



Cotton or chemical wood pulp?

Research tests have come to a clear conclusion.





KLUG's expertise

Research and development for preservation solutions

KLUG-CONSERVATION, with over 140 years of experience, has the know-how to produce premium-quality products made from ageing-resistant paper and board, ensuring maximum permanence and durability for long-term preservation of assets in archives, museums and libraries. Close collaboration with our customers and intense cooperation with the paper industry, development and research institutes, universities and academies allows us to continually improve our existing products as well as develop new ones. This is essential for maintaining a consistently high quality standard, as well as keeping up-to-date with latest developments in the field. We would like to share this knowledge with you in the form of our "Technical Knowledge folders". Should you have any further questions, please refer to our website (www.klug-conservation.com), our printed publications or contact us personally.

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Peter Lang

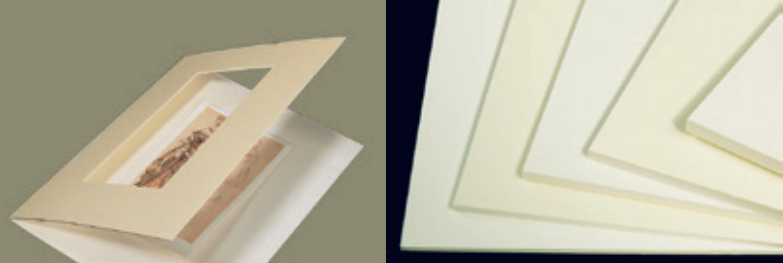
Cotton or wood pulp?

Which type of pulp preserves better

Is the distinctively expensive cotton pulp actually more suitable for preservation purposes in comparison to chemical wood pulp? In times of scarcity of funds the question is whether extra expenditure is necessary? Upon examination the Paper Technology Specialists (ptpaper.com) have come to the conclusion that the influence of the fibre type on the strength and preserving properties of paper and board material is apparently very marginal. A detailed research report is available on our website klug-conservation.com, under the context menu »Knowledge«.

Which criteria are decisive?

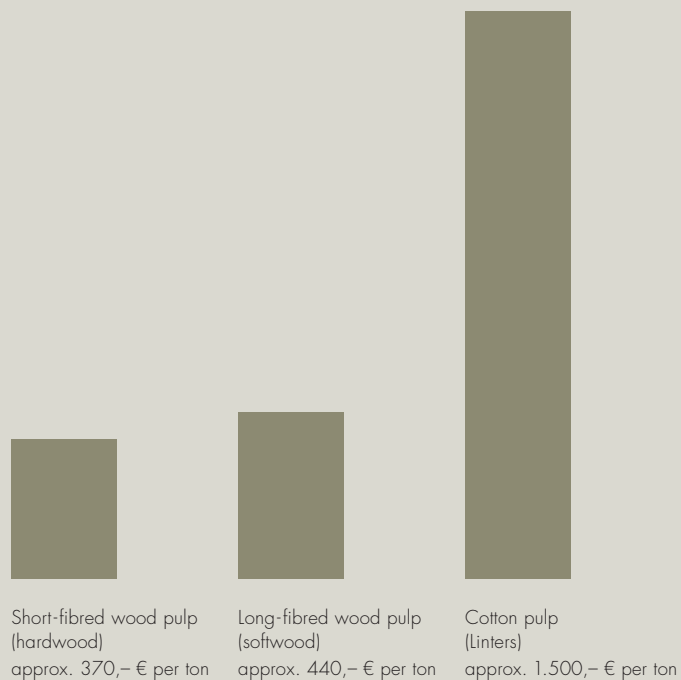
For the required tensile strength and permanence (age-resistant) of the material itself, it is immaterial whether the preservation envelope (packaging) is made of cotton pulp or chemical wood-pulp fibre. As a matter of fact, more important is the composition of materials, such as the alkaline buffer content, sizing agents and dyes used as well as the production procedure. Storage temperature and humidity are also relevant factors.



Prices in comparison

Vast differences in price, however less in effect.

Different types of pulp were examined and the bar chart below illustrates the enormous price difference.



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Proper storage

Important criteria for archival storage

Effective preservation does not only depend on the fibres used, vital is the paper's composition (ingredients), the manufacturing process and proper storage. Essential guidance points for good storage:

- Preservation quality paper envelopes and packagings in accordance with ISO 9706.
- Climatic conditions: Temperature and relative humidity prevalent. Air tightness can be quantified using the existing European Measurement Standards, anchored in the ISO 9972 and DIN 4108 T 7 standard as well as in the heat insulation ordinance. Implementation of these requirements provides archives, museums and libraries with a useful tool to analyse the situation of the collections (stock/collectables) and if necessary helps to improve climatic conditions.
- Exposure to light.

Conclusion: Under appropriate storage conditions, it is of no consequence whether the content of the paper and board products is made of either wood pulp or cotton pulp - both are ideally suitable and preserve for a limitless period of time.

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