

# Halar 300LC ECTFE

Medium Viscosity - Extrusion

Halar®

## Typical Physical Properties

Typical Properties	Test Method	US Unit	SI Unit		
<b>Physical Properties</b>					
Density @ 23°C/73°F	ASTM D792	lb/ft <sup>3</sup>	105	g/cm <sup>3</sup>	1.68
Water Absorption	ASTM D570	%	<0.1		
Melt Flow Index @ 275°C, 2.16 kg	ASTM D1238	g/10 min	2		
<b>Mechanical Properties</b>					
<b>Tensile</b>	ASTM D638				
Tensile Yield Strength	23°C/73°F 2in/min (50mm/min)	psi	4300	MPa	30
Tensile Break Strength		psi	7800	MPa	54
Elongation at Yield		%	5		
Elongation at Break		%	250		
Tensile Modulus		psi	240,000	MPa	1655
<b>Flexural</b>	ASTM D790				
Flexural Strength	0.1in/min (2.5mm/min)	psi	6800	MPa	47
Flexural Modulus		psi	245,000	MPa	1690
<b>Impact</b>	ASTM D256				
Notched Izod Strength, 23°C/73°F	0.125 in (3.2 mm)	ft.lbf/in	No Break	J/m	No Break
Notched Izod Strength, -40°C/-40°F		ft.lbf/in	2.0	J/m	207
<b>Hardness, Shore D</b>	ASTM D2240		75		
<b>Hardness, Rockwell R</b>	ASTM D785		90		
<b>Abrasion Resistance, CS 17 (0.5kg)</b>	Taber			mg/1000 rev	5
<b>Friction Coefficient</b>	ASTM D1894				
Static			0.2		
Dynamic			0.2		
<b>Thermal Properties</b>					
<b>DSC</b>	ASTM D3418				
Melting Point		°F	468	°C	242
Heat of Fusion		BTU/lb	18	J/g	42
Crystallization Point		°F	432	°C	222
Crystallization Heat		BTU/lb	17	J/g	40
Specific Heat @ 23°C/73°F		BTU/lb-°F	0.23	J/g.K	0.95

For information contact your Solvay Solexis representative or:

**Europe**  
Solvay Solexis S.p.A. (Italy)  
Tel: +39-02-3835-1  
Fax: +39-02-3835-2129  
Email: solvaysolexis.ita@solvay.com

**North America**  
Solvay Solexis, Inc.  
Tel: +1-856-853-8119  
Fax: +1-856-853-6405  
Email: solvaysolexisinfo@solvay.com

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<b>Thermal Properties (cont'd)</b>					
DTUL, 66 psi (0.46 MPa)	ASTM D648	°F	195	°C	90
DTUL, 264 psi (1.82 MPa)	ASTM D648	°F	150	°C	65
Glass Transition Temperature (T <sub>g</sub> )	DMA	°F	185	°C	85
Brittleness Temperature	ASTM D746A	°F	<-105	°C	<-76
Mold Shrinkage	ASTM 955	%	2.5		
Thermal Stability, 1% Mass Loss, N <sub>2</sub>	TGA	°F	760	°C	405
Linear Thermal Exp. Coefficient	ASTM D696	10 <sup>-6</sup> /°F	56	10 <sup>-6</sup> /K	100
Thermal Conductivity @ 40°C/104°F	ASTM C177	BTU- in/h-ft <sup>2</sup> -°F	1.05	W/m.K	0.15
<b>Electrical Properties</b>					
Volume Resistivity @ 23°C, 50% RH	ASTM D257	ohm- in.	1.4 x 10 <sup>16</sup>	ohm.cm	5.5 x 10 <sup>16</sup>
Dielectric Strength @ 23°C/73°F @ 3.2 mm thickness	ASTM D149	V/mil	350	kV/mm	14
			2.57		
Dielectric Constant, 23°C @ 10 <sup>6</sup> Hz					
<b>Fire Resistance</b>					
UL-94 Flammability Test	UL-94	Class	V-0		
Limiting Oxygen Index	ASTM D2863	%	52		

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Email: solvaysolexis.ita@solvay.com

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Solvay Solexis, Inc.  
Tel: +1-856-853-8119  
Fax: +1-856-853-6405  
Email: solvaysolexisinfo@solvay.com

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