

EMPOWERING

AGC

SOLAR EFFICIENCY

S O L A R

MODULE MATERIAL

Fluon® ETFE FILM

The performance of Fluon® ETFE film is highly valued by the construction and architectural industry. Examples are the football stadium in Munich and the National Stadium and the National Aquatics Center in Beijing. It is also widely used in the field of photovoltaics.

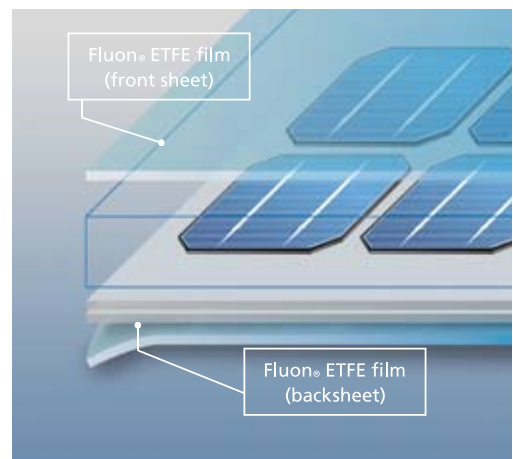
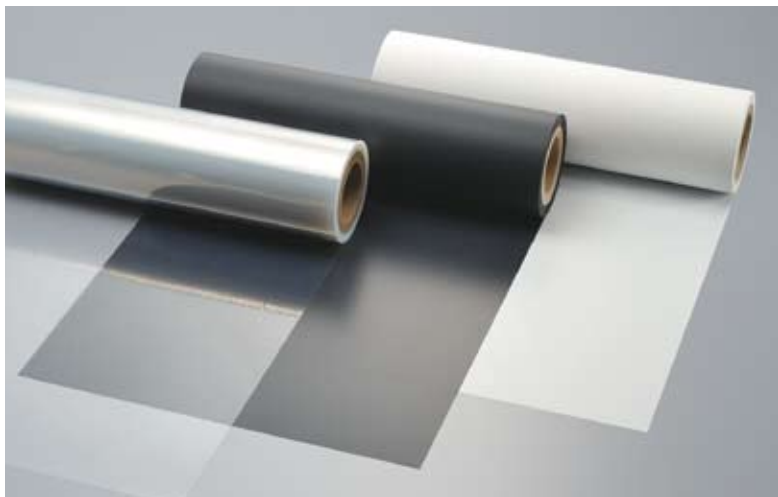
White and black colored Fluon® ETFE film is ideal for use as backsheets thanks to its durability and long service life. Transparent Fluon® ETFE film is of course also used extensively in photovoltaics as front sheets for flexible modules or BIPV.

PRODUCT DESCRIPTION

Applications

Fluoropolymer film for front sheets and backsheets of PV module

Fluon® ETFE film for PV



FOR INFORMATION

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Durability Test of 100N for front sheets

		Before test	After 5000 hrs exposure test
Light transmittance	%	93	93
Tensile strength	MPa	60	60
Tensile elongation	%	395	390

Accelerated weather test with Sunshine wether-o meter

Accelerated Exposure Test of 25PW for backsheets

Retention of Mechanical Properties

Exposure time	0 hrs	Retention rate after 500 hrs	Retention rate after 1000 hrs
Tensile Elongation	300~400 %	95~100 %	95~100 %
Tensile strength	55~65 MPa	90~95 %	85~95 %

Change in Optical Properties

Exposure time	単位	0 hrs	500 hrs	1000 hrs
Transparency at 360 nm	%	≤0.1	≤0.1	≤0.1
Visible light transmission	%	24~26	23~26	22~25
Solar transmittance	%	36~37	36~37	35~36
Solar reflectance	%	60~62	61~63	61~63
Color difference ΔE*		-	-	< 0.7

Test condition of accelerated exposure

Metal halide lamp, 1000W/m² (300~400nm), 63°C (Black panel temperature)

Cycle conditions:

- 10 hours Light irradiation (50% R.H.)
- 10 seconds Shower
- 2 hours Blackness/Condensation (30°C, 100 % R.H.)
- 10 seconds Shower

"EYE Super UV Tester" made by Iwasaki Electric Co., Ltd.

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