

Processing instructions for flat lamination.

Feelz City 2D PET

The lamination of Feelz City 2D PET film onto various substrates is a complex process, during which several factors should be taken into account, which have an immediate effect on the result. This includes handling and storage before and after lamination. The process, handling and storage conditions are explained below. Therefore, the process is considered as ideal.

Preparation for flat lamination:

The film is supplied standardly as a master roll hanging on plastic side parts.

The master roll and the substrate have to be stored at room temperature (20°C +/-3°C) for at least 48 hours before processing.

Flat Lamination Process:

The Flat-Lamination process can normally be divided into the following steps:

1. PUR hotmelt adhesive is applied onto the substrate
 2. Film is fed into the machine
 3. Film is laminated onto the substrate
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1. PUR hotmelt adhesive is applied onto the substrate:
 - The PUR hotmelt adhesive is available in a melted form in the application device, usually a roll coater. The needed adhesive temperature can be found in the supplier's data sheet. The adhesive is applied to the substrate with the application roll as a thin film. The recommended amount of adhesive according to the kind of substrate used can also be found in the supplier's data sheet. Several adhesives of different suppliers were tested with the corresponding process parameters. These can be requested from our technical team.
 2. Film is fed into the machine:
 - The film is applied to the substrate with the design side up. The distance between adhesive application and film lamination has to be adjusted according the used machine setup. Insufficient adhesion of the film to the substrate might be caused by a too low adhesive temperature at the lamination point.
 3. Film is laminated to the substrate
 - Directly after film application to the substrate the part passes a lamination nip which applies pressure to the part. A common nip setting is (thickness of substrate plus thickness of film) minus 10%.
 4. Treatment after lamination
 - After lamination the film is cut and the edges are trimmed according to the substrate size. After at least 24 hours storage minimum at room temperature (>20°C) the adhesion of the film to the substrate is sufficient to process the laminated boards. Storage at lower temperatures result in insufficient adhesion. After about seven days the final adhesion is reached.