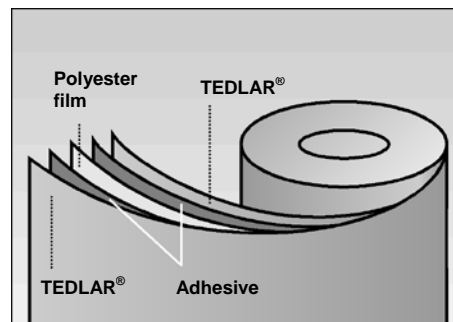


AKASOL® PTL 3-38/250 TCC

TEDLAR® + Polyester + TEDLAR®

General

PTL 3-38/250 TCC is a KREMPEL laminate consisting of TEDLAR® PVF film and polyester film. This laminate has been developed especially for **photovoltaic applications** and is characterised by its excellent mechanical, electrical and chemical properties. The **outstanding resistance** of our laminate to **weather and moisture** in particular, makes it an ideal material for use in **solar modules**. The treated surface of PTL 3-38/250 TCC has improved adhesion to the encapsulating polymer



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

Properties	Unit	Test method	Typical values
Thickness of TEDLAR® PVF film	µm	-	37.5
Thickness of PET film	µm	-	250
Colour of TEDLAR® film	-	-	black
Other combinations of thicknesses and colours available on request			
Properties of TEDLAR® film			
Tensile strength, MD	MPa	ASTM D-882-80, Method A	55
Bursting strength	MPa/m	ASTM D-774-67	7800
Propagating tear strength, MD	N/mm	ASTM D-1922-67	8.9
Moisture absorption	%	ASTM D-570-81	< 0.5
Coefficient of thermal expansion, MD (50 to 70 °C)	K ⁻¹	ASTM D-696-79	6.7 x 10 ⁻⁵
Dimensional stability (30 min. / 150 °C)	%	ASTM D-1204-78	5
Chemical resistance to acetone, hydrochloric acid (10 %), sodium hydroxide (10 %)	-	1 year at RT or 2 h boiling	no relevant changes in tensile strength, elongation and appearance
Service temperature	°C	-	-70 to +110
Properties of PET film			
Tensile strength, MD + TD	MPa	ASTM D-882-80	> 150
Dimensional stability	%	DIN 40634	≤ 1.2
Properties of the laminate			
Thickness	mm	-	approx. 0.35
Peel strength	N/mm	IPC-TM 650 Method 2.4.9	film damage before delamination
	N/mm		> 3
Dimensional stability, MD + TD (30 min. / 150 °C)	%	DIN 40634	approx. 1.2
Vapour permeability	g/m ² · d	DIN 53122	approx. 0.9
Moisture absorption	%	DIN 53495	≤ 0.7
Maximum system voltage *	V _{DC}	IEC 60664-1	1050

* tested by TÜV, Rheinland, ID 21211999.

RU This AKASOL®-Type is a UL Recognized Component (File No. QIHE2.E312459)

2.2.3

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: 05/2010
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