

KYNAR® 720

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® 720 resin is a standard grade of granules for injection molding. This product is ANSI/NSF Standard 61 certified.

A powder form is available as **Kynar® 721 resin**.

MAIN CHARACTERISTICS

PROPERTIES	VALUE	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	10	cm ³ /10min	ISO 1133
Temperature	230	°C	-
Load	5	kg	-
Melt Flow Rate	5 - 26.5	g/10min	ASTM D1238
Temperature	230	°C	-
Load	3.8	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	6 - 12	kPoise	ASTM D3835
MECHANICAL PROPERTIES			
Tensile Modulus	2200	MPa	ISO 527-1/-2
Tensile Modulus, 73 °F	1380 - 2310	MPa	ASTM D638
Yield stress	54	MPa	ISO 527-1/-2
Tensile Strength at Yield, 73 °F	44.8 - 55.2	MPa	ASTM D638
Yield strain	8	%	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
Elongation at Break, 73 °F	20 - 100	%	ASTM D638
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
Flexural Strength @ 5% Strain, 73 °F	58.6 - 75.8	MPa	ASTM D790
Compressive Strength, 73 °F	68.9 - 103	MPa	ASTM D695
Charpy Impact Strength, +23°C	208	kJ/m ²	ISO 179/1eU
Charpy Impact Strength, -30°C	189	kJ/m ²	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	8	kJ/m ²	ISO 179/1eA
Charpy Notched Impact Strength, -30°C	5	kJ/m ²	ISO 179/1eA

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Unnotched Impact Strength, 73 °F	1.07 - 4.27	kJ/m	ASTM D256
Notched Impact Strength, 73 °F	0.0801 - 0.214	kJ/m	ASTM D256
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
Temperature Rating	150	°C	UL RTI
Temp. of Deflection Under Load, 1.80 MPa	110	°C	ISO 75-1/-2
Heat Deflection Temperature, 264 Psi, 248 °F/hr	105 - 115	°C	ASTM D648
Temp. of Deflection Under Load, 0.45 MPa	132	°C	ISO 75-1/-2
Heat Deflection Temperature, 66 Psi, 248 °F/hr	125 - 140	°C	ASTM D648
Vicat Softening Temperature, 50°C/h 50N	139	°C	ISO 306
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
Burning Behav. at 1.5 mm Nominal Thickness	V-0	class	IEC 60695-11-10
Thickness Tested	1.6	mm	-
Yellow Card available	yes	-	-
Burning Behav. at Thickness h	V-0	class	IEC 60695-11-10
Thickness Tested	0.8	mm	-
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
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	150	°C	UL 746B
Relative Thermal Index, Electrical	150	°C	UL 746B
ELECTRICAL PROPERTIES			
Relative Permittivity, 100Hz	9	-	IEC 60250
Relative Permittivity, 1MHz	7	-	IEC 60250
Dielectric Constant, 1 kHz	4.5 - 9.5	-	ASTM D150
Dissipation Factor, 100Hz	320	E-4	IEC 60250
Dissipation Factor, 1MHz	2140	E-4	IEC 60250
Dissipation Factor, 100 kHz	0.01 - 0.21	-	ASTM D150

KYNAR® 720

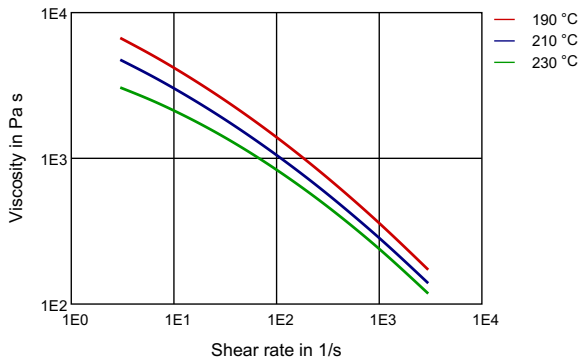
Volume Resistivity	2E12	Ohm*m	IEC 60093
Volume Resistivity, DC 68 °F, 65% R.H.	2E14	Ohm*cm	ASTM D257
Surface Resistivity	> 1E15	Ohm	IEC 60093
Dielectric (Electric) Strength	21	kV/mm	IEC 60243-1
Dielectric (Electric) Strength, 73°F	≥ 1.7	kV/mil	ASTM D149
Comparative Tracking Index	600	-	IEC 60112
OTHER 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/m ³	ISO 1183
Specific Gravity, 73 °F	1.77 - 1.79	-	ASTM D792
OPTICAL PROPERTIES			
Refractive Index @ sodium D line	1.42	-	ASTM D542

