

Schempp®
Schutzverpackung für Kulturgut



Paper protective packaging for national treasures

 Two of the most important causes of damage to original documents are the storage and transport conditions. Unprotected archive objects, books, maps or other types of objects such as textiles, coins, etc. are constantly subject to environmental influences such as dust and

archival objects, antiquarian books or museum objects are being stored over longer periods of time then there are more demanding requirements.

In the archival and library areas the objects to be stored are frequently made of paper and they will be stored in their packaging for very long periods. Even objects from museum collections can become damaged



Protective Packaging for National Treasures

light. Whether these objects are removed from the shelf or returned this will always lead to some damage being caused, and on transport even more so.

where unsuitable materials are chosen for the packaging and this leads, for example, to acid infiltration or damage from softening agents.

There are certainly many more ways to cause damage to objects and not all factors can be taken into consideration or influenced. However, damage arising from unprotected storage conditions or transport in unsuitable packaging can be avoided with very little effort and at fairly low cost.

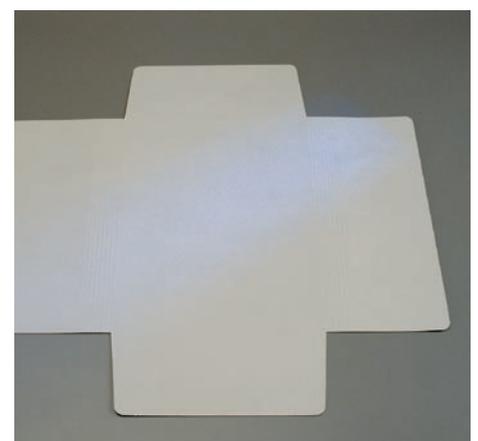
Suitable packaging keeps dust and light at bay and provides protection during movement and transport. If, however, there is a disaster, it makes a great deal of difference whether water falls directly onto a file, book or textile, or whether the protective box becomes wet first. This factor becomes even more important when it comes to the effects of fire.



Suitable, age-resistant materials

Every box is able to provide some protection. It is able to protect the object from mechanical damage during transport and reduces the damage caused through minor accidents (e.g. dropping onto the floor), it can protect from dust, light and other environmental factors, in an emergency it can provide some protection against water splashing or from fire debris.

For simple packaging only used for short periods, e.g. for transport purposes, this form of protection is certainly sufficient. However, for packaging in which national treasures (or even personal treasures) such as



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Whether a box is beneficial or whether the packaging itself leads to damage will depend decisively on the kinds of materials used.

When the phenomenon of acid migration became known, both the manufacturer and the user of archival boxes and museum cases had to revise their opinions: cardboard containing acid can cause damage as the acid present migrates and permeates the object being stored within. In this way even paper containing no acid-building components and therefore not endangered could be affected through acidification.

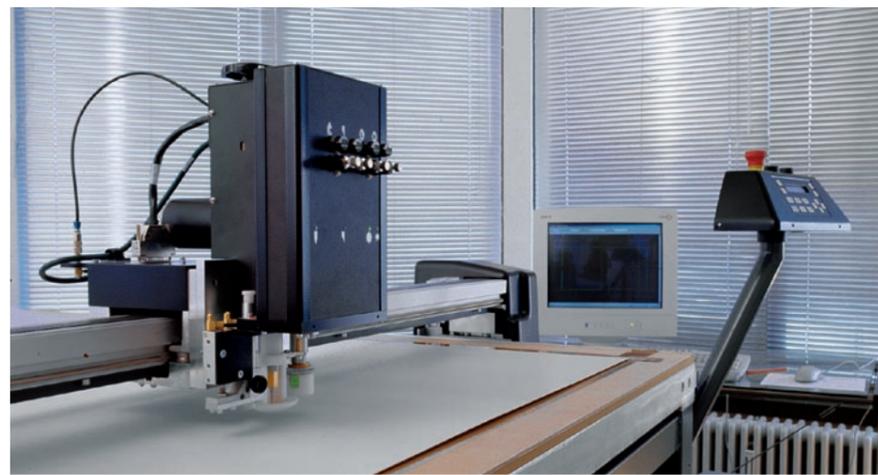
Initially this led to the requirement that all packaging cardboard had to be acid-free. Almost immediately this led to a further improvement in the quality whereby a reserve of alkali was included in the material. This was able to neutralise the acidic component which might be present in the object or which might come from the environment. It even became possible to use materials which contained some components which might produce acid. The acid particles contained could be neutralised for a period of time through the use of alkali buffer materials.

