

ELECTROSTATIC CHARGES DURING THE APPLICATION OF SELF-ADHESIVE FILMS

What is electrostatic charge?

Electrostatic charge is an unavoidable side effect that appears during the handling of isolated materials such as paper, textiles or plastics. It is created by the energy that is required to move the items during handling. The higher the speed of this movement (friction) the stronger the electrostatic charge.

Electrostatic charges can also be an issue during the application of self-adhesive films. When removing the liner from the self-adhesive film, it gets electrostatically charged. The degree of the charge depends on various factors: Humidity as well as the grounding of materials, persons and used machinery plus the speed of removing the liner play an important role. An electrostatically charged self-adhesive film attracts dust and lint and is more difficult to apply.

How can I reduce and control electrostatic charge during the application of self-adhesive films?

Avoid dust

The ideal environment for the application of self-adhesive films is free of any dust. Clothes should be free of lint. The working area should not be cleaned immediately prior to the application, in order to avoid dust being raised.

Humidity

Dry air increases the danger of an electrostatic charge. To avoid this, use a bowl or a bucket filled with water. The evaporating water ties the dust particles and reduces the electrostatic charge.

Alternatively, prior to the application, use a spray bottle to humidify the air, which will enhance the effect of dust particles being tied.

Grounding

Additionally, the person applying the self-adhesive films can himself be electrostatically charged, making the application more difficult. To discharge, it is helpful to touch a grounded metallic object.

Tips for reducing electrostatic charge when applying self-adhesive films with a laminating machine

When using a laminator at high speed, an above-average electrostatic charge might occur. The following measures can be taken to minimize this effect:

- Grounding the machine
- Using special „anti-static“ tapes which discharge the electrostatic charge
- Increasing the humidity, since dry ambient air cannot dissipate sufficient electrostatic charge