

Søuld

Sustainable building materials made
from eelgrass for healthy living.

Søuld is a Danish material manufacturer committed to providing forward-thinking designers, builders and end-users with eco-friendly, recyclable and CO₂-storing building 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 acoustics from eelgrass—an abundant, 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, to the protection of the eelgrass ecosystem and to the material's optimization for sustainable 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 CO₂ 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 CO₂-storing building materials that combine high acoustic performance, safety and health with sustainability and 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 CO₂-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 CO₂ while growing in the sea and therefore serves as a carbon sink when used in construction.

Søuld has demonstrated that this natural, non-toxic and CO₂-binding material has numerous inherent qualities as a modern building material: it provides excellent acoustic and thermal comfort, effective humidity regulation, long-term durability, high fire-resistance and low susceptibility to mould and bacteria due to its naturally high content of mineral salts.



Acoustic Mats

Made from eelgrass—a natural, non-toxic and CO₂-binding material—Søuld's acoustics enhance the sensory experience of interior wall and ceiling cladding whilst providing exceptional acoustic performance, health and well-being benefits.



2.

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



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

The mats are approved for safety indoors with high fire resistance, zero harmful chemicals or additives and extremely 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 acoustics represent a sustainable alternative to help architects, designers and builders reduce the environmental impacts of construction. Søuld's engineering of the CO₂-binding eelgrass fibres results in building materials that act as a carbon sink by locking CO₂ in the material over the building's lifetime. Søuld's products are responsibly produced in Denmark and designed to be fully circular with the lowest environmental impact possible.

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

GENERAL SPECS:	Acoustic Mats: Building	Acoustic Mats: Interior
Application:	Interior walls or ceilings	Interior walls or ceilings
Mounting:	Adhesive or screws	Adhesive or screws
Composition:	Eelgrass, Flame-retardant, Thermoplastic	Eelgrass, Thermoplastic
Acoustic Absorption:	Class B(MH)	Class A
Reaction to Fire:	Class C-s1, d1	Unclassified
Thickness:	35 mm	40 mm
Standard Size:	600 x 1100 mm	600 x 1100 mm
Custom Size:	Up to 3000 x 1100 mm	Up to 3000 x 1100 mm
Density:	137 kg/m³	120 kg/m³
Dust Release:	0.28 mg/m² (avg. 3 and 15h)	0.28 mg/m² (avg. 3 and 15h)
Indoor Emission:	72 µg/m³ (at 28 days)	72 µg/m³ (at 28 days)
Colour:	Silvery greys/warm browns	Muted greens/warm browns
Scent:	Subtle wind and sea	Subtle wind and sea

UNIQUE SPECS:

Recyclability:	100% recyclable	100% recyclable
Total carbon footprint A1-A3:	-1,8 kg CO2-eq./m²	-3,6 kg CO2-eq./m²
Cradle to Cradle:	Expected by Q4 2021	Expected by Q4 2021



3.

The pliable, customizable materials easily adapt to suit varying creative and functional needs. They are designed for simple and easy installation in homes or commercial spaces.



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



2.

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

3

CARBON STORING — Sould 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 CO₂ during its growth and if left to decompose, it would release CO₂ back into the atmosphere. By safely storing this CO₂ in durable building materials, Sould's products serve as carbon sinks which result in a highly positive climate impact. Our certified EPD confirms there is more CO₂ bound in eelgrass than what is emitted during Sould's production of the final product (A1-A3).



4.

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

1

FIREPROOFING — Sould's Acoustic Mats are crafted from eelgrass which is naturally impregnated with sea salts to result in products with an imbedded fire protection. For increased performance, Sould combines the eelgrass with a natural and non-toxic flame-retardant. Sould is currently type-approved as protective cladding with a class D-s2,d2 and will reach class B-s1,d0 by fall 2021.

4



1.

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

2

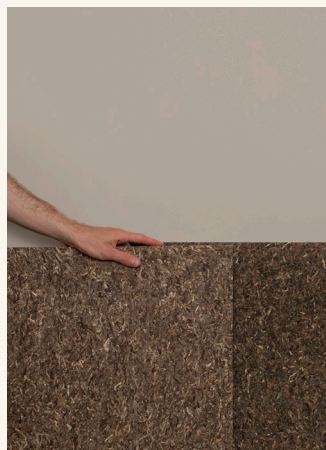


3.

When used in construction, Sould's Acoustic Mats reduce the overall carbon footprint of a building, thus contributing to more sustainable living.

ROBUST & DURABLE — Sould acoustics 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.





5.

Søuld's Acoustic Mats improve the quality of interior atmospheres by balancing moisture.

6



7.

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

LOW-EMISSION — Søuld's products contain no harmful chemicals or additives, and emissions from the products are extremely low. This contributes to improved indoor air quality that supports health and well-being. Additionally, our products are classified as low dust emitting, making them well-suited for sensitive environments.

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.

8

MOISTURE REGULATING — Søuld 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.

Søuld Acoustic Mats are non-toxic and release low emissions, making them a healthy building material for homes, offices and public spaces.

7



8.

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



Design Solutions

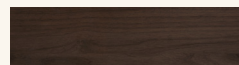
Søuld offers simple and modular design systems to celebrate the eelgrass's natural character and add subtle atmosphere to a room without dominating its contents.

