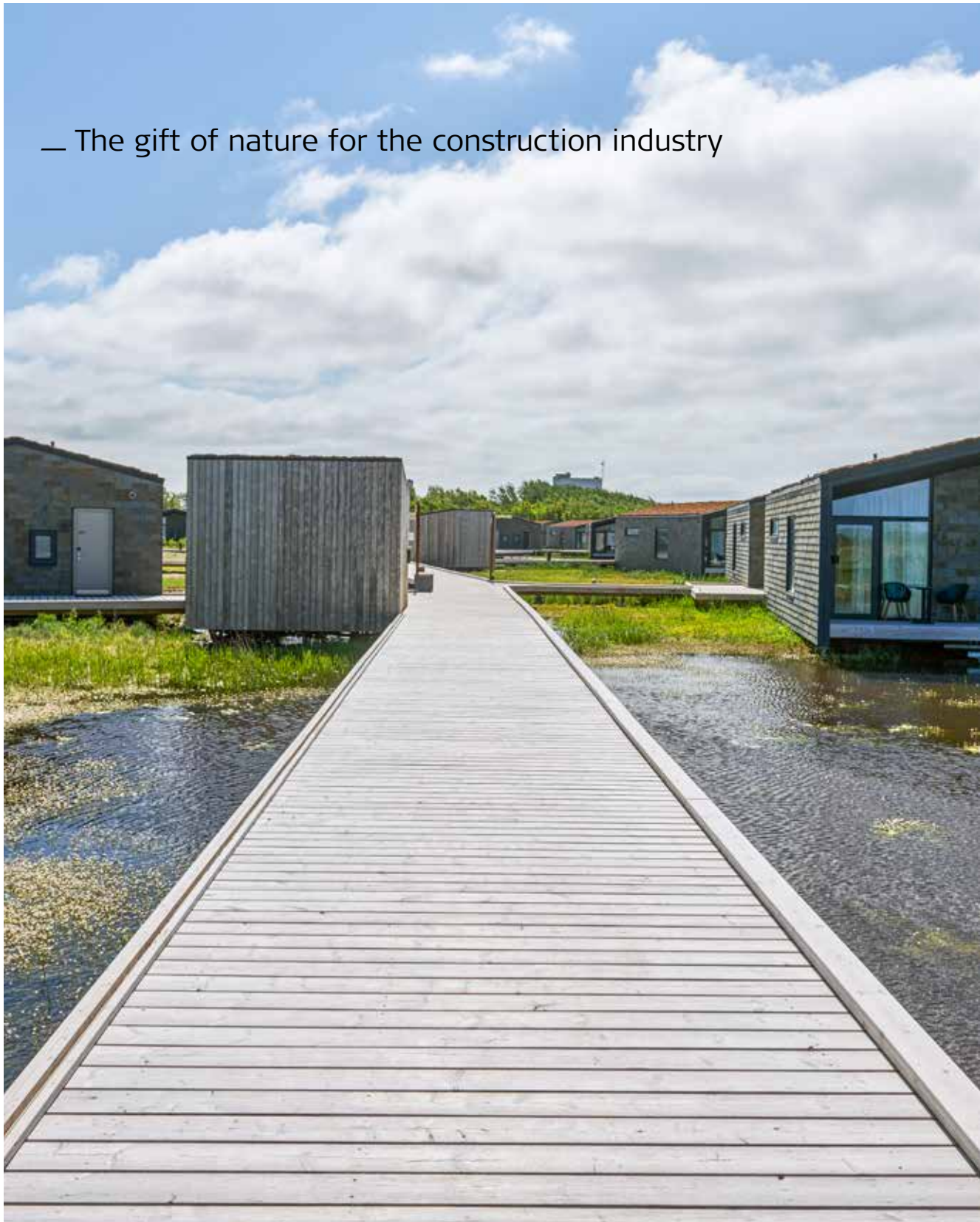


Froslev Sature®

— The gift of nature for the construction industry



Frøslev Sature®

Frøslev Sature® is silicate-impregnated quality pine from certified Nordic forests and is a new, ground-breaking material for the construction industry. The silicone impregnation consists of sand (silicate) and water and increases resistance to dry-rot and wood-decay fungi, so the wood can last year after year. Frøslev Sature® is strong and durable and is especially suitable for terraces and façade cladding and is a good alternative to pressure-impregnated wood.



