

PAPER FILE FOR BINDING DOCUMENTS

The present invention relates to a paper file for binding documents. In particular, it relates to a file comprising a front cover, a back cover and a spine, in which the inner surface of the spine carries at least one
5 thermosetting glue layer.

Paper files for binding documents, wherein a layer of a thermosetting glue is provided on the inner surface of the spine are known in various variants and embodiments. Paper files of that kind and the process for applying
10 them are disclosed, for example, in French Patent No. 2 189 215, US Patent No. 3 954 548 and Belgian Patent No. 869 886. According to those patents the spine is placed against the documents and heat is applied, whereby the thermosetting glue is bonded to the documents. However,
15 these proposals suffer from the disadvantage that, with the passage of time, the paper files become loose from the documents. This loosening is exacerbated by adverse climatic conditions as well as by general fatigue and ageing.

20 It has been found, according to the present invention, that the aforesaid disadvantage can be mitigated to a substantial degree by a novel method, involving the use of special materials for the spine and the glue.

25 Accordingly, in a first aspect the present invention provides a paper file for binding documents, the file comprising a front cover, a back cover and a spine, in which the inner surface of the spine carries a layer of thermosetting glue, and said inner surface and the glue

are of materials such that when said inner surface and the glue are subjected to thermal activation they enter into a chemical reaction with each other thereby providing a permanent bond between them.

5 In a second aspect the present invention provides a method of binding documents, in a file of the first aspect of the invention, which comprises:

forming a plurality of documents into a bundle;

10 contacting an edge of the bundle with the layer of thermosetting glue; and

heating so as to effect chemical reaction between said layer and the spine and thereby provide a permanent bond between the layer and the spine.

15 The paper file of the invention can be produced, for example, as follows. The glue layer is applied to the inner surface of the spine in a conventional way.

At normal temperature, no chemical bond forms between this glue layer and the material of the spine; in other words the glue layer co-operates with the spine by its
20 normal adhesive power. Then the paper file is applied around a bundle of documents, the spine and its immediate surroundings are heated, for example by means of known apparatus. The glue and the material of the spine are thus subjected to thermal activation which leads to a
25 chemical reaction between them; and a bond forms which provides a permanent bond between the glue layer and the spine. The bond between the glue layer and the bundle

of documents occurs in the normal way through the adhesive power of the glue.

As an example, when the spine is of poly(vinyl chloride), also known as PVC, a glue will be employed which forms hydrogen bonds with the chlorine of the PVC under the action of heat. It is clear that the inner surface of the spine of the paper file may consist of a material different from PVC, using an appropriate glue to provide a chemical bond according to the invention.

The present invention is by no means limited to the embodiment described as an example; and the selection of the glue and of the material of the spine may consist in distinct variants without departing from the scope of the present invention.



CLAIMS

1. A paper file for binding documents, the file comprising a front cover, a back cover and a spine, in which the inner surface of the spine carries a layer of thermosetting glue, and said inner surface and the glue are of materials
5 such that when said inner surface and the glue are subjected to thermal activation they enter into a chemical reaction with each other thereby providing a permanent bond between them.
- 10 2. A file according to Claim 1, in which the spine is of poly (vinyl chloride) and the glue is such that upon said chemical reaction it forms hydrogen bonds with the chlorine of the poly (vinyl chloride).
- 15 3. A paper file for binding documents, substantially as described herein.
4. A method of binding documents, in a file as claimed in Claim 1, which comprises:
20 forming a plurality of documents into a bundle;
contacting an edge of the bundle with the layer of thermosetting glue; and
heating so as to effect chemical reaction between said layer and the spine and thereby provide a permanent
25 bond between the layer and the spine.



5. A method according to Claim 4, in which a bond between said layer and the bundle occurs through the adhesive properties of the glue.

5 6. A method according to Claim 4, substantially as described herein.