This development led to ever higher demands in terms of quality. The materials to be used must not only not contain any acidic components but they must also be void of any components which themselves could lead to acid being produced. Paper materials which conform to these requirements can be termed "age-resistant". In order to fulfill these high quality standards, paper manufacturers are not only prevented from using any form of woody material – as is usual in the production of acid-free paper – but also forbidden from employing recycled paper, because the exact composition of this cannot be determined and it must always be assumed that this contains a mix of wood-containing and acidic materials.

Age-resistant paper is the basic component for the manufacture of card, corrugated cardboard or museum board with the corresponding properties.

The following standards relate to the manufacture of age-resistant paper:

- ANSI/NISO Z39.48: American National Standard for Permanence of Paper for Publications and Documents in Libraries and Archives
- ANSI IT9.16: Photographic Activity Test (for paper which comes into contact with photographic materials)
- DIN ISO 9706: Paper for documents and printed materials – preconditions for age-resistant materials



Materials for Schempp® boxes

Schempp® Boxes are only made from age resistant paper materials. The main materials employed are as follows:

Paper

- 80 g/m², 120 g/m², 170 g/m²
- white or grey
- 100% bleached cellulose, acid-free and free of any lignin
- ph-value of circa 8.0
- alkali reserve of calcium carbonate > 4%
- neutral glue

Archival card

- 240 g/m², 330 g/m²
- light grey, smooth surface
- 100% bleached cellulose, acid-free and free of any lignin
- ph-value of circa 8.0
- alkali reserve of calcium carbonate > 4%
- neutral glue

Corrugated cardboard

- 1.6 mm, 3.0 mm
- white, one side printed grey
- ph-value of circa 8.5 – 9.0
- oxidation resistance (Kappa value) of between 1 and 2
- alkali reserve of calcium carbonate > 4%

Corrugated cardboard – special order

- corrugated cardboard as above laminated with archival paper, cloth etc.

Paper board

- archive solid board 1.5 mm
- blue-grey
- ph-value of circa 8.5 – 10.0
- oxidation resistance (Kappa value) < 5
- alkali reserve of calcium carbonate > 4%

Made-to-measure protective packaging

Each and every object should ideally be stored under the best possible storage conditions and protected from damaging influences such as light, air pollution, climate changes, attack from micro-organisms or pests and be kept in special containers.

Books, archive objects, official and legal documents as well as other objects preserved in historical collections come in all shapes and sizes.

Therefore, the particular container employed should be individually and exactly constructed in order to keep out destructive environmental influences and to physically protect the object. However, it is also not economic to manufacture large numbers of such hand-made protective boxes for each and every object.

This was one of the main reasons why, in 1991, we began to develop, in-house, a computer-supported manufacturing process for the production of tailor-made protective packaging.

A single CAD-program contains all the data concerning a complete range of products (SB 31, SB 53 etc., see opposite page) with their design and construction input. In order to produce one box the design is selected, the material is chosen and the object's dimensions entered into the system.

Once the software has these details it can calculate the production process (i.e. plot folding lines, or cutting edges) of the particular box and then controls the fold-cut plotter to create a box out of the raw sheet of card.

This technology can be used on both corrugated cardboard and on archival board.

Individual boxes can be produced or even small production runs.

Product overview

Schempp® Boxes (SB) can be produced according to the following designs:

The different boxes are grouped according to basic design (SB 10, SB 20 etc.) and the individual boxes have a model number (e.g. SB 31).

