

## TECHNICAL DATA SHEET

# KYNAR FLEX® 2800-00

## FLUORINATED COPOLYMER PELLET

KYNAR FLEX® resins are fluorinated thermoplastic copolymers.

Outstanding characteristics: chemical resistance, imperviousness to UV, high barrier properties, high purity, good mechanical and thermo-mechanical properties.

KYNAR FLEX® 2800-00 resin is a standard grade of granules, 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, compression molding of bulky parts.

Additional characteristics:

- Easily processed using conventional equipment
- Excellent thermal stability
- Retains properties after aging
- Pigmentable
- UL RTI temperature rating 125°C
- Radiation crosslinking

### DESIGNATION

PVDF

### MAIN APPLICATIONS

- Tubing
- Plenum Pipe

### DELIVERY FORM

- Pellets

## RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Melt viscosity, 230°C (445°F) at 100 s <sup>-1</sup>	22 - 27 kPo	ASTM D3835
Melt flow index (MFR), 235°C / 5 kg (455°F / 11 lb)	3 - 8 g/10min	ASTM D1238
Melt volume flow rate (MVR), 230°C / 5 kg (446°F / 11 lb)	0.5 cm <sup>3</sup> /10min	ISO 1133

## MECHANICAL PROPERTIES

PROPERTIES	VALUE	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
Nominal strain at break, 23°C (73°F), 50 mm/min	>50 %	ISO 527-1/-2
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 notched impact strength, 23°C (73°F)	No Break	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	5 kJ/m <sup>2</sup>	ISO 179 1eA
Hardness, Shore D	60 - 70	ASTM D2240
Yield strain, 23°C (73°F), 50 mm/min	15 %	ISO 527-1/-2
Flexural modulus, 23°C (73°F)	483 - 758 MPa	ASTM D790

# KYNAR FLEX® 2800-00

PROPERTIES	VALUE	TEST STANDARD
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	VALUE	TEST STANDARD
Glass transition temperature, 10°C/min	-40 °C	ISO 11357-1/-2
Vicat softening temperature, 50N at 50°C/h	79 °C	ISO 306
Limiting oxygen index (LOI)	42 %	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, 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

## ELECTRICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Dielectric constant, 1kHz	3.5 - 10.6	ASTM D150
Surface resistivity, 23°C (73,4°F)	5.1E+11 - 5.3E+11 ohm/sq	ASTM D257
Dielectric strength, 23°C (73,4°F)	1.3 - 1.5 kV/mm	ASTM D149
Relative permittivity, 100Hz	11	IEC 60250
Relative permittivity, 1MHz	7	IEC 60250
Relative thermal index	130	
Dissipation factor, 100Hz	520 E-4	IEC 60250
Dissipation factor, 1MHz	2330 E-4	IEC 60250
Dissipation factor	0.02 - 0.21	ASTM D150

## OTHER PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Moisture absorption, At equilibrium at 23°C (73°F) / 50%HR	0.015 %	ISO 62
Specific gravity, 23°C (73°F)	1.77 - 1.8 g/cm <sup>3</sup>	
Water absorption, Saturated in water at 23°C (73°F)	0.03 %	ISO 62

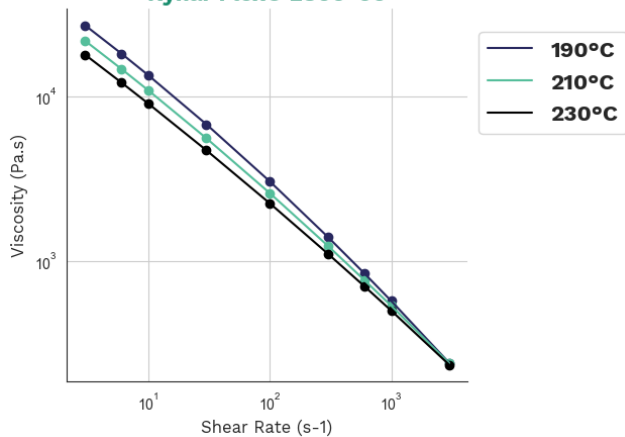
## SPECIAL CHARACTERISTICS

- Flame & smoke

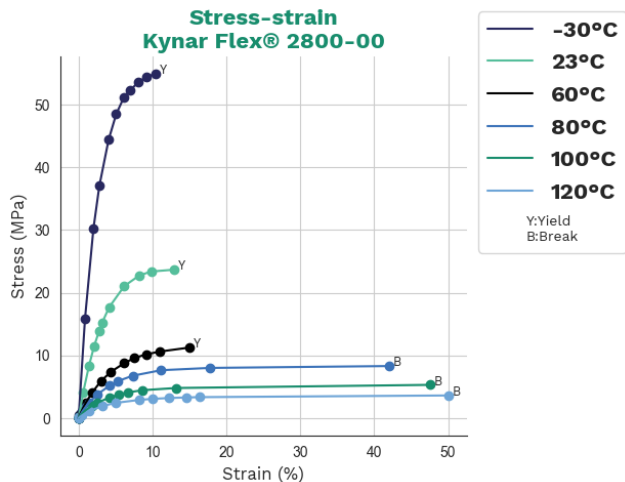
# KYNAR FLEX® 2800-00

## DIAGRAMS

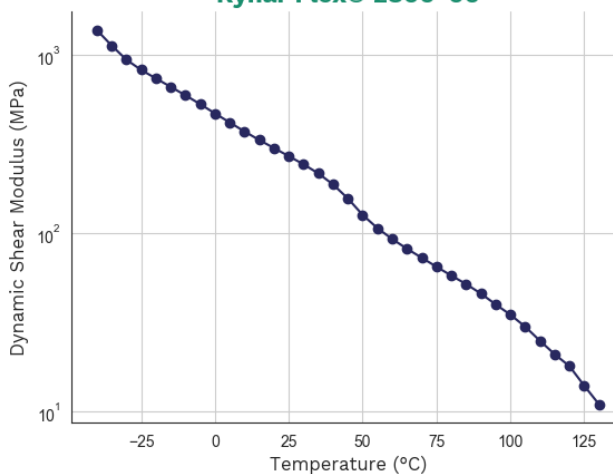
**Viscosity-shear rate**  
Kynar Flex® 2800-00



**Stress-strain**  
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**Dynamic Shear modulus-temperature**  
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