

Corrugated Clamshell Box*

This type of box is made from a single corrugated board folded into a clamshell box style. The main advantage of this structure is that no covering or lining materials are used and only minimal gluing is required. The box completely encloses the item and is used for: fragile items that need to be preserved in original condition, important bindings, loose materials, bindings with clasps or other metal attachments.

Measurement Formula.

Single archival-quality corrugated board is the basis for the box, which is made from one piece that is cut and folded. If we assume as a model, a book measuring 20.3 (height) x 13.0 (width) x 2.2 (thickness), the following is the measurement formula for the lower (inner) tray. Follow the illustration in figure 1 to make the formula clear.

To the height, width, and thickness of the item, add .3, resulting in 20.6 (height) x 13.3 (width) x 2.5 (thickness).

To calculate the size of the upper (outer) tray, add .3 to the width and thickness measurement above, and .6 to the height measurement, resulting in 21.2 x 13.6 x 2.8. The spine portion of the box is part of the upper (outer) tray and the same measurement as one of the box walls.

The overall size of the board can best be demonstrated by checking the illustration which in this case, for the length, reading from right to left is: $2.8 + 13.6 + 2.8 + 13.3 + 2.5$, a total of 35 centimeters.

The height is calculated on the upper (outer) tray size of: $2.8 + 21.2 + 2.8$, a total of 26.8 centimeters, thus the overall size of the board is 35 x 26.8 centimeters.

Materials and Tools.

The only tools needed are: bone folder, scissors, mat knife, ruler, and glue brush. Material consists of polyvinyl acetate adhesive and single layer corrugated board (available from a number of suppliers, including Gaylord and University Products).

* The enclosure was developed by Andrea Krupp and first appeared in the *Abbey Newsletter* 15 (October 1991) 97-98.

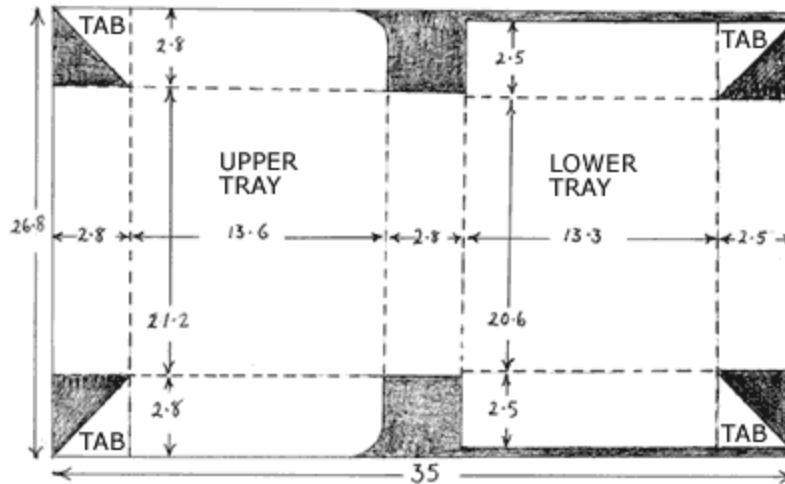


Figure 1

Scoring and Construction.

1. The scoring and cutting lines are drawn onto the board with a pencil and carpenter's square as illustrated, and the waste portions cut away with scissors or a sharp knife.
2. The score lines (shown here as broken lines) are scored with the edge of a bone folder, taking care not to break or penetrate the board surface.
3. When all lines are scored and the waste areas cut away, the walls are folded upwards in the direction of the score lines and set well in with a bone folder.
4. The triangular corner tabs are also folded upwards, and the outer layers of the board separated from the corrugated core, which should be removed leaving the two outer layers.
5. Polyvinyl acetate adhesive is applied to the inner surfaces of the triangular tabs and the tabs pressed into place against the outer and inner walls to secure the box (see figure 2 below)..

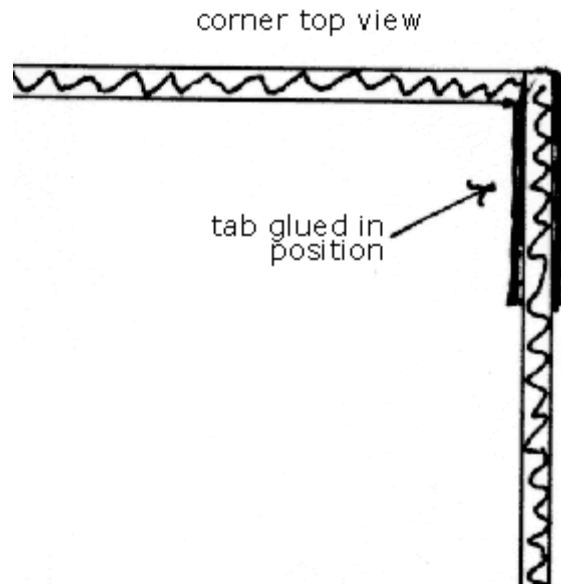


Figure 2

*Updated 1999