

HYLAR 460/461

PVDF Homopolymer
High Melt Viscosity - Extrusion

HYLAR®

Typical Physical Properties

Typical Properties	Test Method	US Unit		SI Unit	
Physical Properties					
Density @ 23°C	ASTM D792	lb/ft ³	110	g/cm ³	1.76
Water Absorption	ASTM D570	%	0.02		
Melt Viscosity @ 232°C, 100 s ⁻¹	ASTM D3835	kP	26	Pa·s	2600
Melt Index @ 230 °C, 21.6 kg	ASTM D1238	g/10 min	10		
Refractive Index @ 23°C	ASTM D542		1.42		
Mechanical Properties					
Tensile					
Tensile Yield Strength	ASTM D638 23°C 2 in/min (50 mm/min)	psi	7000	MPa	48
Tensile Break Strength		psi	6000	MPa	41
Elongation at Yield		%	10		
Elongation at Break		%	100		
Tensile Modulus		psi	190,000	MPa	1310
Flexural					
Flexural Strength	ASTM D790 23°C 2 in/min (50 mm/min)	psi	8000	MPa	55
Flexural Modulus		psi	220,000	MPa	1517
Impact					
Notched Izod Strength	ASTM D256 23°C	ft-lb _i /in	2	J/m	107
Unnotched Izod Strength		ft-lb _i /in	20	J/m	1070
Hardness, Shore D	ASTM D2240			75	
Abrasion Resistance, CS 17 (1 kg)	Taber			mg/1000 rev	8
Friction Co-efficient					
Static	ASTM D1894 23°C		0.3		
Dynamic			0.2		

For information contact your Solvay Solexis representative or:

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Typical Physical Properties

Typical Properties	Test Method	US Unit		SI Unit	
Thermal Properties					
DSC					
Melting Point	ASTM D3418	°F	320	°C	160
Heat of Fusion		BTU/lb	20	J/g	46
Crystallizing Point		°F	270	°C	132
Crystallization Heat		BTU/lb	20	J/g	46
Specific Heat @ 23°C		BTU/lb-°F	0.32	J/g-K	1.3
Thermal Events					
DTUL, 66 psi (0.46 MPa)	ASTM D648	°F	260	°C	127
DTUL, 264 psi (1.82 MPa)	ASTM D648	°F	190	°C	88
Glass Transition Temperature (T _g)	DMA	°F	-38	°C	-39
Thermal Stability, 1% Mass Loss, Air	TGA	°F	707	°C	375
Thermal Stability, 1% Mass Loss, N ₂	TGA	°F	770	°C	410
Linear Thermal Expansion Coefficient	ASTM D696	10 ⁻⁶ /F	70	10 ⁻⁶ /K	126
Thermal Conductivity	ASTM D433	BTU-in/hr-ft ² °F	1.3	W/m-K	0.2
Electrical Properties					
Volume Resistivity @ 23°C, 50% RH	ASTM D257	ohm-in	4 x 10 ¹⁴	ohm-cm	1 x 10 ¹⁵
Dielectric Strength @ 23°C, 0.125"	ASTM D149	V/mil	260	kV/mm	10
Dielectric Constant, @ 23°C, 10 ⁶ Hz	ASTM D150			6.0	
Fire Resistance					
UL-94 Flammability Test,	UL-94	Class	V-0		
Limiting Oxygen Index	ASTM D2863	%	44		

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