

## HANDLING RECOMMENDATIONS FOR THE RANGE:

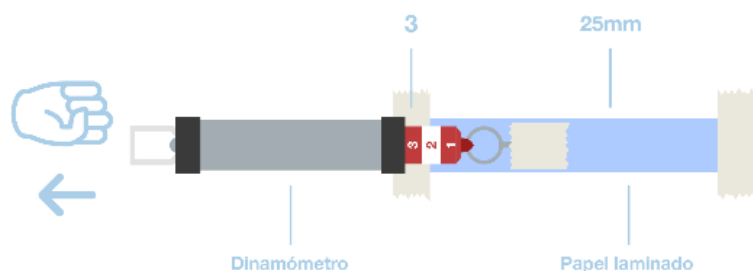
### GLOSS & MATTE

#### General recommendations (Gloss & Matte)

- ✓ Ideal for prints with dark backgrounds and subsequent creasing processes, we would also recommend the drying of the inks.
- ✓ For stamping and varnishing processes, we recommend pre-testing the film matte, while we do not recommend the use of varnish on the glossy film.
- ✓ As far as making covers is concerned, we only have experience of correct operation with Hot Melt type adhesives. It must be applied properly bearing in mind that during those periods in which the room temperature is colder, the hot melt application temperature must be raised between 10 and 15°C. Whenever possible, Hot Melt will be applied to the film. Other adhesives are not guaranteed and it is the end consumer who must ensure their smooth operation. When making boxes with water-based glues, flame pre-treatment must be ensured.
- ✓ To obtain the best adhesion properties, it is vital to adopt the following usage recommendations in regards the main variables affecting the activation of the adhesive:
  - a) **Temperature:** Due to the larger thickness of the film, and to get a full melted of the adhesive, is necessary to increase the rolling temperatures compared to "thermal "standard films. We recommend to apply these temperatures in the calender:
    - i) Gloss Film 24µ: 95 - 115°C
    - ii) Matte Film 27µ: 95 - 115°C

To ensure good adherence, the film must be contracted between 1 and 1.5 % in terms of film width, maintaining minimum unwinding tension.

- b) **Speed:** Increased residence time of the film in contact with the heated roll, allows better melted of the material, whereby we recommended to reduce the speed and threading of the machine between 15 - 30%, in order to obtain the maximum wrapping of the film on the calender.
- c) **Pressure Lamination:** If the machine so allows, the pressure of the lamination roll on the calender will be increased to promote the penetration of the adhesive in the support.
- ✓ Check the lamination strength in the first laminations with a view to verifying the suitability of the film for the type of support and inks. We recommend using the methods described:
- ✓ We would recommend our customers to use the dynamometer. With this in mind the customer must:
  - 1. Have available a laminated sheet with our film, with a width of around 25mm (1 inch).
  - 2. Delaminate via one end of the sheet.
  - 3. For smooth operation, it is recommended to secure the laminated end and the unlaminated carton, pulling out the dynamometer parallel to the table. As shown in the photo.



4. Our experience tells us that if the value shown by the dynamometer is lower than 3 Newton, there may be problems in processes subsequent to lamination such as creasing, sharp blows, stampings etc., whilst of the value is greater than 3 Newton the film can withstand this type of processes.

- ✓ If you don't have a dynamometer, you can carry out this simple test to determine the adhesion strength. It consists of hanging a 500 g weight from a 40 mm test tube. (a 0.5 litre bottle of water may be used). If the test tube withstands the weight of the bottle without delaminating, it can be considered that the adhesion strength is sufficient, otherwise the film may come unstuck, making creases, sharp blows etc. In this case we would recommend waiting two or three days to achieve better ink drying and repeat the test before moving on to subsequent operations.