

Dr. Dietrich Müller GmbH, Zeppelinring 18, D-26197 Ahlhorn

Technical Films

Tecfilm® ECTFE TC 00160

Properties:

Tecfilm® ECTFE TC 00160 is a semi-crystalline and melt-processable fluoropolymer resin. Because of its chemical structure – a 1:1 alternating copolymer of ethylene and chlorotrifluoroethylene – Tecfilm® ECTFE TC 00160 offers a unique combination of properties.

Tecfilm® ECTFE TC 00160 film is a strong, hard, tough, abrasion resistant film that retains its useful properties over a broad range of temperatures. Its low-temperature properties, especially those related to impact, are particularly outstanding. Tecfilm® ECTFE TC 00160 films also have good tensile, flexural and wear resistant properties.

In addition, Tecfilm® ECTFE TC 00160 films have demonstrated excellent weathering properties and are extremely resistant to UV radiation and common industrial or environmental pollutants.

Tecfilm® ECTFE TC 00160 films is an excellent barrier to water vapor in a wide range of temperatures. This lower permeability is a key advantage in applications where protection from water as well as oxygen or other small gaseous molecules is required.

Tecfilm® ECTFE TC 00160 films exhibit high bulk and surface resistivity, high dielectric strength, low dielectric constant, and moderate dissipation factor. The dissipation factor varies slightly with frequencies above 1 kHz. The dielectric constant of Tecfilm® ECTFE TC 00160 is stable across broad temperature and frequency ranges.

Stand November 2014

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info@mueller-ahlhorn.com | www.mueller-ahlhorn.com | Sitz der Gesellschaft: Ahlhorn
Geschäftsführer: Heinz-Jürgen Siebert | AG Oldenburg: HRB 209026 | Ust. ID-Nr.: DE 295969093
St.-Nr.: 68/207/07677 | Zertifiziert nach DIN EN ISO 9001:2008 | UL anerkannter Repacker E341377

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- Elektroisierstoffe
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Properties	Testmethod	Unit	Value
Density	ASTM D-1505	g/cm ³	1.66-1.70
Thickness Range	-	µm	25-200
Melting Point	ASTM D-3418	°C	240-244
Thermal conductivity @ 40°C	ASTM C-177	W/(m K)	0.15
Water Vapor Transmission Rate @ 38°C and 90% RH / For a 50 µm film Cast film	ASTM F-1249	g/m ² d	1.6
Stress at Break @ 23°C			
MD	ASTM D 882	MPa	53
TD	ASTM D 882	MPa	50
Elongation at Break @ 23°C			
MD	ASTM D 882	%	280
TD	ASTM D 882	%	280
Modulus @ 23°C			
MD	ASTM D 882	MPa	1550
TD	ASTM D 882	MPa	1500
Free shrink % @ 200°C			
MD	30 min in oven	%	4.4
TD	30 min in oven	%	0
Surface Resistivity at 23°C	ASTM D 257	Ohm	>10 ¹⁷
Volume Resistivity	ASTM D 257		
@ 23°C		Ohm cm	6 10 ¹⁶
@ 80°C		Ohm cm	4 10 ¹⁵
@ 130°C		Ohm cm	2 10 ¹³
Dielectric Constant at 1 kHz	ASTM D 150		
@ 23°C			2.5
@ 100°C			2.6
Dissipation factor at 1 kHz	ASTM D 150		
@ 23°C			1 10 ⁻³
@ 100°C			2 10 ⁻³

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Tecfilm[®] ECTFE TC 00160

Trademark Information: Tecfilm[®] is a registered trademark of Dr. Dietrich Müller GmbH.

Please note:

The information in this data sheet is based on our current knowledge and experience. They do not disengage the fabricator and user from own tests and inspections because of the plenty of possible effects. There is no judicial binding assurance of certain properties or of the qualification for a concrete application in our declaration. We recommend consulting us in individual cases. The acceptor of our products has to observe possible industrial property rights as well as present laws by himself.

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