

# KYNAR SUPERFLEX<sup>®</sup>

## 2500-20

Kynar Superflex<sup>®</sup> resin is a thermoplastic fluorinated polymer.

The properties are the same as standard grades: chemical resistance, resistance to UV, low permeation, high purity, excellent mechanical behavior.

More over, this grade is very flexible and is suitable in electrical isolation cable, tubing and co-extrusion.

This grade is available as pellet form for injection, extrusion, compression.

PROPERTIES	VALUE	UNIT	TEST STANDARD
<b>RHEOLOGICAL PROPERTIES</b>			
Melt Volume-Flow Rate	5.8	cm <sup>3</sup> /10 min	ISO 1133
Temperature	232	°C	-
	450	°F	-
Load	3.8	kg	-
	8.38	lb	-
Melt Flow Rate	1 - 15	g/10min	ASTM D1238
Temperature	230	°C	-
Load	3.8	kg	-
Melt Viscosity, 230°C, 100 s <sup>-1</sup>	9 - 16	kPoise	ASTM D3835
<b>MECHANICAL PROPERTIES</b>			
Tensile Modulus	350	MPa	ISO 527-1/-2
	50800	psi	
Tensile Modulus, 73 °F	241 - 379	MPa	ASTM D638
	35000 - 55000	psi	
Yield Stress	15	MPa	ISO 527-1/-2
	2180	psi	
Tensile Strength at Yield, 73 °F	11.7 - 19.3	MPa	ASTM D638
	1700 - 2800	psi	
Yield Strain	18	%	ISO 527-1/-2
Elongation at Yield, 73 °F	17 - 25	%	ASTM D638
Nominal Strain at Break	>50	%	ISO 527-1/-2
Tensile Strength at Break, 73 °F	13.8 - 31	MPa	ASTM D638
	2000 - 4500	psi	
Elongation at Break, 73 °F	300 - 400	%	ASTM D638
Taber Abrasion, CS 17 1000g:pad	28 - 33	mg/100 cycles	ASTM-G195-13A

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Hardness, Shore D, 73 °F	50 - 57	-	ASTM D2240
Flexural Modulus, 73 °F	193 - 276	MPa	ASTM D790
	28000 - 40000	psi	
Flexural Strength @ 5% Strain, 73 °F	10.3 - 17.2	MPa	ASTM D790
	1500 - 2500	psi	
Compressive Strength, 73 °F	13.8 - 20.7	MPa	ASTM D695
	2000 - 3000	psi	
Charpy Notched Impact Strength, +23°C	No Break	kJ/m <sup>2</sup>	ISO 179/1eA
Unnotched Impact Strength, 73 °F	No Break	kJ/m	ASTM D256
Notched Impact Strength, 73 °F	No Break	kJ/m	ASTM D256
Coefficient of Friction, Static vs. Steel, 73 °F	0.49	-	ASTM D1894
Coefficient of Friction, Dynamic vs. Steel, 73 °F	0.54	-	ASTM D1894
<b>THERMAL PROPERTIES</b>			
Melting Temperature, 10°C/min	122	°C	ISO 11357-1/-3
Melting Point	117 - 125	°C	ASTM D3418
Glass Transition Temperature, 10°C/min	-40	°C	ISO 11357-1/-2
Glass Transition Temperature (Tg)	-43.3 - -40	°C	ASTM D7028
	-46 - -40	°F	
Temp. of Deflection Under Load, 1.80 MPa	31	°C	ISO 75-1/-2
	88	°F	
Heat Deflection Temperature, 264 Psi, 248 °F/hr	26.7 - 37.8	°C	ASTM D648
	80 - 100	°F	
Coefficient of Thermal Expansion, 73 °F	15.3 - 19.4	10E-5/ °C	ASTM D696
	8.5 - 10.8	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	1.0	mm	-
	0.0394	in	
Oxygen Index	44	%	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 ft <sup>2</sup> F)	

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Specific Heat	745 - 958 0.28 - 0.36	J/(kg K) BTU/(l b <sup>°</sup> F)	DSC
Thermal Decomposition TGA, in air	375 707	°C °F	1% wt. loss
Thermal Decomposition TGA, in nitrogen	410 770	°C °F	1% wt. loss
<b>ELECTRICAL PROPERTIES</b>			
Dielectric Constant, 1 kHz	4.5 - 13.5	-	ASTM D150
Dissipation Factor, 100 kHz	0.05 - 0.29	-	ASTM D150
Volume Resistivity, DC 68 °F, 65% R.H.	2E14	Ohm*c m	ASTM D257
Surface Resistivity, 73 °F	8.5E11 - 9.2E11	Ohm per square	ASTM D257
Dielectric (Electric) Strength	12 305	kV/mm kV/in	IEC 60243-1
Dielectric (Electric) Strength, 73°F	0.8 - 1.1	kV/mil	ASTM D149
<b>OTHER PROPERTIES</b>			
Water Absorption, 23°C, immersion, equilibrium	0.03	%	ISO 62
Water Absorption	≤0.07	%	ASTM D570
Density	1790 1.79	kg/m <sup>3</sup> g/cm <sup>3</sup>	ISO 1183
Specific Gravity, 73 °F	1.8 - 1.82	-	ASTM D792
<b>OPTICAL PROPERTIES</b>			
Refractive Index @ sodium D line	1.4	-	ASTM D542

<b>PROCESSING</b> Injection Molding, Sheet Extrusion, Coating, Transfer Molding	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
<b>DELIVERY FORM</b> Pellets	
<b>SPECIAL CHARACTERISTICS</b> Heat Stabilized, Light Stabilized	
<b>REGIONAL AVAILABILITY</b> North America, Europe, Asia Pacific, South and Central America, Near East/Africa	

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