KYNAR FLEX®

TECHNICAL DATA SHEET

KYNAR FLEX® 2800-20

FLUORINATED COPOLYMER PELLET

KYNAR FLEX® resins are fluorinated thermoplastic copolymers.
Outstanding characteristics: chemical resistance, resistance to UV, high barrier properties, high purity, good mechanical and thermo-mechanical properties. This product is NSF/ANSI/CAN 61 certified.
KYNAR FLEX® resin is a standard grade of pellets, compared to the homopolymer grades, which exhibits a lower modulus, a better resistance to stress cracking in alkaline and oxidizing media, and a lower melting point.
For cable coating, extrusion of tube and plaque, injection molding.

Additional characteristics:
- Easily processed using conventional equipment
- Excellent thermal stability
- Retains properties after aging
- Pigmentable
- UL RTI temperature rating 125ºC

TYPE

PVDF

MAIN APPLICATIONS

- powder coating - others
- tubing
- plenum pipe

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

- Injection Molding

RHEOLOGICAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Melt viscosity, 230°C (446°F) at 100 s-1	12 - 20	kPo	ASTM D3835
Melt flow index (MFR), 230°C / 5 kg (446°F / 11 lb)	1 - 8	g/10min	ASTM D1238
Melt volume flow rate (MVR), 230°C / 5 kg (446°F / 11 lb)	3	cm^3/10min	ISO 1133

MECHANICAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Yield stress, 23°C (73°F)	20 - 34.5	MPa	ASTM D638
Stress at break, 23°C (73°F)	17.2 - 34.5	MPa	ASTM D638
Compression strength, 23°C (73°F)	31 - 41.4	MPa	ASTM D695
Izod impact unnotched strength, 23°C (73°F)	No Break		ASTM D256
Izod impact notched strength, 23°C (73°F)	0.534 - 1.07	J/m	ASTM D256
Charpy unnotched impact strength, 23°C (73°F)	177	kJ/m2	ISO 179 1eU
Charpy unnotched impact strength, -30°C (-22°F)	235	kJ/m2	ISO 179 1eU
Charpy notched impact strength, 23°C (73°F)	60	kJ/m2	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	5	kJ/m2	ISO 179 1eA
Hardness, shore D	60 - 70		ASTM D2240
Nominal strain at break, 23°C (73°F)	>50	%	ISO 527-1/-2

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PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Yield strain, 23°C (73°F)	15	%	ISO 527-1/-2
Flexural modulus, 23°C (73°F)	483 - 758	MPa	ASTM D790
Tensile modulus, 23°C (73°F)	700	MPa	ASTM D638
Coefficient of friction dynamic vs steel, 23°C (73°F)	0.33		ASTM D1895
Coefficient of friction static vs steel, 23°C (73°F)	0.33		ASTM D1894
Abrasion resistance, wheel CS 17, load 1 kg, 1000 cycles	16 - 19	mg	ASTM G195-13A

THERMAL PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Glass transition temperature, 10°C/min	-40	°C	ISO 11357-1/-2
Vicat softening temperature, 50N at 50°C/h	76	°C	ISO 306
Limiting oxygen index (LOI)	42	%	ASTM D2863
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, 0.45 MPa	68	°C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	48	°C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa, 138°C/h	40 - 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	143	°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 - 10.6		ASTM D150
Dielectric strength, 23°C (73,4°F)	1.3 - 1.5	kV/mm	ASTM D149
Relative permittivity, 100Hz	11		IEC 62631-2-1
Relative permittivity, 1MHz	6		IEC 62631-2-1
Relative thermal index	130		
Dissipation factor, 100Hz	570	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	2340	E-4	IEC 62631-2-1
Dissipation factor	0.02 - 0.21		ASTM D150

OTHER PROPERTIES

PROPERTIES	TYPICAL VALUE	UNIT	TEST STANDARD
Density, 23°C (73°F)	1.77 - 1.8	g/cm³	ISO 1183-1
Water absorption, at equilibrium at 23°C (73°F) / Immersion	0.03	%	ISO 62

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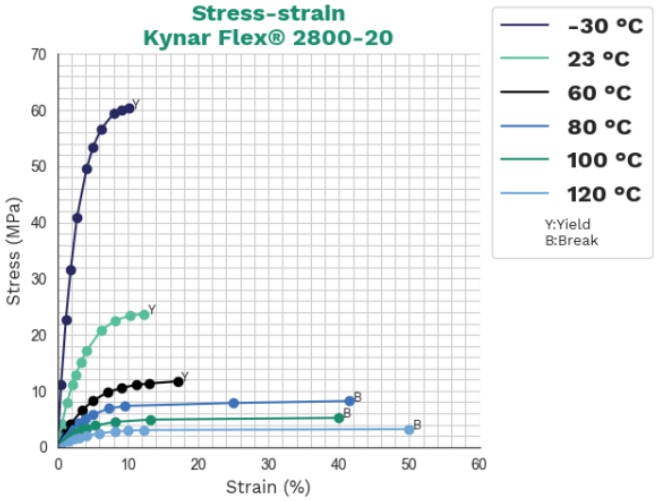
PACKAGING

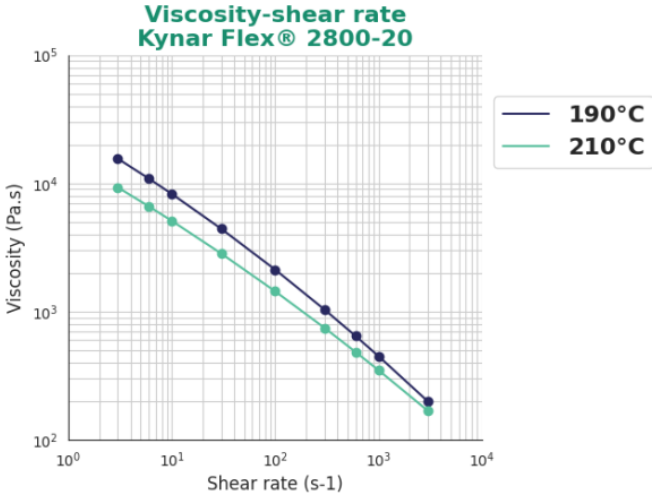
Available packaging:
- 25 kg / 55 lb rigid container

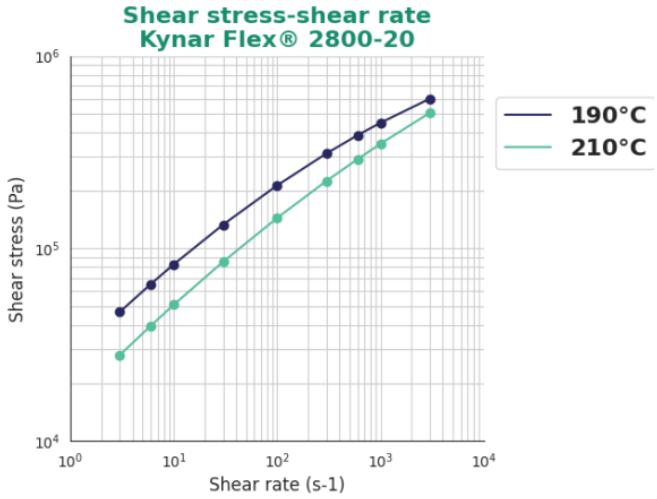
SPECIAL CHARACTERISTICS

- Flame & smoke

DIAGRAMS







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