



BIOLINK
tapesolutions

Technical Appraisal.

Testmethod - Description.

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Introduction

Peel adhesion at 180° angle

This is the most popular and used method for testing the adhesive strength of adhesive tape. The tape (normally 25mm width) is applied with a roller to a panel of the test substrate. After a specified dwell time, the free end of the tape is folded back and peeled of at an angle of 180 degrees at a specified speed. This method is also used for determination of liner release.

Standard substrates

Aera & ASTM/PSTC stainless steel
Aluminium, Glass, PMMA, PVC, PP, PE

Standard dwell time

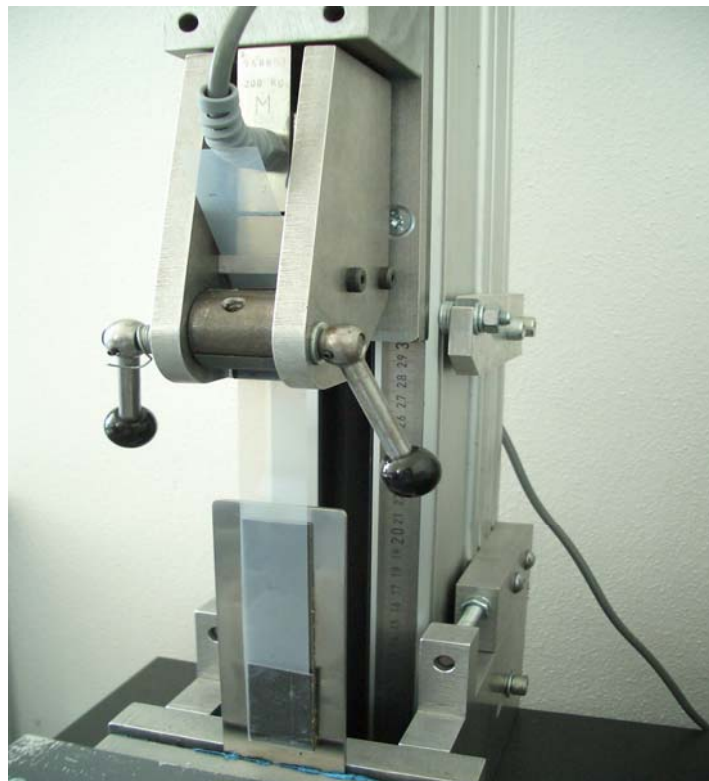
10 minutes and 24 hours

Tests can also be performed after different types of accelerated ageing.

Standard speed

300 mm/min

Tests can also be performed with other substrates, for example customer substrates, or to other specifications.



Introduction

Material Thickness

The material to be measured is placed on the table of the gauge, and the probe is lowered to the material. The result is expressed in mm.

The gauge have a resolution of 0.001mm. A normal procedere isto measure the thickness on 10 different spots of the material, and take the average of these readings as the result.

For testing tapes with a foamcarrier or a filmiccarrier you need different Presser foots at the thickness gauge.



Introduction

Static shear

This test shows the ability of the tape to withstand a fixed load over time. The Tape to be tested is applied to the test substrate at an area of normally 25 x 25 mm, and left for 10 minutes. After this dwell time, the complete Specimen is fixed in the Static shear tester and a weight is hanged in the free end of the tape.

The test is carried out until either the tape slips a certain length in a specified time or the bond fails and the weight drop down. The result is expressed as kg / N per tested area / slippage in mm or the number of minutes until bond failure.

The test can be carried out in room temperature or in high temperature up to 250°C.

Standard substrates

Afera stainless steel

Tests can also be performed with other substrates, for example customer substrates, or to other specifications.



Introduction

Ageing in heat

This test is suitable when determine what influence exposure in heat have to A adhesive tape and the substrate the tape being bond to.

Exposure to heat is also good when testing plastiziser resistance, because higher temperatures cause the plastiziser to migrate and effect the tape and Bond. The choice of temperature level is depending on the requirements and where the tape is to be placed.

When testing plasticizer resistance, a suitable temperature is +70°C for 7 Days.

You can test the ageing in the composite (substrate and tape) or only the ageing of the tape.

For testing composite for example you have to bond the tape to the surface of the final application and than placed in the oven and exposed to heat for the specific time. After ageing a optical inspection could be done and / or the peel test or dynamic shear and the result compared to the result obtained of an unaged tape.



Introduction

Resistance to ageing in heat, cold and moisture

The test shows the influence of accelerated ageing with heat, cold and moisture air in different combinations and cycles for applications specially outside.

The tape to be tested is applied to the surface of the final application and then placed in the chamber. Thereafter, a climate cycle for example according to ISO 9142 (15 h +40°C at min. 90% R.H., then dropping down to –20°C for 2h and then going up to +70°C at 50% R.H. for 4 h) is run for 10 times.

After ageing an optical inspection could be done and / or the peel test or dynamic shear and the result compared to the result obtained of an unaged tape.



Introduction

Ageing in atmospheric humidity / water spray and UV-irradiation

The test shows the influence of artificial weathering to a tape or a final application.

The tape to be tested is applied to the surface of the final application and then placed in the chamber. Thereafter, a typical cycle for example is 102 min. +55°C ,UV and no rain and then 12 min. +55°C , UV and rain (UV-irradiation Intensity 60 W/m²) for 1000 hours.

After ageing a optical inspection could be done and / or the peel test or dynamic shear and the result compared to the result obtained of an unaged tape.

