



NORDGRÖNA Flexible Moss Panel

Since early days the lichen, commonly known as Reindeer moss has been used by mankind. Often around windows to avoid water condense on the glass. As the lichen is hygroscopic it balances the humidity in the surrounding air.

Now the Swedish company Nordgröna has found a new innovative way to use the Reindeer moss. The company has developed a moss panel that works as an acoustic panel as well as being a beautiful interior product.

Due to the organic structure of the lichen it is ideal for absorbing acoustics, this makes the Nordgröna Moss panel to a high class sound absorber.

To meet costumer demand Nordgröna had to develop a new flexible moss panel that could be installed on curved walls. This was the beginning of the Master Thesis, "Nordgröna Flexible Moss Panel."



Wild growing Reindeer Moss, Source: www.nordgrona.com



Three panels in a row

The new flexible moss panel was designed to fulfil high demands on quality, materials used, manufacturing, aesthetically appealing and flexibility. To meet these criteria a whole new production technique had to be developed and the construction of the panel would have to change. The key selling point for the existing panel was that it was made of only natural materials. To use rubber or plastic in the new panel was therefor unacceptable. This made it hard to find any flexible materials that could be used, the flexibility would instead have to be in the construction of the panel. Ideas were generated that evolved into concepts and quick prototypes. Every idea was evaluated and compared with each other and finally it resulted in a construction that was easy to produce and had the potential to fulfil the specifications of the project.

The sushi concept

The chosen concept originated in a sushi mat, and is there for referred to as the sushi concept. The construction of the panel is very similar to a sushi mat with rods attached to each other with threads. The moss is inserted between the rods and fasten with friction from tightening the threads. This construction was simple, durable and very flexible. To meet the other costumer demands the concept was further developed. A backside of high quality linen-fabric with a sewing-pattern to allow both flexibility and a secure attachment. Two of the sides are covered with a beautiful frame piece to allow easy handling, mounting and making it possible to install the panels without seams in between.

The flexibility

The new Nordgröna flexible panel can bend around 90 degree corners, without the moss losing density or structure. This makes the panel interesting for costumers with only flat walls as well. Not only is the panel it self flexible, the production technique developed is also flexible when it comes to size, shape and colours. Depending on special customer demands the panel can easy be produced in any measurements.



Panel bent 90 degrees

The result

The Master thesis resulted in a full scale prototype consisting of three 300x300 mm flexible moss panels. This is needed to show all the different features and attributes of the product. The frame sides express the contrast of soft and hard. The black rectangular wood meets the green fluffy rounded organic moss.

The shape of the moss follows the frame in a harmonious way, the choice of materials shows that this is a high quality product. The seams between the panels are distinct lines that separates the different rows of moss panels on the wall. It is pleasing to the eye and a natural point to lay focus on. It is obvious that the seam is supposed to be there and adds a depth and pattern to the installation. The panels has no problem handling 90 degrees corners without the moss losing density or structure. The moss on the sides goes all the way back to the wall and it is impossible to see how it is mounted or produced. On the backside the panel is covered with black linen creating a pleasing relation to both the materials in the frame and the moss.



Linen fabric on the backside of the panel



Two panels in 90 degree corner

Key features



High Class Sound Absorber

Certified by ISO-354 & 25269



Fire-Resistant

Certified by ISO-11925-2



Hygroscopic

Natural breathing material



Forest Fragrance

The Reindeer Moss retains a soft forest fragrance



Non-Allergenic

The moss panel doesn't contain any toxic chemicals or components



Dust-Proof

Moss repels dust particles



100% Natural

Only natural materials are used



Maintenance-Free

No maintenance is required



Insect-Free

Doesn't attract any insects or pathogens



Flexible

Allows 90° bends for installation on curved walls and corners

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