

## Kynar Flex® 3120-50

PVDF

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**Kynar Flex®** resins are fluorinated thermoplastic copolymers.

**Kynar Flex® 3120-50** is a pelletized flexible, semi-crystalline VF2 based copolymer. It can be molded or extruded and has a useful temperature range from -40°C - 150°C. Kynar Flex® 3120-50 has a UL RTI of 150°C.

Kynar Flex® 3120-50 can be used in compounding for cross-linkable wire and cable as well as both wire applications requiring low temperature flexibility and high temperature resistance.

Kynar Flex® 3120-50 also finds use as a polymer processing aid (PPA) for polyolefins. The use of Kynar Flex® 3120-50 or Kynar Flex 3121-50 at 200-1000 ppm levels reduces extruder pressure, improves surface finish, reduces die build up, and improves gauge control.

[UL Yellow Card](#)

Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate, MVR	<b>0.5</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>230</b>	°C	-
Load	<b>5</b>	kg	-

Mechanical properties	Value	Unit	Test Standard
Tensile Modulus	<b>700</b>	MPa	ISO 527-1/-2
Yield stress	<b>27</b>	MPa	ISO 527-1/-2
Yield strain	<b>15</b>	%	ISO 527-1/-2
Nominal strain at break	<b>&gt;50</b>	%	ISO 527-1/-2
Charpy notched impact strength, +23°C	<b>N</b>	kJ/m <sup>2</sup>	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	<b>165</b>	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	<b>-36</b>	°C	ISO 11357-1/-2
Temp. of deflection under load, 1.80 MPa	<b>50</b>	°C	ISO 75-1/-2
Burning Behav. at 1.5 mm nom. thickn.	<b>V-0</b>	class	IEC 60695-11-10
Thickness tested	<b>1.5</b>	mm	-
Yellow Card available	<b>yes</b>	-	-
Burning Behav. at thickness h	<b>V-0</b>	class	IEC 60695-11-10
Thickness tested	<b>1.0</b>	mm	-
Yellow Card available	<b>yes</b>	-	-
Burning Behav. 5V at thickness h	<b>5VA</b>	class	IEC 60695-11-20
Thickness tested	<b>1.0</b>	mm	-
Oxygen index	<b>43</b>	%	ISO 4589-1/-2

Other properties	Value	Unit	Test Standard
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Water absorption	<b>0.03</b>	%	Sim. to ISO 62
Density	<b>1780</b>	kg/m <sup>3</sup>	ISO 1183

Test specimen production	Value	Unit	Test Standard
Compression Molding, molding temperature	<b>225</b>	°C	ISO 293
Compression Molding, molding time	<b>3</b>	min	ISO 293
Compression Molding, demolding temperature	<b>120</b>	°C	ISO 293

### Characteristics

#### Processing

Profile Extrusion, Other Extrusion

#### Delivery form

Pellets

#### Special Characteristics

Light stabilized or stable to light, U.V. stabilized or stable to weather, Heat stabilized or stable to heat

#### 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)

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- ✓ 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)