

GCC

Alternative Packing Materials Correct Usage

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Version 1. September 2021



Alternative Packing Materials – Correct Usage

Many 'green' or 'eco-friendly' plastic alternatives now exist on the market but their viability as packing materials depends on the nature of the artwork, as well as the mode and length of the journey or storage period.

Whilst these materials can be viable replacements for short-term use, due to their organic composition they will disintegrate quicker than plastics, making them inappropriate for long-term protection of artwork in storage. Organic materials are more prone to mould, acidification, off-gassing, and pest infestations, which do not generally affect non-organic materials.

Before purchasing and using any material it is important to understand their properties and exactly what context they will be used in. This document instructs on the correct usage of the products referred to in GCC's **Plastic Alternative Packing Materials Research**. Consult that document for more information about the items listed here.

The 'Oddy Test' is used as a subjective method for determining whether or not a material, such as wood, fabric, or paint, is appropriate for use in an enclosed space with artwork or other cultural heritage artifacts. If you are in any doubt about the suitability of a packing material for an artwork, contact a conservator or experienced art handler.













The following research charts have been developed by the GCC Packaging & Materials Research Group. They give a good indication of which materials to use in what context but have not been peer-reviewed and should be only used as reference and - until further testing has been conducted - cannot be considered GCC approved guidelines.

Definitions of Traffic Light Colours:

- Red – Known compatibility issues with certain materials / degrades too rapidly for archival use.
- Amber – Possible compatibility issues with certain materials / requires further testing / approved for certain short-term applications but check with conservator or art handler before using in archival context.
- Green – Generally safe. Recommended use in this context.













ALTERNATIVES TO PLASTIC FILMS

GCC

MATERIAL	SHORT TERM	LONG TERM	STORAGE	COMMENTS
PLA film				PLA film has a limited shelf life. Failed Oddy test
NatureFlex™				Material analysis in a conservation lab necessary
Cellophane™				Degrades too readily
Glassine				Glassine can become acidic over time and should not be used for the long-term storage of acid-sensitive materials













ALTERNATIVES TO BUBBLE WRAP

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MATERIAL	SHORT TERM	LONG TERM	STORAGE	
Acid-free Kraft Paper				Acid-free kraft paper can become acidic over time and should not be used for the long-term storage of acid-sensitive materials
Shredded Cardboard				Shredded cardboard is acidic and becomes more acidic over time and should not be used for the shipping and long-term storage of acid-sensitive materials
Paper "Bubble Wrap"				Unbuffered paper is acidic and becomes more acidic over time and should not be used for the shipping and long-term storage of acid-sensitive materials
Bio-based "Compostable" Bubble Wrap (BioViron)				Failed Oddy test













ALTERNATIVES TO POLY-FOAMS

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MATERIAL	SHORT TERM	LONG TERM	STORAGE	
Corn Starch Foam				Corn starch foam has a limited shelf life and will begin to degrade in the presence of moisture - can mould over time and may attract insects. Failed Oddy test
Cellulose Foam™				The company is currently conducting tests and claims it holds up well to humidity - further tests in a conservation lab necessary
Mycelium Foam				Mycelium is hygroscopic and will start to degrade in the presence of moisture - can mould over time
Corrugated Cardboard				Cardboard is acidic and becomes more acidic over time and should not be used for the shipping and long-term storage of acid-sensitive materials













ALTERNATIVES TO POLY-FOAMS

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MATERIAL	SHORT TERM	LONG TERM	STORAGE	
Archival (Buffered) Corrugated Cardboard				
Moulded Pulp				Hygroscopic and will start to degrade in the presence of moisture - can mould over time Paper is acidic and becomes more acidic over time and should not be used for the shipping and long-term storage of acid-sensitive materials
Paper Cushions				Paper is acidic and becomes more acidic over time and should not be used for the shipping and long-term storage of acid-sensitive materials
Thermoplastic Starch Foam				Material analysis in a conservation lab necessary

ALTERNATIVES TO POLY-FOAMS

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MATERIAL	SHORT TERM	LONG TERM	STORAGE	
Honeycomb Cardboard (Corners and Insulating)				Cardboard is acidic and becomes more acidic over time and should not be used for the long-term storage of acid-sensitive materials
PLA Foam				PLA foam has a limited shelf life. Failed the Oddy test
PHA Foam				Material analysis in a conservation lab necessary
Insulating Crate Liners				Paper is acidic and becomes more acidic over time and should not be used for the long-term storage of acid-sensitive materials