FLATTENING WITH HARD-SOFT-SANDWICH

TOOLS:

Gore-Tex-Sandwich

- Gore-Tex (or Sympatex, Tyvek), two sheets, min. 20 cm larger than object
- 2 sheets moisture source (capillary matting or blotting paper) size according Gore-Tex
- sponge to apply water to blotter

Hard-Soft-Sandwich

- 1 mat board (museum quality) with smooth surface, min. 20 cm larger than object
- 1 Reemay, Bondina or thin Hollytex, size of mat board
- 2 wooden boards, minimum the size of the mat board
- Synthetic felt or fleece, number of layers depend on distortions
- weights, min. 100 kg/qm, or press

FILM

Before you flatten a tracing paper all the tears have to be closed. Otherwise, these tears might be gapping open.

Humidify the object. You can use a Gore-Tex-Sandwich or a sandwich with similar membranes such as Sympatex, Tyvek, etc. Moisten the blotter not dripping wet, to avoid any leakage of liquid water through the membrane. Place the object on a support into the Sandwich. Humidify until it feels slightly soft. Depending on the thickness of the paper, the humidification time varies. It can be five or even 20 minutes.

Keep a short distance between the humidification station and the flattening station. Otherwise, your object will be already unevenly dry, before placed under weight.

Transfer to the drying stack with the synthetic support sheet onto the acid free mat board. This is hard, smooth, and lying on a wooden board. Cover the object with polypropylene fleece or similar synthetic felt. The thickness of the layer depends on the distortion of the object. The higher the distortions, the thicker the layer. The layer can consist of several pieces of fleece. Cover with a wooden board and put under weight or in press. Make sure you have enough weight to press the fleece and object close to the board. The thicker the layer of fleece, the more weight you need.

Do not open for at least two days. Otherwise, there is the risk that the object is not settled enough and it will react to the surrounding air and distort. Check after two days carefully without moving the object. If the result is satisfying, close immediately and place the weights back for at least one week. Then you can reduce the weight.

Leave the object under weight for at least four weeks to allow the built up of hydrogen bonds in the desired flat position.

Some papers might require repeating of the process. In subsequent flattenings the number of fleece layers might be reduced. With very large objects, several pieces of fleece can be laid next to each other with overlapping edges. It is important that no spaces remain between the fleeces. It is safe to overlap the pieces of fleece because when weighted down they press into each other and produce an even pressure overall.

The hard-soft sandwich is also suitable for local treatments. For this however, the sandwich has to be considerably larger than the treated paper area. This way the polypropylene fleece evens out the tension between the dampened and dry areas.



Built up of hard-soft sandwich

Cross section of the hard-soft sandwich



Materials:

Sympatex

https://www.preservationequipment.com/Catalogue/Conservation-Materials/Other-Materials/Sympatex

Blotting Paper

https://www.karthaeuser-breuer.de/search?search=flieskarton

Reemay

https://www.preservationequipment.com/Catalogue/Conservation-Materials/Other-Materials/Reemay

Hollytex

https://www.preservationequipment.com/Catalogue/Conservation-Materials/Other-Materials/Hollytex

Polyester-felt

https://www.preservationequipment.com/Catalogue/Conservation-Materials/Other-Materials/Polyester-Felt

https://www.eifeltor-muehle.de/papiermacherprodukte/filze/

Literature:

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