MAIN APPLICATIONS:

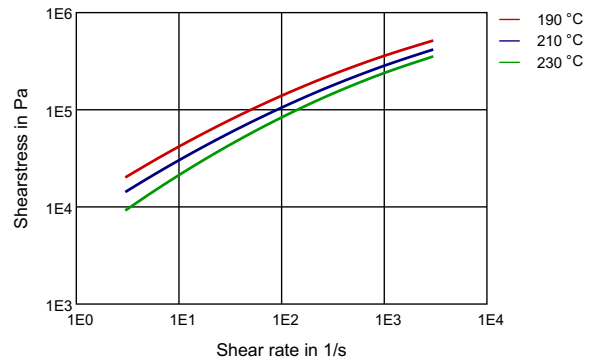
- corrosion protection in the chemical industry
- coating (painting, co-extrusion)
- off shore
- wire and cable

DIAGRAMS

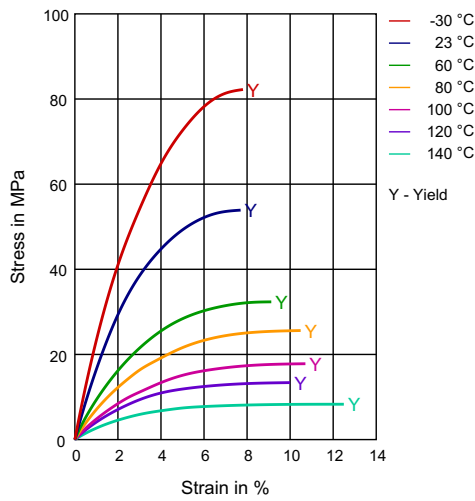
VISCOSITY-SHEAR RATE



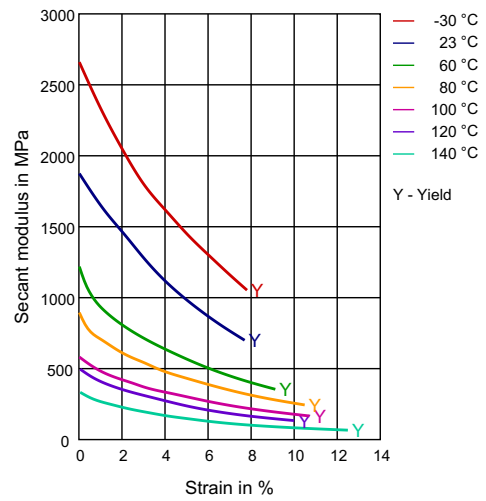
SHEARSTRESS-SHEAR RATE



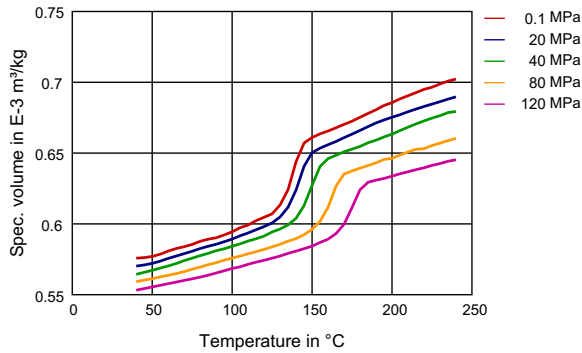
STRESS-STRAIN



SECANT MODULUS-STRAIN



SPECIFIC VOLUME-TEMPERATURE (PVT)



PROCESSING

Injection Molding, Film Extrusion, Sheet Extrusion, Casting, Thermoforming

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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