+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

KYNAR® BY ARKEMA

Kynar® 460

PVDF

Kynar® 460 resin

Kynar® resins are fluorinated thermoplastic homopolymers.

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

Main applications: corrosion protection in the chemical industry, coating (painting, co-extrusion), off shore, wire and cable.

Kynar® 460 resin is a standard grade of granules for extrusion of tubes, cables and plaques, compression and transfer molding.

Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate, MVR	**5.6**	cm^3/10min	ISO 1133
Temperature	**230**	°C	-
Load	**21.6**	kg	-
Molding shrinkage, parallel	**2.0**	%	ISO 294-4, 2577
Molding shrinkage, normal	**2.0**	%	ISO 294-4, 2577

Mechanical properties	Value	Unit	Test Standard
Tensile Modulus	**1400**	MPa	ISO 527-1/-2
Yield stress	**42**	MPa	ISO 527-1/-2
Yield strain	**13**	%	ISO 527-1/-2
Nominal strain at break	**>50**	%	ISO 527-1/-2

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	**161**	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	**-40**	°C	ISO 11357-1/-2
Temp. of deflection under load, 1.80 MPa	**85**	°C	ISO 75-1/-2
Burning Behav. at 1.5 mm nom. thickn.	**V-0**	class	IEC 60695-11-10
Oxygen index	**43**	%	ISO 4589-1/-2

Electrical properties	Value	Unit	Test Standard
Relative permittivity, 100Hz	**9**	-	IEC 60250
Relative permittivity, 1MHz	**6.7**	-	IEC 60250
Dissipation factor, 100Hz	**1300**	E-4	IEC 60250
Dissipation factor, 1MHz	**700**	E-4	IEC 60250
Volume resistivity	**2E12**	Ohm*m	IEC 60093
Electric strength	**63**	kV/mm	IEC 60243-1

Other properties	Value	Unit	Test Standard
Water absorption	**0.04**	%	Sim. to ISO 62

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Density	**1760**	kg/m³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
Thermal conductivity of melt	**0.19**	W/(m K)	-

VDA Properties	Value	Unit	Test Standard
Coeff. of linear therm. expansion -40°C to +100°C, parallel	**114**	E-6/K	ISO 11359-1/-2

Characteristics

Processing
Profile Extrusion, Other Extrusion

Delivery form
Pellets

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Chemical Media Resistance

Acids
- ✔ Acetic Acid (5% by mass) (23°C)
- ✔ Citric Acid solution (10% by mass) (23°C)
- ✔ Lactic Acid (10% by mass) (23°C)
- ✔ Hydrochloric Acid (36% by mass) (23°C)
- ✔ Nitric Acid (40% by mass) (23°C)
- ✔ Sulfuric Acid (38% by mass) (23°C)
- ✔ Sulfuric Acid (5% by mass) (23°C)
- ✔ Chromic Acid solution (40% by mass) (23°C)

Bases
- ✔ Sodium Hydroxide solution (35% by mass) (23°C)
- ✔ Sodium Hydroxide solution (1% by mass) (23°C)
- ✔ Ammonium Hydroxide solution (10% by mass) (23°C)

Alcohols
- ✔ Isopropyl alcohol (23°C)
- ✔ Methanol (23°C)
- ✔ Ethanol (23°C)

Hydrocarbons
- ✔ n-Hexane (23°C)
- ✔ Toluene (23°C)
- ✔ iso-Octane (23°C)

Ketones
- ✖ Acetone (23°C)

Ethers
- ✔ Diethyl ether (23°C)

Mineral oils
- ✔ SAE 10W40 multigrade motor oil (23°C)
- ✔ SAE 10W40 multigrade motor oil (130°C)

- ✔ SAE 80/90 hypoid-gear oil (130°C)
- ✔ Insulating Oil (23°C)

Standard Fuels

- ✔ ISO 1817 Liquid 1 (60°C)
- ✔ ISO 1817 Liquid 2 (60°C)
- ✔ ISO 1817 Liquid 3 (60°C)
- ✔ ISO 1817 Liquid 4 (60°C)
- ✔ Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)
- ✔ Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)
- ✔ Diesel fuel (pref. ISO 1817 Liquid F) (23°C)
- ✔ Diesel fuel (pref. ISO 1817 Liquid F) (90°C)
- ✔ Diesel fuel (pref. ISO 1817 Liquid F) (>90°C)

Salt solutions

- ✔ Sodium Chloride solution (10% by mass) (23°C)
- ✔ Sodium Hypochlorite solution (10% by mass) (23°C)
- ✔ Sodium Carbonate solution (20% by mass) (23°C)
- ✔ Sodium Carbonate solution (2% by mass) (23°C)
- ✔ Zinc Chloride solution (50% by mass) (23°C)

Other

- ✖ Ethyl Acetate (23°C)
- ✔ Hydrogen peroxide (23°C)
- ✔ Ethylene Glycol (50% by mass) in water (108°C)
- ✔ Water (23°C)
- ✔ Deionized water (90°C)
- ✔ Phenol solution (5% by mass) (23°C)