

# Caring for your collections: Storage furniture

Choosing the right storage furniture requires careful consideration. Many of the currently available materials produce by-products that can pollute and are harmful to the collections they house.

- Furniture and shelving units must be strong enough for their intended use. Make sure to check loading requirements.
- There should be no sharp edges or protruding bolts or screws.

## Furniture Materials

### Aluminium and steel coated with baked enamel paint

- Aluminium must be anodised to create an inert surface otherwise it will emit peroxides as it oxidises. Therefore aluminium runners should be avoided for drawers containing sensitive materials.
- Baked enamel coating on steel must be properly cured and fully cross-linked; if such a coating has not been sufficiently baked it can off-gas formaldehyde that will quickly cause damage to the collection.

### Powder coated steel storage furniture

- Steel storage furniture with various powder coatings appears to avoid the off-gassing problems associated with baked enamel. Tests have shown that the coatings are safe for storage of valuable materials.

## Wood

- Wooden storage furniture, especially shelving and display cabinets, is very traditional and popular. Unfortunately wood, wood composites, and some sealants and adhesives emit harmful acids and other substances. Off-gassing of these organic acids increases dramatically at higher temperatures and at relative humidity above 80%.
- After long periods of time wood may continue to emit organic acids, and even 'aged' wooden storage cabinets may still be unsafe.
- Therefore, it is advisable not to use wood and wood products for storage and display of collection material. If this is not possible and wood must be used, precautions are necessary. Ensure objects are not in direct contact with the wooden surface.
- Units can be lined with barriers such as aluminium sheets (an inert sealant must be used for aluminium sheeting), aluminium/polyester sheeting, heavy aluminium foil if it cannot get punctured, or glass.
- Other less effective, cheaper materials include alkaline buffered paper, sheets of rag board, and polyester. These materials must be applied over all wood or wood composite surfaces including the undersides of shelves and drawers and the fronts and backs of cabinets. Polyester sheeting is often used to prevent direct contact with wooden shelving.

## Location

- Once suitable storage furniture has been selected, it is necessary to carefully choose the location of the storage area. Choose a clean, well-ventilated, well-insulated area away from sources of moisture, heat, and direct light (i.e. avoid external walls, kitchens, and bathrooms, heating systems, and water pipes).
- The key is to provide an area with limited fluctuations in temperature and relative humidity but good air movement.
- The area should be regularly cleaned and checked for pest and mould activity.

## Storage Enclosures

- Further protection from the surrounding environment is achieved by placing material in appropriate storage enclosures such as archival boxes, sleeves, and folders.

## Useful Websites

- *AICCM Australian Institute for Conservation of Cultural Material* [www.aiccm.org.au](http://www.aiccm.org.au)
- *AIC American Institute for Conservation* <https://www.culturalheritage.org/>
- Find a conservator in private practice through the Australian Institute for Conservation of Cultural Material (AICCM) <https://www.aiccm.org.au/need-a-conservator>

*The procedures described here have been used by State Library of Queensland in the care of its collections and are considered suitable by State Library as described; however, State Library will not be responsible for damage to your collections should damage result from the use of these procedures.*

## Need further information?

(07) 3840 7810 | [www.slq.qld.gov.au/preservation](http://www.slq.qld.gov.au/preservation)

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