KYNAR FLEX®

TECHNICAL DATA SHEET

KYNAR FLEX® 2850-02

FLUORINATED COPOLYMER PELLET

KYNAR FLEX® resins are fluorinated thermoplastic copolymers.
KYNAR FLEX® 2850-02 has been specifically designed for use in wire and cable constructions which require an Underwriters Laboratories temperature of 150ºC and a Limiting Oxygen Index (LOI) of at least 75.
KYNAR FLEX® 2850-02 is easily processed and has excellent physical, mechanical, thermal and flame resistant characteristics. KYNAR FLEX® 2850-02 meets the smoke and flame requirements of UL 910 and ASTM E84 (the Modified Steiner Tunnel Test). This copolymer is commonly used for pipe, wire jacketing, conduits, and in injection molded parts.

ADDITIONAL CHARACTERISTICS:
€¢ Excellent thermal stability
€¢ Excellent abrasion resistance
€¢ Impervious to UV degradation
€¢ Self extinguishing material
€¢ Extremely low smoke emission characteristics
€¢ 0/0 rating in ASTM E-84/UL 723

TYPE

PVDF

MAIN APPLICATIONS

- plenum conduit
- plenum cable

DELIVERY FORM

- Pellets

RHEOLOGICAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Melt viscosity, 230°C (446°F) at 100 s-1	4 - 8	kPo	ASTM D3835
Melt flow index (MFR), 230°C / 5 kg (446°F / 11 lb)	17 - 20	g/10min	ASTM D1238
Melt volume flow rate (MVR), 230°C / 5 kg (446°F / 11 lb)	10	cm^3/10min	ISO 1133

MECHANICAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Yield stress, 23°C (73°F)	31 - 41.4	MPa	ASTM D638
Yield strain, 23°C (73°F)	10	%	ISO 527-1/-2
Stress at break, 23°C (73°F)	27.6 - 48.3	MPa	ASTM D638
Nominal strain at break, 23°C (73°F)	>50	%	ISO 527-1/-2
Compression strength, 23°C (73°F)	41.4 - 58.6	MPa	ASTM D695
Izod impact unnotched strength, 23°C (73°F)	No Break		ASTM D256
Izod impact notched strength, 23°C (73°F)	0.107 - 0.427	J/m	ASTM D256
Charpy notched impact strength, 23°C (73°F)	8	kJ/m2	ISO 179 1eA
Hardness, shore D	70 - 75		ASTM D2240
Flexural modulus, 23°C (73°F)	1030 - 1240	MPa	ASTM D790
Tensile modulus, 23°C (73°F)	1300	MPa	ASTM D638

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PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Coefficient of friction dynamic vs steel, 23°C (73°F)	0.19		ASTM D1895
Coefficient of friction static vs steel, 23°C (73°F)	0.26		ASTM D1894
Abrasion resistance, wheel CS 17, load 1 kg, 1000 cycles	6 - 9	mg	ASTM G195-13A

THERMAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Glass transition temperature, 10°C/min	-40	°C	ISO 11357-1/-2
Limiting oxygen index (LOI)	43	%	ASTM D2863
Yellow card available	yes		
Coefficient of linear thermal expansion, 23°C (73°F)	126 - 185	10E-6 / °K	ASTM D696
Specific heat temperature, 23°C (73°F)	745 - 958		ISO 11357-1/-2
Heat deflection temperature, 1.8 MPa	46	°C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa, 138°C/h	37.8 - 55	°C	ASTM D648
Heat deflection temperature, 0.45 MPa, 138°C/h	60-75	°C	ASTM D648
Thermal conductivity	0.144 - 0.18	W/m-K	ASTM D433
Melting temperature, 10°C/min	157	°C	ISO 11357-1/-3
Burning behavior, nominal thickness 1.5 mm	V-0		IEC 60695-11-10

ELECTRICAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Dielectric constant, 1kHz	3.5 - 10.2		ASTM D150
Dielectric strength, 23°C (73,4°F)	1.3 - 1.6	kV/mm	ASTM D149
Volumic (transversal) resistivity, DC, 20°C (68°F)/50%RH	2.0E+12	ohm*m	ASTM D257
Relative thermal index	140		
Dissipation factor	0.01 - 0.22		ASTM D150

OTHER PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Density, 23°C (73°F)	1.77 - 1.8	g/cm³	ISO 1183-1

PACKAGING

Available packaging:
- 1000 kg / 2205 lb rigid container
- 25 kg / 55 lb rigid container
- 680 kg / 1500 lb big bag

SPECIAL CHARACTERISTICS

- Flame & smoke

Headquarters: Arkema France
51, Esplanade du Général de Gaulle
92800 Puteaux – France
T +33 (0)1 49 00 80 80

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