KYNAR®
1000 HD

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® 1000 HD resin is a standard grade of granules for compression and transfer molding, for extrusion of thick walled parts: blocks, rods, plaques, tubes.

UL Yellow Card

PROPERTIES	VALUE	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	1.1	cm³/10 min	ISO 1133
Temperature	230	°C	-
	446	°F	
Load	5	kg	-
	11	lb	
Melt Flow Rate	1 - 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}	15 - 20	kPoise	ASTM D3835
MECHANICAL PROPERTIES			
Tensile Modulus	2000	MPa	ISO 527-1/-2
	290000	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	9	%	ISO 527-1/-2
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
Hardness, Shore D, 73 °F	76 - 80	-	ASTM D2240
Flexural Modulus, 73 °F	1450 - 2310	MPa	ASTM D790
	210000 - 335000	psi	

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Compressive Strength, 73 °F	68.9 - 103	MPa	ASTM D695
	10000 - 15000	psi	
Charpy Impact Strength, +23°C	No Break	kJ/m²	ISO 179/1eU
Charpy Impact Strength, -30°C	No Break	kJ/m²	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	22	kJ/m²	ISO 179/1eA
	10.5	ftlb/in²	
Charpy Notched Impact Strength, -30°C	5	kJ/m²	ISO 179/1eA
	2.38	ftlb/in²	
THERMAL PROPERTIES			
Melting Temperature, 10°C/min	169	°C	ISO 11357-1/-3
Melting Point	172	°C	ASTM D3418
Glass Transition Temperature, 10°C/min	-40	°C	ISO 11357-1/-2
Glass Transition Temperature (Tg)	-40	°C	ASTM D7028
Temperature Rating	150	°C	UL RTI
	302	°F	
Temp. of Deflection Under Load, 1.80 MPa	104	°C	ISO 75-1/-2
	219	°F	
Heat Deflection Temperature, 264 Psi, 248 °F/hr	105 - 115	°C	ASTM D648
	221 - 239	°F	
Heat Deflection Temperature, 66 Psi, 248 °F/hr	125 - 140	°C	ASTM D648
	257 - 284	°F	
Vicat Softening Temperature, 50°C/h 50N	138	°C	ISO 306
	280	°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	
Burning Behav. at Thickness h	V-0	class	IEC 60695-11-10
Thickness Tested	0.8	mm	-
	0.0315	in	
Oxygen Index	83	%	ISO 4589-1/-2
Limiting Oxygen Index	60	%	ASTM D2863
Thermal Conductivity	0.17 - 0.19	W/(m K)	ASTM D433
	1.18 - 1.32	BTU in /(hr ft2 F)	

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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	
ELECTRICAL PROPERTIES			
Relative Permittivity, 100Hz	10.5	-	IEC 60250
Relative Permittivity, 1MHz	7	-	IEC 60250
Dissipation Factor, 100Hz	270	E-4	IEC 60250
Dissipation Factor, 1MHz	2400	E-4	IEC 60250
Volume Resistivity	2.3E10	Ohm*m	IEC 62631-3-1
Volume Resistivity, DC 68 °F, 65% R.H.	2E14	Ohm*cm	ASTM D257
Surface Resistivity	4E13	Ohm	IEC 62631-3-2
Dielectric (Electric) Strength	27	kV/mm	IEC 60243-1
	686	kV/in	
Comparative Tracking Index	600	-	IEC 60112
OTHER PROPERTIES			
Water Absorption, 23°C, immersion, equilibrium	0.03	%	ISO 62
Water Absorption	0.01 - 0.03	%	ASTM D570
Humidity Absorption, 23°C, RH50%, equilibrium	0.015	%	ISO 62
Density	1770	kg/m³	ISO 1183
	1.77	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

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PROCESSING

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

DELIVERY FORM

Pellets

REGIONAL AVAILABILITY

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

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