Industrie Service
Energie und Umwelt

TÜVRheinland®
Precisely Right.

Test results - Bonding Performance of tesa® 62934 double-coated foam tape for solar modules

tesa® 62934 double coated tape for solar modules has been tested on 3 substrates after the following climatic test acc. to EN IEC 61215:2005 and IEC 61646:2008:
Damp heat test (10.13), a thermal cycling test (200 cycles, 10.11) and a thermal cycling test (50 cycles, 10.11) with an additional humidity freeze test (10.12).

After the preconditioning climatic tests in the TÜV Rheinland laboratory, a peel adhesion measurement acc. to ISO 29862:2007 – EN 1939:2003 has been performed in the test laboratory of tesa AG in Hamburg, observed by the TÜV Rheinland. The **tesa® 62934** tapes are peeled from the glass, aluminium and Tedlar® surfaces at a 180° angle by a calibrated electronic tensile testing machine (Zwick/Roell). The force required to peel off the tapes is measured and recorded as averages of three identical test samples in N/cm.

Used substrate material:
Aluminium (AlMg3), Float glass and Tedlar® film
(Du Pont dyMAT cTE weiß weiß Tedlar®/PET/Primer T25/PET125/P100) have been used.

Basis for testing:

- Basis of testing is EN IEC 61215:2005 "Terrestrial silicon photovoltaic (PV) modules - Design qualification and type approval" as well as all standards that also apply.
- Basis of testing is IEC 61646:2008 "Thin-film terrestrial photovoltaic (PV) modules – Design qualification and type approval.
- ISO 29862:2007 – EN 1939:2003 – "Self adhesive tapes – Determination of peel adhesion properties".

Measurement results: Adhesion force averages for substrate Aluminium, Glass and Tedlar® in N/cm

		Adhesion force averages in N/cm			
Tape name	**Substrate**	**Reference at room temperature**	**after damp heat test (10.13)**	**after thermal cycling test (200 cycles, 10.11)**	**after thermal cycling test (50 cycles, 10.11) and humidity freeze test (10.12)**
tesa® 62934	Aluminium	14.06	15.71	14.99	16.02
	Glass	14.13	16.07	14.99	15.67
	Tedlar®	14.14	15.31	15.31	15.17

The visual test results of all proofed test samples were foam splitting. The results of the peel adhesion test revealed that there were no remarkable changes between the reference test samples and climatic preconditioned test samples.

Cologne, 18 November 2008

Renewable Energies

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