

TECHNICAL DATA SHEET

KYNAR® 711 POWDER

FLUORINATED HOMOPOLYMER POWDER

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® 710 resin is a grade of granules for injection molding, rotomolding applications and multifilament extrusion. This product is NSF/ANSI/CAN 61 certified.

A powder form is available as Kynar® 711 resin.

DESIGNATION

PVDF

DELIVERY FORM

- Powder

TRANSFORMATION PROCESSES

- Injection Molding

RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Melt viscosity, 230°C (445°F) at 100 s-1	4 - 8 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)	19 - 35 g/10min	ASTM D1238
Melt volume flow rate (MVR), 230°C / 5 kg (446°F / 11 lb)	20 cm³/10min	ISO 1133

MECHANICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Yield stress, 23°C (73°F)	44.8 - 55.2 MPa	ASTM D638
Stress at break, 23°C (73°F)	34.5 - 55.2 MPa	ASTM D638
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/m2	ASTM D256
Izod impact notched strength, 23°C (73°F)	0.0801 - 0.214 J/m	ASTM D256
Charpy unnotched impact strength, 23°C (73°F)	192 kJ/m2	ISO 179 1eU
Charpy unnotched impact strength, -30°C (-22°F)	208 kJ/m2	ISO 179 1eU
Charpy notched impact strength, 23°C (73°F)	8 kJ/m2	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	5 kJ/m2	ISO 179 1eA
Hardness, Shore D	76 - 80	ASTM D2240
Nominal strain at break, 23°C (73°F), 50 mm/min	>50 %	ISO 527-1/-2
Yield strain, 23°C (73°F), 50 mm/min	9 %	ISO 527-1/-2
Flexural modulus, 23°C (73°F)	1380 - 2310 MPa	ASTM D790
Tensile modulus, 23°C (73°F)	2300 MPa	ASTM D638
Coefficient of friction dynamic vs steel, 23°C (73°F)	0.14	ASTM D1895

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PROPERTIES	VALUE	TEST STANDARD
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	140 °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)	665 - 958	ISO 11357-1/-2
Heat deflection temperature, 0.45 MPa	130 °C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	110 °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
Dielectric constant, 1kHz	4.5 - 9.5	ASTM D150
Dielectric strength, 23°C (73,4°F)	1.7 kV/mm	ASTM D149
Relative permittivity, 100Hz	9	IEC 60250
Relative permittivity, 1MHz	6	IEC 60250
Relative thermal index	150	
Dissipation factor, 100Hz	350 E-4	IEC 60250
Dissipation factor, 1MHz	2060 E-4	IEC 60250
Dissipation factor	0.01 - 0.21	ASTM D150

OTHER PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Specific gravity, 23°C (73°F)	1.77 - 1.79 g/cm ³	
Water absorption, Saturated in water at 23°C (73°F)	0.03 %	ISO 62

SPECIAL CHARACTERISTICS

- Flame & smoke

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