KYNAR FLEX®
2950-05

Kynar Flex® resins are fluorinated thermoplastic copolymers.

Kynar Flex® 2950-05 resin is a pelletized, semi-crystalline VF2 based copolymer. It has been designed for wire and cable applications requiring high flexibility and improved resistance to impact.The low molecular weight allows extrusion conditions that reduce jacket shrink back over fiber optic constructions.

Additional characteristics:
- Excellent thermal stability
- Excellent abrasion resistance
- Excellent chemical resistance
- Impervious to UV degradation
- High Limiting Oxygen Index
- Extremely low smoke emission characteristics

Meets UL910 requirements

PROPERTIES	VALUE	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	11.5	cm³/10 min	ISO 1133
Temperature	232	°C	-
	450	°F	
Load	3.8	kg	-
	8.38	lb	
Melt Flow Rate	8 - 25	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	387	MPa	ISO 527-1/-2
	56100	psi	
Tensile Modulus, 73 °F	276 - 448	MPa	ASTM D638
	40000 - 65000	psi	
Yield Stress	17	MPa	ISO 527-1/-2
	2470	psi	
Tensile Strength at Yield, 73 °F	13.8 - 21.4	MPa	ASTM D638
	2000 - 3100	psi	
Yield Strain	18	%	ISO 527-1/-2
Elongation at Yield, 73 °F	15 - 25	%	ASTM D638
Nominal Strain at Break	>50	%	ISO 527-1/-2

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Tensile Strength at Break, 73 °F	20 - 27.6	MPa	ASTM D638
	2900 - 4000	psi	
Elongation at Break, 73 °F	200 - 400	%	ASTM D638
Taber Abrasion, CS 17 1000g:pad	21 - 25	mg/1000 cycles	ASTM-G195-13A
Hardness, Shore D, 73 °F	57 - 62	-	ASTM D2240
Flexural Modulus, 73 °F	276 - 414	MPa	ASTM D790
	40000 - 60000	psi	
Flexural Strength @ 5% Strain, 73 °F	13.8 - 24.1	MPa	ASTM D790
	2000 - 3500	psi	
Compressive Strength, 73 °F	24.1 - 31	MPa	ASTM D695
	3500 - 4500	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	No Break	kJ/m	ASTM D256
Coefficient of Friction, Static vs. Steel, 73 °F	0.55	-	ASTM D1894
Coefficient of Friction, Dynamic vs. Steel, 73 °F	0.54	-	ASTM D1894
THERMAL PROPERTIES			
Melting Temperature, 10°C/min	134	°C	ISO 11357-1/-3
Melting Point	130 - 138	°C	ASTM D3418
Glass Transition Temperature, 10°C/min	-40	°C	ISO 11357-1/-2
Glass Transition Temperature (Tg)	-42.2 - -40	°C	ASTM D7028
	-44 - -40	°F	
Temp. of Deflection Under Load, 1.80 MPa	43	°C	ISO 75-1/-2
	109	°F	
Heat Deflection Temperature, 264 Psi, 248 °F/hr	35 - 51.7	°C	ASTM D648
	95 - 125	°F	
Temp. of Deflection Under Load, 0.45 MPa	57	°C	ISO 75-1/-2
	135	°F	
Heat Deflection Temperature, 66 Psi, 248 °F/hr	48.9 - 65.6	°C	ASTM D648
	120 - 150	°F	
Coefficient of Thermal Expansion, 73 °F	16.2 - 21.6	10E-5/°C	ASTM D696
	9 - 12	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	

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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	95	%	ISO 4589-1/-2
Limiting Oxygen Index	95	%	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	
ELECTRICAL PROPERTIES			
Relative Permittivity, 100Hz	7.05	-	IEC 60250
Dielectric Constant, 1 kHz	3.8 - 12.1	-	ASTM D150
Dissipation Factor, 100Hz	0.12	E-4	IEC 60250
Dissipation Factor, 100 kHz	0.02 - 0.24	-	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	1.4	kV/mm	IEC 60243-1
	35.6	kV/in	
Dielectric (Electric) Strength, 73°F	1.1 - 1.3	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	1770	kg/m³	ISO 1183
	1.77	g/cm³	
Specific Gravity, 73 °F	1.78 - 1.8	-	ASTM D792

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REGIONAL AVAILABILITY

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

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