MD 22077 EN | epddanmark.dk



PEFC-certified

PEFC is an international, recognised labelling scheme for sustainable forest management and ensures environmentally responsible, socially beneficial and economically viable forest management for current and future generations.

FSC®-certified

Frøslev is a member of FSC® Danmark. The FSC® mark is your guarantee for responsible forestry and improved living conditions for the local population in forests around the world – from tropical rainforests to Swedish coniferous forests. FSC® C106294

Nordic Swan Ecolabelled construction

Frøslev Sature® is registered in the database of construction products which can be used in Nordic Swan Ecolabelled construction.



Project: Holiday home, Norsminde | Sature terrace



9 REASONS TO CHOOSE FRØSLEV SATURE®

- // Strong and durable for outdoor use
- // Impregnated with sand (silicate) and water
- // Free from biocides and heavy metals
- // Resistant to dry-rot and wood-decay fungi
- // Patinates in a short time and becomes light grey
- // Certified, Nordic quality pine
- // Very durable (biological durability grade 1v)
- // Unique impregnation developed and tested for ten years
- // Registered in the database of construction products which can be used in Nordic Swan Ecolabelled construction

Products and fire

Products

Frøslev Sature® is made for cladding façades and terraces. The silicate modification increases the durability, strength and hardness of the wood, and the wood is therefore very suitable for outdoor cladding. Frøslev Sature® is for anyone who wants light and Nordic wood that is strong, durable and impregnated with the forces of nature and with respect for the environment.

The product does not tolerate permanent soil or water contact.

The technology behind Frøslev Sature® is patented and the result of 10 years of intensive development and documented research.

Fire

Frøslev Sature® is tested and approved in fire class D-s2, d0. Frøslev Sature® is available in profiles that meet the requirement for Class 2 cladding. See the current declaration of performance (DoP) at froeslev.dk



Project: Villa, Horsens | Profile: 2605 P



REUSABLE

Frøslev Sature® is a wood product free from biocides and heavy metals, meaning that the wood can be reused or upcycled for new purposes at the end of its life.



Patination and maintenance

Patination

Frøslev Sature® has a light and Nordic look. The wood has a matte surface and can be left naturally as is and patinates over time into a beautiful, grey colour.

The patination depends on the elements, structural protection (e.g. eaves) and the location of the façade or the terrace in relation to the sun. Like any other wood, Frøslev Sature® turns grey because of UV rays and turns very light over time. Despite the patination, Frøslev Sature® retains its protective properties.

After completed installation, brush off excess silicate from the Sature® modification from the surface using a soft brush or a damp cloth to reduce ruboff onto shoes and clothes. However, some ruboff from excess silicate is to be expected.

Maintenance

Frøslev Sature® cannot be painted or oiled. If installed on a façade, Frøslev Sature® can be left without any further surface treatment as the silicate modification makes the profiles very durable.

However, a Frøslev Sature® terrace requires care on installation and must be maintained once a year using Sature® Clean and must be given a subsequent surface treatment using Sature® Preserve. Both specially developed care products are water-based and are sold together with the wood. Detailed instructions for use are provided on the packaging. Use Sature® Preserve for finishing treatment of cut surfaces.

Humid periods may cause algae growth and mould on the surface. They do not ruin the wood but will discolour it. Mould spores and algae on Frøslev Sature® can be cleaned off using Sature® Clean.

