

## TECHNICAL DATA SHEET

# KYNAR® 740

## FLUORINATED HOMOPOLYMER PELLET

KYNAR® resins are fluorinated thermoplastic homopolymers.

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

KYNAR® 740 resin is a standard grade of granules for extrusion of tubes and plaques, compression and transfer molding. This product is NSF/ANSI/CAN 61 certified.

A powder form is available as KYNAR® 741 resin.

### DESIGNATION

PVDF

### MAIN APPLICATIONS

- Hi Purity
- CPI - Stock Shape

### DELIVERY FORM

- Pellets

## RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Melt viscosity, 230°C (445°F) at 100 s <sup>-1</sup>	16 - 22 kPo	ASTM D3835
Shrinkage, Normal (t+24h)	2.0 %	ISO 294-4
Shrinkage, Parallel (t+24h)	2.0 %	ISO 294-4
Melt flow index (MFR), 235°C / 5 kg (455°F / 11 lb)	1.5 - 3 g/10min	ASTM D1238
Melt volume flow rate (MVR), 230°C / 5 kg (446°F / 11 lb)	1.1 cm <sup>3</sup> /10min	ISO 1133

## MECHANICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Tensile modulus, 23°C (73°F)	1700 MPa	ASTM D638
Yield stress, 23°C (73°F)	44.8 - 55.2 MPa	ASTM D638
Yield strain, 23°C (73°F), 50 mm/min	7 %	ISO 527-1/-2
Stress at break, 23°C (73°F)	34.5 - 55.2 MPa	ASTM D638
Nominal strain at break, 23°C (73°F), 50 mm/min	>50 %	ISO 527-1/-2
Flexural modulus, 23°C (73°F)	1380 - 2310 MPa	ASTM D790
Compression strength, 23°C (73°F)	68.9 - 103 MPa	ASTM D695
Izod impact unnotched strength, 23°C (73°F)	1.07 - 4.27 kJ/m <sup>2</sup>	ASTM D256
Izod impact notched strength, 23°C (73°F)	0.0961 - 0.214 J/m	ASTM D256
Charpy unnotched impact strength, 23°C (73°F)	244 kJ/m <sup>2</sup>	ISO 179 1eU
Charpy unnotched impact strength, -30°C (-22°F)	186 kJ/m <sup>2</sup>	ISO 179 1eU
Charpy notched impact strength, 23°C (73°F)	14 kJ/m <sup>2</sup>	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	5 kJ/m <sup>2</sup>	ISO 179 1eA
Hardness, Shore D	76 - 80	ASTM D2240

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PROPERTIES	VALUE	TEST STANDARD
Coefficient of friction dynamic vs steel, 23°C (73°F)	0.14	ASTM D1895
Coefficient of friction static vs steel, 23°C (73°F)	0.2	ASTM D1894
Abrasion resistance, Wheel CS 17, load 1 kg, 1000 cycles	5 - 9 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	135 °C	ISO 306
Limiting oxygen index (LOI)	44 %	ASTM D2863
Yellow card available	yes	
Coefficient of linear thermal expansion, 23°C (73°F)	119 - 144 10E-6 / °K	ASTM D696
Specific heat temperature, 23°C (73°F)	745 - 958	ISO 11357-1/-2
Heat deflection temperature, 0.45 MPa	135 °C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	105 °C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa, 138°C/h	105 - 115 °C	ASTM D648
Heat deflection temperature, 0.45 MPa, 138°C/h	125-140 °C	ASTM D648
Thermal conductivity	0.17 - 0.19 W/m-K	ASTM D433
Melting temperature, 10°C/min	168 °C	ISO 11357-1/-3

## ELECTRICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Comparative tracking index	600	IEC 60112
Dielectric constant, 1kHz	4.5 - 9.5	ASTM D150
Relative permittivity, 100Hz	11	IEC 60250
Relative permittivity, 1MHz	8	IEC 60250
Relative thermal index	150	
Dissipation factor, 100Hz	260 E-4	IEC 60250
Dissipation factor, 1MHz	2310 E-4	IEC 60250
Dissipation factor	0.01 - 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 - 1.79 g/cm <sup>3</sup>	
Water absorption, Saturated in water at 23°C (73°F)	0.03 %	ISO 62

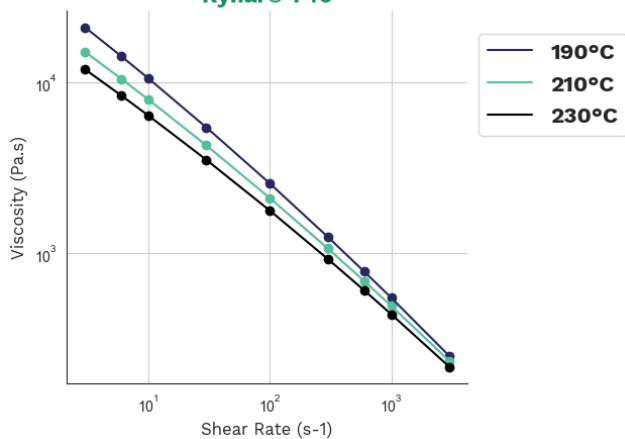
## SPECIAL CHARACTERISTICS

- Flame & smoke

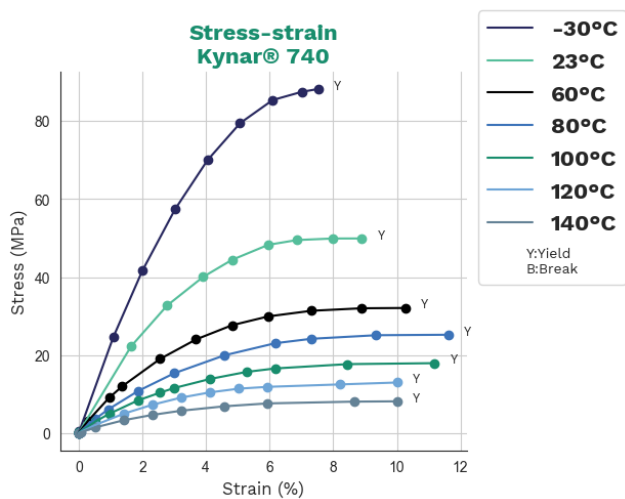
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## DIAGRAMS

Viscosity-shear rate  
Kynar® 740



Stress-strain  
Kynar® 740



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