

HYLAR® 9009 PVDF films Data Sheet

HYLAR® 9009 Polyvinylidene fluoride (PVDF) homopolymer is a semi-crystalline and melt-processable fluoropolymer that, because of its chemical structure, offers interesting combination of properties.

Ajedium's HYLAR® PVDF film is chemically inert to most acids, aliphatic and aromatic organic compounds, chlorinated solvents, alcohols, etc. Moreover, it has very high purity, abrasion resistance comparable to that of polyamides, and relatively low coefficient of friction.

HYLAR® 9009 PVDF film can be used within a wide range on temperatures and has excellent intrinsic fire resistance.

Moreover, polyvinylidene fluoride films have demonstrated excellent weathering properties and are extremely resistant to UV radiation and common industrial or environmental pollutants.

PVDF can cover a wide range of possible applications. Some examples are: release films, filters, chemical resistant lining, outdoor UV resistant as well as electric and electronic applications.

MANUFACTURING

HYLAR® 9009 PVDF homopolymer films are extruded by Ajedium in a wide range of thicknesses, widths and lengths.

For further information on PVDF films produced by Ajedium Films, a division of Solvay Solexis, Inc. contact your Solvay Solexis representative or go to www.ajedium.com.

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HYLAR[®] 9009 PVDF (HOMOPOLYMER) FILMS TYPICAL PROPERTIES

	Test Method	Typical Values	
		SI Units	US Customary Units
Physical and Thermal Properties			
Yield	internal	565 m ² /kg/μm	15,625 in ² /lb/mil
Melting Point	ASTM D-3418	162-168 °C	324-335 °F
Mechanical Properties			
		MD TD	MD TD
Stress at Yield @ 23 °C (73 °F)	ASTM D-882	62 MPa 52 MPa	9,000 psi 7,500 psi
Elongation at Yield @ 23 °C (73 °F)	ASTM D-882	5.8 % 7.2 %	5.8 % 7.2 %
Stress at Break @ 23 °C (73 °F)	ASTM D-882	60 MPa 54 MPa	8,700 psi 7,800 psi
Elongation at Break @ 23 °C (73 °F)	ASTM D-882	150 % 250 %	150% 250%
Modulus @ 23 °C (73 °F)	ASTM D-882	2,200 MPa 1,700 MPa	320 kpsi 305 kpsi
Shrinkage			
		MD TD	MD TD
Free shrink % @ 130°C	30 min in oven	-1 % +0.5 %	-1 % +0.5 %
Free shrink % @ 150°C	30 min in oven	-1.5 % +0.5 %	-1.5 % +0.5 %
Electrical Properties			
Volume Resistivity @ 23°C – 73°F	ASTM D 257	>10 ¹⁴ Ohm-cm	>10 ¹⁴ Ohm-cm
Dielectric Constant @ 1 kHz 23°C (73°F)	ASTM D 150	7 - 8	7 - 8

Typical properties measured on a 25μm (1 mil) film

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