

# Søuld

Acoustic materials made  
from eelgrass for healthy living.



Søuld

Søuld is a Danish material manufacturer committed to providing forward-thinking designers, builders and end-users recyclable and carbon-storing acoustic materials made from eelgrass. Founded in 2010, Søuld's mission is to produce functional, sustainable and beautiful alternatives to traditional building materials that can improve sustainable development in the construction industry, whilst also improving human health and well-being.

For over a decade Søuld has collaborated with ecologists, manufacturers and designers to develop products from eelgrass—a renewable local sea plant with deep roots in Danish culture—to offer the industry a high performing alternative to synthetic options. Søuld's work has led to the revitalization of the 400-year-old eelgrass tradition and to the material's optimization for 21st Century building.

Engineered for residential and commercial spaces, Søuld's eelgrass products create calm and comfortable indoor atmospheres that connect with nature through organic, tactile surfaces and the subtle scent of the sea. Søuld's products offer excellent acoustic, thermal and moisture regulating properties, are highly resistant to fire, contain no toxic chemicals, release extremely low emissions and reduce carbon footprint by serving as CO<sub>2</sub> storage.

Søuld is founded by architects and sustainable design engineers with a passion for quality, beauty and sustainability. The Søuld team constantly strives to push the limits of eelgrass processing, to enhance product quality and devise healthy and sustainable solutions that meet the needs of the industry and end-users.



# Material

Søuld's eelgrass products originate from the sea —a place you are never far from in Søuld's native Denmark. The organic material embodies the same sense of calm provided by the sea and when taken indoors, it imbues living spaces with a restorative connection to nature.





**AN OVERLOOKED RESOURCE** — Eelgrass's use in construction dates back to the 1600's, when settlers of Læsø island would forge thick roof-thatching for their 'seaweed houses'—a technique unseen anywhere else in the world. Enhanced through state-of-the-art technology, Søuld's work represents a passionate reinvention of Denmark's forgotten seaweed house heritage.

After a decade of research and development into the material, Søuld has emerged as an expert in eelgrass and is the first company to convert the material into carbon-storing building materials that combine high acoustic performance, safety and health modern aesthetics. Working together with local farmers, municipalities and ecologists, Søuld has optimized eelgrass collection based on environmental protection and the preservation of natural eelgrass meadows.



1.

Built in the 17th Century, traditional seaweed houses on the Danish island of Læsø represent the first use of eelgrass as a building material.

The carbon-binding sea plant is found washed ashore along Denmark's coastline as an abundant, renewable and overlooked local resource. The plant absorbs significant amounts of carbon while growing in the sea and therefor serves as a carbon sink when used in construction.

Søuld has demonstrated that this natural and carbon-binding material has numerous inherent qualities as a modern building material: it provides excellent acoustic and thermal comfort, effective humidity regulation, longterm durability, high fire-resistance and low susceptibility to mould and bacteria due to its naturally high content of mineral salts.











# Acoustic Products

Made from eelgrass—a natural and carbon-binding material—Søuld's products enhance the sensory experience of interior wall and ceiling cladding whilst providing exceptional acoustic performance, health and well-being benefits.



Søuld's products embody the character of their origins in the Danish sea to connect architectural environments with nature.

**ENGINEERED EELGRASS** — The raw material is collected by Danish farmers and engineered by Søuld into acoustic products that offer exceptional results within indoor environments including restful acoustics, thermal comfort, air humidity stabilization as well as an appealing aesthetic expression.

The products are approved for safety indoors with high fire resistance and low emissions—ultimately creating healthy interior atmospheres that support mental and physical well-being. The natural beauty of the eelgrass forges a serene connection to nature indoors and invites a sense of calm and comfort. The material is resilient yet soft to touch—imparting texture, warmth, and a subtle scent that recalls the sea.

Søuld's products represent an alternative to help architects, designers and builders reduce the environmental impacts of construction. Søuld's engineering of the carbon-binding eelgrass fibres results in building materials that act as a carbon storage by locking carbon in the material over the building's lifetime. Søuld's products are responsibly produced in Denmark and designed to be fully circular with a focus on environmental impact.

With their simple, modern aesthetics, Søuld's products are proportioned for easy interior application and are fully customizable to suit residential or commercial spaces of all natures and scales. The products are convenient and fast to install, and their superior quality provides lasting comfort.



