SOLIDWOOL - A NEW WAY OF WORKING WITH WOOL IN THE UNITED KINGDOM, PROMOTED BY THE IWTO

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Solidwool is one of the innovative products promoted by the International Wool Textile Organization IWTO.

Solidwool is a designed and manufactured innovation created in United Kingdom by Justin and Hannah Floyd, finding new uses for wool that might otherwise go to waste. Solidwool is a unique composite material: pure British wool is bound together with a bio-resin to form a hard, tough, beautiful material that can be used to make chairs and a variety of other products.

The material has a beautiful visual texture, thanks to the coarse nature and organic colour of the fleece. This texture is captured and celebrated in the composite. Wool also possesses natural elasticity and strength, providing flexible reinforcement, an unmatched property to make an ergonomic chair.

The Floyds took Welsh Mountain and Herdwick fleeces, generally too coarse and wiry for use in the clothing industry, and bound them together with a bio-resin. Once the resin had set, they obtained a hard, plastic-like material, a bio-friendly alternative to the plastics and fibreglass used for similar purposes. Since 2020, Solidwool has been engineered by the Roger Oates Design Studio resulting in the Hembury chair, as well as commercially available sheet material that can be used for a variety of design purposes.

Solidwool was born in 2013, with the idea to address the progressive loss of value of wool in the English markets by designing a new product capable of promoting its great potential and supporting British farmers in their work. The wool they used was from a breed called the Herdwick, found in the Central and Western Lake District. The demand for this wild and coarse wool, historically used in the UK carpet industry, has declined since the 1950s, being considered almost worthless and a by-product of sheep farming. The Floyds believed they could help transform this unwanted wool into design with beauty and functionality.

The company was born with the idea of helping farmers regain value, buying British wool from hardy native breeds. In order to make Solidwool, the company combines the wool with a bio-resin made using byproducts from the paper industry and bio-fuel production, in a unique manufacturing process it developed.

The resins they currently use are classed as bio-resins. They use bio-resins with 50% of bio-based renewable content, sourced from waste streams of other industrial processes, such as wood pulp from the paper industry and bio-fuel production. The bio-resin manufacturer claims a 33% reduction in Carbon Footprint and Greenhouse Gas Emissions during manufacture compared to traditional petrochemical based resins.

Plus, the green chemistry of bio-resins eliminates many harmful toxins, making it a more pleasant resin to work with. The use of bio-resin allows the company to create a strong and durable composite with a lower environmental impact. They have worked over the past few years to add more wool content and reduce the bio-resin content. They are currently working with 50% wool and 50% bio-resin, which is nearly twice as much as was in their early designs.

The company sources all materials within the UK, reducing both the carbon footprint of the company and the products they create. UK-sourced ash legs are crafted by a local wood-turner in Devon, while their frames and stackable steel legs are made in Peterborough using recycled steel. The entire moulding and construction process takes place in the Devon workshop, carried out by their skilled team. By limiting themselves to a small network of trusted suppliers, they ensure their ethos and standards are upheld across the board.

The first Solidwool mould was completely experimental. With years of development and experimentation under their belts, the company has invented its own proprietary system. It is a process that they continue to refine. It remains very labour intensive, and each sheet, side-table and chair is made and finished individually. Each chair is assembled by hand, individually inspected and given a unique identification number.

By using traditional, hardy breeds the company is supporting British farms and reducing the carbon footprint of their product. Their goal is to make Solidwool the most natural, lowest impact and highest quality wool composite material out there. They want Solidwool to be considered as a sustainable alternative to today's petrochemical based structurally reinforced plastics and composites. In addition to reducing their carbon footprint, when buying British wool they are keeping traditional skills and craftsmanship alive.

Among the latest projects created with Solidwool is a limited run (only 100 pieces) of side tables. Created by Roger Oates Design, the tables are made from Solidwool, as well as a combination of waste wool fibres used in the creation of woven flatweave and tufted rugs. Each table has unique, organic markings, rich in deep reds, browns and neutral wool tones. These side tables are a perfect complement to Solidwool's signature Hembury chairs.

The Welsh Mountain and Herdwick sheep breeds are both plentiful, producing tons of wool each year. However, there is very little demand for the wool they produce, which is known for its coarseness. Solidwool has found a way to put these fibres to good use, ensuring that wool doesn't go to waste, and proving yet again that beautiful, functional design can always go together with sustainability.

The company is continually striving to improve the sustainability of their products and processes, to minimise the negative impact Solidwool has on the planet. Over the past year they have improved the bio-resin, with bio content rising to 50%. The Hembury now contains twice as much wool as the previous version, which means

they use the equivalent of one whole fleece from a Herdwick sheep in every chair. In the future they aim to use a resin with 100% bio content, making Solidwool the most sustainable and natural it can be.

The idea behind Solidwool was born from a need to re-evaluate the value of Herdwick wool and address the decline of 'wool towns' across the UK that once thrived with industry. This drive to rejuvenate local materials and industries is the inspiration behind their company. Their goal is to connect this unique material with the right people, enabling it to be used as a sustainable alternative to petrochemical-based composites. Solidwool is a material full of possibility.

The 94th IWTO Congress, held in 2025 in Lille (France) brought together 286 delegates from 28 countries, and stressed that *innovation expands wool's horizons*. Sessions throughout the Congress showcased wool's versatility across diverse applications: building materials; luxury cruise liner interiors, and garden applications.

To know more

Article in IWTO website

Solidwool.com website

Solidwool.com about

Soliwood Inspired by waste

Solidwool Catalogue

Solidwool in Facebook.com

Solidwool furniture in Woolmark

Article in tocco.earth

News in solidwool.com

Article in materialsource.co.uk

Article Wool Award in interiorsmonthly.co.uk

IWTO 2024 Activities Report

IWTO 94th Congress Results 2025

IWTO Wool fact-sheets

Using wool for natural insulation in IWTO website

Wool Round Table 2025