KYNAR FLEX®
2821-00

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® 2821 resin is the powder form of the **Kynar Flex® 2820-20 resin**. To be used as an additive in polyethylene to improve the extrusion rate.

UL Yellow Card

PROPERTIES	VALUE	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	3	cm³/10 min	ISO 1133
Temperature	230	°C	-
	446	°F	
Load	5	kg	-
	11	lb	
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
	102000	psi	
Tensile Modulus, 73 °F	552 - 896	MPa	ASTM D638
	80000 - 130000	psi	
Yield Stress	27	MPa	ISO 527-1/-2
	3920	psi	
Tensile Strength at Yield, 73 °F	20 - 34.5	MPa	ASTM D638
	2900 - 5000	psi	
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
	2500 - 5000	psi	
Elongation at Break, 73 °F	100 - 300	%	ASTM D638

KYNAR FLEX®
2821-00

Taber Abrasion, CS 17 1000g:pad	16 - 9	mg/1000 cycles	ASTM-G195-13A
Hardness, Shore D, 73 °F	60 - 70	-	ASTM D2240
Flexural Modulus, 73 °F	483 - 758	MPa	ASTM D790
	70000 - 110000	psi	
Compressive Strength, 73 °F	31 - 41.4	MPa	ASTM D695
	4500 - 6000	psi	
Charpy Notched Impact Strength, +23°C	No Break	kJ/m²	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
	10 - 20	ftlb/in	
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	140 - 145	°C	ASTM D3418
Glass Transition Temperature, 10°C/min	-40	°C	ISO 11357-1/-2
Glass Transition Temperature (Tg)	-41.1 - -39.4	°C	ASTM D7028
	-42 - -39	°F	
Temperature Rating	130	°C	UL RTI
	266	°F	
Temp. of Deflection Under Load, 1.80 MPa	48	°C	ISO 75-1/-2
	118	°F	
Heat Deflection Temperature, 264 Psi, 248 °F/hr	40 - 55	°C	ASTM D648
	104 - 131	°F	
Heat Deflection Temperature, 66 Psi, 248 °F/hr	60 - 75	°C	ASTM D648
	140 - 167	°F	
Vicat Softening Temperature, 50°C/h 50N	76	°C	ISO 306
	169	°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/°C	ASTM D696
	7 - 10.3	10E-5/°F	
Burning Behav. at 1.5 mm Nominal Thickness	V-0	class	IEC 60695-11-10
Thickness Tested	1.5	mm	-
	0.0591	in	

KYNAR FLEX®
2821-00

Yellow Card available	yes	-	-
Burning Behav. at Thickness h	V-0	class	IEC 60695-11-10
Thickness Tested	0.8	mm	-
	0.0315	in	
Yellow Card available	yes	-	-
Burning Behav. 5V at Thickness h	5VB	class	IEC 60695-11-20
Thickness Tested	1.5	mm	-
	0.0591	in	
Oxygen Index	42	%	ISO 4589-1/-2
Limiting Oxygen Index	42	%	ASTM D2863
Thermal Conductivity	0.144 - 0.18	W/(m K)	ASTM D433
	1 - 1.25	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	130	°C	UL 746B
	266	°F	
Relative Thermal Index, Electrical	130	°C	UL 746B
	266	°F	
ELECTRICAL PROPERTIES			
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
Volume Resistivity	2E12	Ohm*m	IEC 62631-3-1
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, 23°C, immersion, equilibrium	0.03	%	ISO 62
Density	1770	kg/m³	ISO 1183
	1.77	g/cm³	

KYNAR FLEX®
2821-00

Specific Gravity, 73 °F	1.77 - 1.8	-	ASTM D792
OPTICAL PROPERTIES			
Refractive Index @ sodium D line	1.41	-	ASTM D542

MAIN APPLICATIONS:

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

DELIVERY FORM

Powder

SPECIAL CHARACTERISTICS

Heat Stabilized, Light Stabilized

REGIONAL AVAILABILITY

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

Headquarters:

Arkema France
420 rue d'Estienne d'Orves
92705 Colombes Cedex France
T +33 (0)1 49 00 80 80
hpp.arkema.com

Arkema Inc. – High Performance Polymers

900 First Avenue
King of Prussia, PA 19406
Tel.: +1 610 205 7000
hpp.arkema.com