GENERAL SPECS:

Application:	Interior walls or ceilings
Mounting:	Adhesive/Joints/Frames
Acoustic Absorption:	Up to Class A
Standard Size:	600 x 1100 mm
Custom Size:	Up to 3000 x 1100 mm
Dust Release:	0.28 mg/m² (avg. 3 and 15h)
Indoor Emission:	72 µg/m³ (at 28 days)
Total carbon footprint A1-A3:	Up to -3,6 kg CO2-eq./m²*
Cradle to Cradle:	Gold
Recyclability:	100% recyclable
Complete datasheets:	sould.dk
	* download full EPD

**COLOUR VARIATIONS** — Sould's products are natural. They will have a brown colour that can be lighter or darker, sometimes with shades of green. The colour depends on the natural character of the batch of eelgrass, as will the products we produce for your order.

Variations:



Green Winter



Summer Brown



Bright Autumn Brown







Restaurant Gaijin  
Photo: MTJ:STUDIO



Restaurant Goldfinch  
Photo: Stine Heilmann

**SOUND ABSORBING** — As a result of the material's porous structure, Søuld's acoustic products deliver an exceptional sound absorption across a wide range of frequencies. By heavily dampening noise, Søuld's products help to create restful and productive atmospheres within residential, industrial and public spaces, contributing to human health and well-being.

1



2.

Derived from the sea, the eelgrass fibres naturally contain high amounts of minerals which resists fire.

**FIREPROOFING** — Søuld's acoustic products are crafted from eelgrass which is naturally impregnated with minerals to result in products with an imbedded fire protection. For increased performance, Søuld combines the eelgrass with a biobased flame-retardant.



1.

As well as reducing ambient noise, Søuld's products bring calm to interiors through their simple, honest forms.

2

## 3

**CARBON STORING — Søuld**

is made from a sea plant that reproduces itself annually, washes ashore during autumn storms and is dried on nearby fields by the sun and wind. Eelgrass binds large amounts of carbon during its growth and if left to decompose, it would release CO<sub>2</sub> back into the atmosphere. By safely storing carbon in durable building materials, Søuld's products serve as carbon storage. Our certified EPD confirms there is more CO<sub>2</sub>eq bound in eelgrass than what is emitted during Søuld's production of the final product (A1-A3).



3.

When used in construction, Søuld's acoustic products has the potential to reduce the overall carbon footprint of a building.



4.

The material's organic properties stimulate the senses and regulate the interior atmosphere to help keep body and mind in balance.

## 4

**ROBUST & DURABLE — Søuld's**

acoustic products are robust and durable. The plants' growth in salt water adds a natural impregnation to the fibres which impede the growth of mold and bacteria. This enables a long product lifetime and contributes to a healthy indoor climate.





Private Villa, Denmark  
Sould Acoustic Mats







5.

Søuld's acoustic products improve the quality of interior atmospheres by balancing moisture.

5

#### MOISTURE REGULATING —

Søuld's products act as an effective humidity regulator. They absorb excess indoor humidity and release it when the humidity levels drop, thus maintaining an optimal level. This natural humidity control contributes to a pleasant indoor climate that promotes comfort and health.

6

**LOW-EMISSION** — The emissions from Søuld's products are extremely low (Cradle to Cradle Certified - Platin level in Material Health). This contributes to improved indoor air quality that supports health and well-being. Additionally, our products are certified as emitting almost no dust, making them well-suited for sensitive environments.



6.

Søuld acoustic products release low emissions, making them a healthy building material for homes, offices and public spaces.





7.

Søuld's acoustic products retain the evocative quality of the plant they're made from to bring nature indoors.

#### NATURAL CHARACTER —

Humans, climate and nature are inseparable and natural materials allow us to slow down and feel at ease. Søuld brings an honest expression of nature inside, imparting warmth and a sense of pre-industrial humanity. As eelgrass is a living material, unique tonal variations are seen each season from muted greens to warm browns. Watch the expression shift as light and weather conditions change and colours take on more character as a subtle patina emerges over time.

7

**FLEXIBLE SOLUTIONS** — Søuld is characterized by tactility and simple design solutions that seamlessly integrate with many contexts and needs. The material is heat pressed into flat, uniform mats allowing the products to be cut in various shapes and sizes, making design customizations easy. The products are simple to install using adhesive or screws, and they're scalable to suit interiors of any size.

8



8.

Passionate about collaboration, Søuld also works with designers and architects to create bespoke solutions.



