

‘Modern Leathers’ – knowledge gathering for cultural heritage

The Leather Conservation Centre (LCC) are global experts in the field of leather conservation and have extensive knowledge on the manufacture and deterioration mechanisms at play for traditional leather and skin-based materials.

However, ‘modern leathers’ – those industrially produced from around the 1920’s onwards using new materials and techniques – are posing new emergent challenges and risks; and are coming into our studio at an increasing rate. These materials cover a broad range of heritage collection types, the extent of which is yet to be fully determined, but include transport, furniture, fashion, utility, medicine, and social history.

In order to establish suitable preservation approaches, we first need to fill current knowledge gaps and create a record of developments throughout this period; a task that has presented a wonderful collaborative opportunity for the LCC and SLTC.

Current approaches to the preservation of these materials rely heavily on research from the plastics conservation field and has limited direct application. This lack of knowledge means conservators working with modern leathers are limited in what they can do to care for these materials; treatment is dictated by the type of collection the object is in (i.e. fashion collection or automotive collection), the expertise and resources of the conservators, and/or best practice approaches to the conservation of plastics (which is still a very limited arsenal). Current approaches do not generally account for the leather component, and thus the material as a whole. Although well intentioned, such approaches come with risk - history has taught us that treating one material according to the recommendations of another can cause long-term damage!

As an initial stage in this large, multifaceted project, we aim to establish a holistic history of developments, both direct and indirect that have had an impact on the physical properties and characteristics of modern leathers, to help conservators understand both their chemistry and wider manufacturing context.

Some of the information we would like to cover include (but certainly not limited to) - the introduction of new mineral and synthetic tannages, new combination tannages, changes in quality of the raw material, shifts in consumer trends, market forces and end uses. Of particular interest is information about surface finishes throughout this period – new and changing formulations, and methods of application. Experience to date indicates that these pose the most immediate risk to ‘modern leathers’, displaying issues such as blooming, tackiness, colour change and delamination, amongst others.

Alongside initial information gathering, we are establishing a material library of examples of 'modern leathers' to use for reference and research purposes.

These will help in understanding degradation mechanisms and aging properties, determine vulnerability to environmental agents of deterioration and ultimately inform appropriate conservation treatments and suitable long-term preventive care approaches.

As well as physical samples, we are hoping to document recipes and any other manufacturing information to create a holistic, informative and useful archive. Any proprietary recipes will be protected and used strictly for research and education purposes only.