

# AKASOL® PTL 750

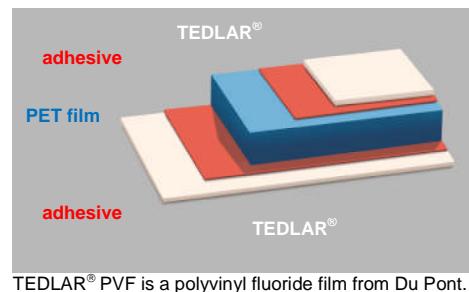
## TEDLAR® + Polyester + TEDLAR®

### General

**PTL 750** is a KREMPPEL laminate consisting of 38µm white TEDLAR® PVF film on both sides of a polyester film core layer. It has been developed for the specific application as a backsheet of a Photovoltaic Module which minimum requirements are described in the International Standard IEC 61730-1.

Electrical, mechanical and optical properties of **AKASOL® PTL 750** remain at high level when exposed to UV radiation or to rough combined temperature/humidity conditions (e.g. 2000 h, 85%rh, 85°C). The physical treated surface of PTL 750 has improved adhesion to the encapsulating polymer.

All tests including accelerating tests are performed on plain back sheet.



TEDLAR® PVF is a polyvinyl fluoride film from Du Pont.

### Required properties in accordance to IEC 61730-1

Property	Unit	Test method	Results	Testing laboratory
Maximum system voltage (in air)	V <sub>DC</sub>	IEC 60664-1	> 1000	VDE, Offenbach
Maximum system voltage (in oil)		IEC 60664-1	2580	UL
- After conditioning 2000h 85°C/85%rh <sup>3)</sup>	V <sub>DC</sub>	IEC 60664-1	> 1000	VDE, Offenbach
UV resistance	-	EN 4892-3	Passed <sup>1)</sup>	KREMPPEL
Flame spread index	-	ASTM E 162	6.5	UL
Relative Thermal Index (RTI)	°C	UL746B	125 <sup>2)</sup>	UL

1) 2000h UV exposure with 0.68 W/m<sup>2</sup> at 340 nm; 60°C; 500 min. wetting; 1000h condensation. Total exposure time 3000h.

2) RTI tested as mechanical temperature rating of TEDLAR®. Electrical temperature rating is 140°C.

3) not required in IEC 61730-1.

### Certificates



This AKASOL®-Type is an UL Recognized Component (File No. QIHE2.E312459), recognized with former designation PTL 3-38/250 TWH.



KREMPPEL GmbH Quality Standards: ISO/TS 16949 (Reg.No.068224) and ISO 9001 (Reg.No.003915).

1.4.3

All values stated are to be seen as typical values. We reserve the right to introduce changes within the framework of further technical development. We do not accept any obligations or liabilities in respect of this information. Status: 12/2014  
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**AKASOL® PTL 750****Additional properties not required by IEC 61730-1**

Property	Unit	Test method	Typical values
Thickness	mm	EN 60674-2	0.34
Area weight	g/m <sup>2</sup>	EN 60674-2	470
Water vapour permeability 38°C/90%rh 37,8°C/100%rh	g/m <sup>2</sup> · d	ISO 15106-3, test condition 2 ASTM F1249	2.3 2.4
Moisture absorption	%	DIN EN ISO 62	≤ 0.6
Dimensional stability, MD + TD (30 min. / 150 °C)	%	EN 60674-2	≤ 1.2
Reflection of visible light (380 – 780nm) <sup>1)</sup>	%	EN 410	73
Reflection of radiation (280 – 2500nm) <sup>1)</sup>	%	EN 410	66
Volume resistivity	Ω·cm	UL 746A	10 <sup>18</sup>
Dielectric strength	kV/mm	UL 746A	68
Comparative Tracking Index (max.)	V (max)	IEC 60112	CTI450
High-current arc ignition	PLC	UL 746A	0

1) Tested in direct solar radiation. Test equipment: Perkin Elmer Lambda 900 (Ulbrichtkugel), Fraunhofer ISE, Freiburg, Germany.

**1.4.3**

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