# Design Solutions

Søuld offers simple and modular acoustic products that celebrate the natural character of eelgrass and add subtle atmosphere to any room.

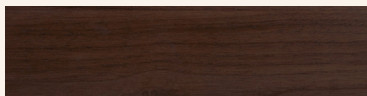




**WOODEN FRAMES & WOODEN JOINTS** — To cater for various interior design needs, Søuld offers Acoustic Mats with wooden joinery or wooden frames. The unframed acoustic mats - Wooden Joints - are the most minimal and versatile solution—accentuating the beauty of the eelgrass as pure forms which are held together using custom-designed wooden joints. When installed as a sequence, the mats create a pattern of clean, linear lines accented by the joinery.

Søuld Wooden Frames are held within custom natural wooden frames with beveled edges, bringing additional craftsmanship and tactility to the eelgrass material. The Wooden Frames form a contemporary architectural landscape when installed together on walls.

#### FINISHES — WOODEN FRAMES



Oiled Smoked Oak



Oiled Oak

#### FINISHES — WOODEN JOINTS



Untreated Beech



# Production



To unlock the benefits of eelgrass, Søuld has spent over five years devising manufacturing processes that merge nature with state-of-the-art technology, and has built a local community of dedicated eelgrass suppliers.

**OUR PROCESS** — Søuld has established the optimal formula to produce eelgrass mats at an industrial level and deliver products that meet market needs.

Søuld's products are manufactured in Denmark through close, longstanding relationships with local partners. We collaborate with independent institutes and certification authorities to test and ensure that our producers meet the highest standards with respect to toxic emissions.

**CIRCULARITY** — Søuld's products and processes are designed to be fully circular and with a focus on the environmental impact. We take environmental protection and the health of producers and customers seriously. Therefore, we expect all of our production partners and suppliers to meet the same commitments as our own team, and we provide full transparency about our materials, processes and product life-cycle.



4.

Søuld products are made in Denmark using manufacturing practices that generate almost zero waste and that have low energy consumption.





# 1

## Airlaid

**AIRLAID** — At Søuld's Danish production facility, the eelgrass is analyzed, sorted and classified according to quality, then shredded down to shorter standardized fibres to ensure the best aesthetic and mechanical properties. Initially, the shredded fibres are impregnated with a fire retardant and mixed with a binder specially designed for cellulose fibres and recyclability. The blended fibres are then formed into eelgrass batts using airlaid technology.



# 3



**SOURCING** — Eelgrass is a natural resource which reproduces itself annually in the sea, washes ashore without any human intervention, and is dried on nearby fields by the sun and wind. Working closely with our community of farmers in Denmark as well as local municipalities and ecologists, Søuld has developed a responsible approach to eelgrass collection based on environmental protection and the preservation of eelgrass meadows. Our sourcing practices also sustain the age-old eelgrass trade and empower local businesses.

## Sourcing

# 2



**COMPRESSION** — After the fibres are formed into eelgrass batts, they are compressed into mats or boards using a process which balances a low temperature with high compression. The material are then ready to be cut. Standard sizes are offered at 600 x 1100mm, or the mats can be fully customized to suit any project, with sizes up to 3000 x 1100mm. The finished material are then ready for easy installation onto interior walls or ceilings.

## Compression

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## Circularity

**CIRCULARITY** — Søuld's products are designed for circularity. When they reach their end-of-life after many years of use, they can be returned to the factory, re-shredded and either blended into standard products or used to create a base for second-generation Søuld materials. This process ensures the products' sustainability throughout the entire life-cycle. Søuld products that are not returned to the factory can be sent for combustion at heating plants.



# 5

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## Transparency

**TRANSPARENCY** — Our materials are responsibly sourced and produced in Denmark according to the highest local environmental standards and industry certifications. We collaborate with partners, test institutes and certification authorities to verify data about the materials we use, our processes and product life-cycle, and to provide transparent results. We strive unceasingly to develop sustainable products of high quality and always search for the best solutions to improve the environmental accounting of our production and products.



# 4



**QUALITY CONTROL** — We work closely with our local production partners to maintain full control at every step of the process from each component to the final product. The Søuld team are enthusiastic developers and we constantly strive to improve our processes and the aesthetic and functional properties of our mats to make them the best option for interior spaces.

## Quality Control

# 6



To learn more about Sould, to request samples, place an order, or discuss a collaboration, please feel welcome to contact our team below:

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