

Rethinking Wool as a Modern Design Material

IMAGES COURTESY OF SOLIDWOOL

Solidwool shows how designers can rethink a familiar material and use it in an entirely new way. By combining British wool with plant-based resin, the company has created a durable composite material that can be used in furniture and product design while also supporting British farming and sustainable production.

Solidwool has developed a unique composite material made from British wool and bio-resin. The result is a strong, durable material with a distinctive texture and pattern created by the natural fibres within it. The concept is often described as being similar to fibreglass, but instead of glass fibres, the material uses wool. This approach transforms a traditional agricultural product and material into a new design material with applications in furniture, interiors and product design.

It Started with Wool

The idea behind Solidwool began with a simple ambition to create something beautiful while reconnecting design with nature. The material was originally developed by designers Justin and Hannah Floyd, who were interested in exploring how natural fibres could be used in new and unexpected ways.

Their inspiration came from Herdwick sheep, an iconic breed found in the Lake District. Herdwick wool is very coarse, strong and highly durable, making it different from the softer wools typically used in clothing. For many years it was widely used in the UK carpet industry, but as manufacturing methods changed, the demand for this wool dropped dramatically.

In some cases it became almost worthless to farmers. Rather than seeing this as waste, the designers saw the potential. By combining wool fibres with a 50% plant-based resin, the team created a composite material that is both strong and visually distinctive.



The chair demonstrates how material choice can influence the appearance and structure of a product. Since 2020, the development of Solidwool has been supported by Roger Oates Design, who have continued refining the material, improving production techniques and developing new applications.

A New Way of Thinking About Materials

For students, Solidwool offers an example of how designers can rethink traditional materials. Instead of creating something entirely new, the designers looked at an existing resource and asked how it might be used differently. By combining natural fibres with modern composite technology, they created a material that connects agriculture, manufacturing and design. This approach reflects an important principle in sustainable design that innovation often comes from reimagining what we already have.

Designing with Conscience

Today, designers face the challenge of developing products that balance creativity with environmental responsibility. Materials play a crucial role in this process. The choices designers make about sourcing, production and waste can shape the sustainability of the final product.

Designing with Natural Materials

Composite materials are often associated with advanced engineering applications. Materials such as fibreglass or carbon fibre combine fibres with resins to create lightweight yet strong structures. Solidwool follows a similar principle but replaces synthetic fibres with the natural wool. A layer of wool fibres is combined with bio-resin and pressed together, creating a solid sheet material that can be cut, shaped and formed.

One of the most striking aspects of Solidwool is its appearance. The natural colours and textures of the wool fibres remain visible within the finished material, creating patterns that are unique. No two panels look exactly the same with each piece revealing the structure of the fibres within it.

Supporting British Farming

The wool used in Solidwool comes primarily from Herdwick and Welsh Mountain sheep, both traditional breeds that have been part of the British landscape for centuries. These sheep produce strong, hardy wool that is well suited to outdoor conditions but often considered too coarse for clothing. By finding a new application for this wool, Solidwool creates value from a material that might otherwise have little economic use. This supports farmers and shepherds who maintain these traditional breeds in their natural environments. Using locally sourced wool also reduces the need for imported materials, helping to lower the environmental impact of production.

From Material to Product

Solidwool can be manufactured into sheet material that designers can use to create a range of products. One of the best-known examples is the Hembury Chair, a modern piece of furniture that highlights the natural patterns within the composite.



Classroom Connection

Students can investigate how materials and sustainability influence modern fashion and textile design. The 'Inspired by Industry' Community Clothing KS3 context challenges students to design plastic free trainers, exploring materials, manufacturing methods and environmental impact. Students are asked to consider ethical production, supply chains and responsible design.



Inspired by Industry
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