SB 00: flat design, box accessories

- SB 01: additional floor panel, shelf, coin tray etc.
- SB 02: support, retention aid

SB 10: folder box

- SB 11: folder with extra divider between object and the fold-in flap

SB 20: standard box

- SB 21: standard box with detachable lid
- SB 22: standard box with reinforced side walls
- SB 23: SB 22 with reinforced floor
- SB 24: SB 21 with one folding side panel

SB 30: standard box with folding-lid

- SB 31: standard box with folding-lid
- SB 31A: as above but with filling aid
- SB 32: standard box with folding-lid and reinforced side walls
- SB 32A: as above but with filling aid
- SB 33: SB 32 with reinforced floor
- SB 34: folding lid box with fixed side walls

SB 40: archival box with flap

- SB 41: archival box for flat-lying objects with front, outward-folding flap
- SB 42: SB 41 with flat insert
- SB 43: SB 42 with flat insert with three standing sides
- SB 46: archival box with flap on long side for horizontal storage
- SB 47: archival box with flap on long side for standing storage

SB 50: slipcase, magazine file

- SB 51: slipcase
- SB 52: magazine file
- SB 53: slipcase with integrated magazine file

SB 90: folders, envelopes

- SB 91: folders
- SB 92: envelopes
- SB 93: folders for maps, charts etc.



All boxes are constructed without the aid of staples, glue or other material.

Many of the boxes are available in ready-glued form.



SB 11: folder box



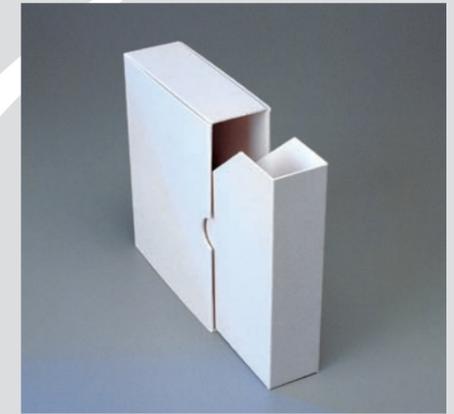
SB 21: standard box



SB 31: standard box with folding-lid



SB 41: archival box with front



SB 53: slipcase with integrated magazine file



SB 91: folders



Standard box with lid (SB 29)



Front flap box (SB 42)

Standard products

Individually tailor-made boxes or folders cannot normally be realistically considered for very large numbers of objects for financial reasons. Nevertheless, it is possible, even here, to considerably improve the storage conditions in this sector by careful choice of suitable materials and the use of reasonably-priced standard boxes and folders. Such boxes are not produced using the CAD plotter but by stamping.

The following products are available in a range of the most common sizes:

- standard box with lid (SB 29) – paper board
- front flap box (SB 42) – paper board
- folder (SB 91) – archival board
- map folder (SB 93) – paper board

The stamping production process can also be used to produce boxes and folders in special sizes and in higher numbers. Either paper board or corrugated cardboard can be used for these items.

Flat wares

A range of flat products are available produced from age resistant paper materials in standard formats, or can be supplied in special sizes.

- copy paper, DIN A4 or folio
- self-adhesive paper for labels
- filling paper, DIN A4 or folio
- wrapping paper any size
- sheet materials as required (paper; archival board, paper board, corrugated cardboard, laminated if required)

Service

As well as our consultation service regarding the appropriate selection of packaging form and materials and construction of boxes we are able to offer a range of other services:

- measuring of objects
- printing and marking of boxes
- folding of boxes
- placement of objects into boxes

Schempp® Conservation Services at a Glance

The Schempp company began with book and art restoration in 1989. Since that time the firm has developed into a highly effective and professional service partner in the conservation of archives, libraries and collections. Today the company consists of four main divisions:

- book and map/print restoration
- archival services and damage repair
- storage systems for individual objects
- digitalisation and film services

We are therefore able to offer a professional and complete service for conservation of archive and library for all your needs.

Book and map/print restoration

- Restoration services for paper, parchment, book covers, seals on antiquarian documents, books, certificates, maps and charts, drawings, posters etc.

www.buch-und-graphikrestauration.de

Archival services and damage repair

- Repair of fire or water damaged objects, fungal eradication, cleaning as well as deacidification and conservation of library or collection stock

www.bestandserhaltung.de

Storage systems for individual objects

- Folders, covers, boxes in various forms and sizes made of age-resistant and acid-free paper materials

www.schemppbox.de

Digitalisation and film services

- User-friendly media such as CD-Rom or DVD, paper copies, fiche and microfiche and film

www.schemppscan.de