EELGRASS MATS & FRAMES — To cater for various interior design needs, Søuld offers Acoustic Mats with wooden joinery or wooden frames. The unframed acoustic mats 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.

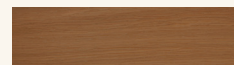
Søuld's framed acoustic mats are held within custom natural wooden frames with beveled edges, bringing additional craftsmanship and tactility to the eelgrass material. The framed acoustics form a contemporary architectural landscape when installed together on walls or ceilings.



FINISHES — WOODEN FRAMES



Smoked Oak

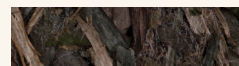


Oiled Oak

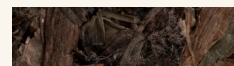


White Oiled Ash

COLOURS — ACOUSTIC MATS



Green Summer



Autumn Brown

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 responsibly manufactured in Denmark through close, long-standing relationships with local partners who are equally committed to sustainable production. We collaborate with independent institutes and certification authorities to test and ensure that our producers meet the highest standards with respect to toxic emissions. We only use compounds that are manufactured without noxious chemicals and release no harmful substances into the indoor environment.

Søuld's products and processes are designed to be fully circular and with the lowest environmental impact possible. 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 zero waste and that have low energy consumption.



1

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, safeguarding of ecosystems and the preservation of eelgrass meadows. Our sourcing practices also sustain the age-old eelgrass trade and empower local businesses.

Sourcing

Airlaid

AIRLAID — At Søuld's Danish production facility, the eelgrass is analyzed, sorted and classified according to colour and quality, then shredded down to shorter standardized fibres to ensure the best aesthetic and mechanical properties. Initially, the shredded fibres are impregnated with a natural, non-toxic flame 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.

2



3

COMPRESSION — After the fibres are formed into eelgrass batts, they are compressed into mats using a process which balances a low temperature with high compression. The mats 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 mats are then ready for easy installation onto interior walls or ceilings.

Compression

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.

4



5

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 sustainable option for interior spaces.

Quality Control

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.

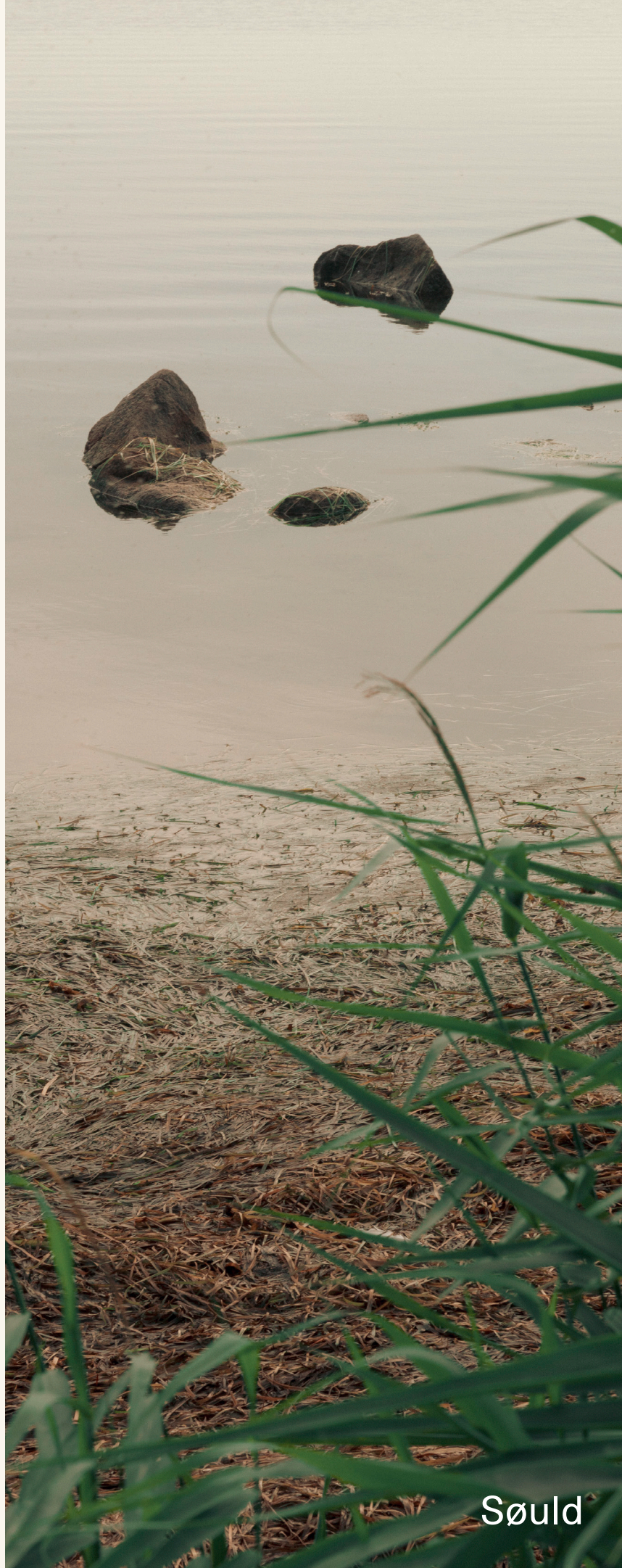
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To learn more about Sould, to request samples,
place an order, or discuss a collaboration, please
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