

KYNAR FLEX®

2900-04

Kynar Flex® resins are fluorinated thermoplastic copolymers.

Kynar Flex® 2900-04 resin is a pelletized, semi-crystalline VF based copolymer. It can be used in extrusion applications such as flexible wire jacketing, or injection molding applications where higher Limiting Oxygen Index is needed for flame and smoke applications.

Additional characteristics:

- Excellent thermal stability
- Excellent abrasion resistance
- Extremely flexible and tough

Meets UL 910 requirements

PROPERTIES	VALUE	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	9	cm ³ /10 min	ISO 1133
Temperature	232	°C	-
	450	°F	-
Load	3.8	kg	-
	8.38	lb	-
Melt Flow Rate	4 - 21	g/10min	ASTM D1238
Temperature	230	°C	-
Load	3.8	kg	-
Melt Viscosity, 230°C, 100 s ⁻¹	6 - 12	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	25	MPa	ISO 527-1/-2
	3630	psi	
Tensile Strength at Yield, 73 °F	20 - 34.5	MPa	ASTM D638
	2900 - 5000	psi	
Yield Strain	14.5	%	ISO 527-1/-2
Elongation at Yield, 73 °F	15 - 25	%	ASTM D638
Nominal Strain at Break	>50	%	ISO 527-1/-2
Tensile Strength at Break, 73 °F	20 - 27.6	MPa	ASTM D638
	2900 - 4000	psi	

Arkema France - A French "société anonyme", registered in the Nanterre (France) Trade and Companies Register under the number 319 632 790 SDC/11-2018
 Source: automatically generated TDS from Material Database on 12-08-2024

KYNAR FLEX[®]

2900-04

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
	70000 - 110000	psi	
Flexural Strength @ 5% Strain, 73 °F	20.7 - 34.5	MPa	ASTM D790
	3000 - 5000	psi	
Compressive Strength, 73 °F	31 - 41.4	MPa	ASTM D695
	4500 - 6000	psi	
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	
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	
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	
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	75	%	ISO 4589-1/-2

Arkema France - A French "société anonyme", registered in the Nanterre (France) Trade and Companies Register under the number 319 632 790 SDC/11-2018
 Source: automatically generated TDS from Material Database on 12-08-2024

KYNAR FLEX[®]

2900-04

Limiting Oxygen Index	75	%	ASTM D2863
Thermal Conductivity	0.144 - 0.18	W/(m·K)	ASTM D433
	1 - 1.25	BTU in	
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	
ELECTRICAL PROPERTIES			
Dielectric Constant, 1 kHz	3.5 - 10.6	-	ASTM D150
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·m	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
Water Absorption	0.03 - 0.05	%	ASTM D570
Density	1780	kg/m ³	ISO 1183
	1.78	g/cm ³	
Specific Gravity, 73 °F	1.77 - 1.8	-	ASTM D792

REGIONAL AVAILABILITY	Headquarters:
North America, Europe, Asia Pacific, South and Central America, Near East/Africa	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

Arkema France - A French "société anonyme", registered in the Nanterre (France) Trade and Companies Register under the number 319 632 790 SDC/11-2018
 Source: automatically generated TDS from Material Database on 12-08-2024

KYNAR FLEX[®]

2900-04

The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, ARKEMA expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information; NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. The user should thoroughly test any application before commercialization. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement.