABILITY

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