CARE PRODUCTS



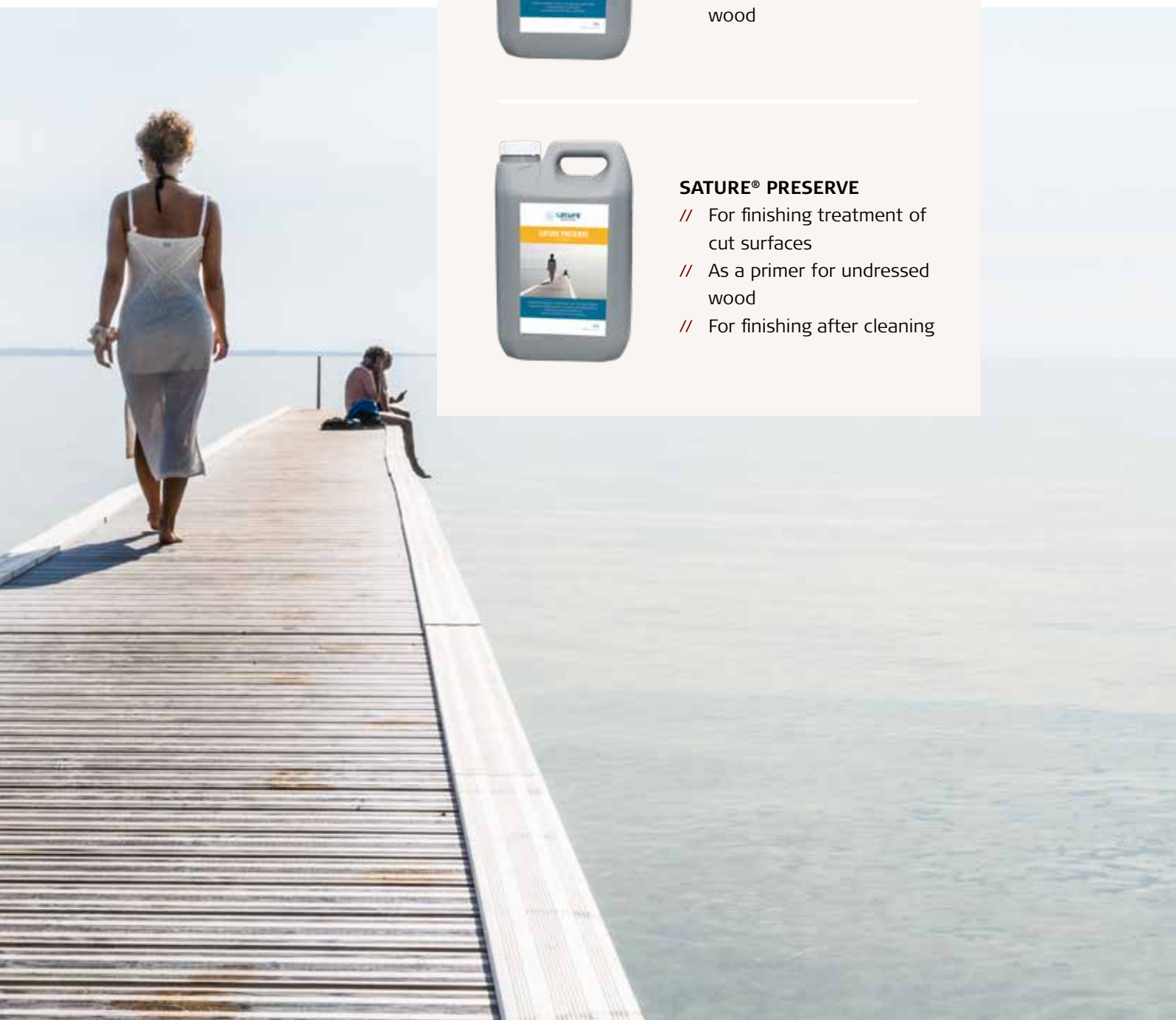
SATURE® CLEAN

- // For cleaning
- // Removes dirt and deposits on the surface
- // Adds a new look to the wood



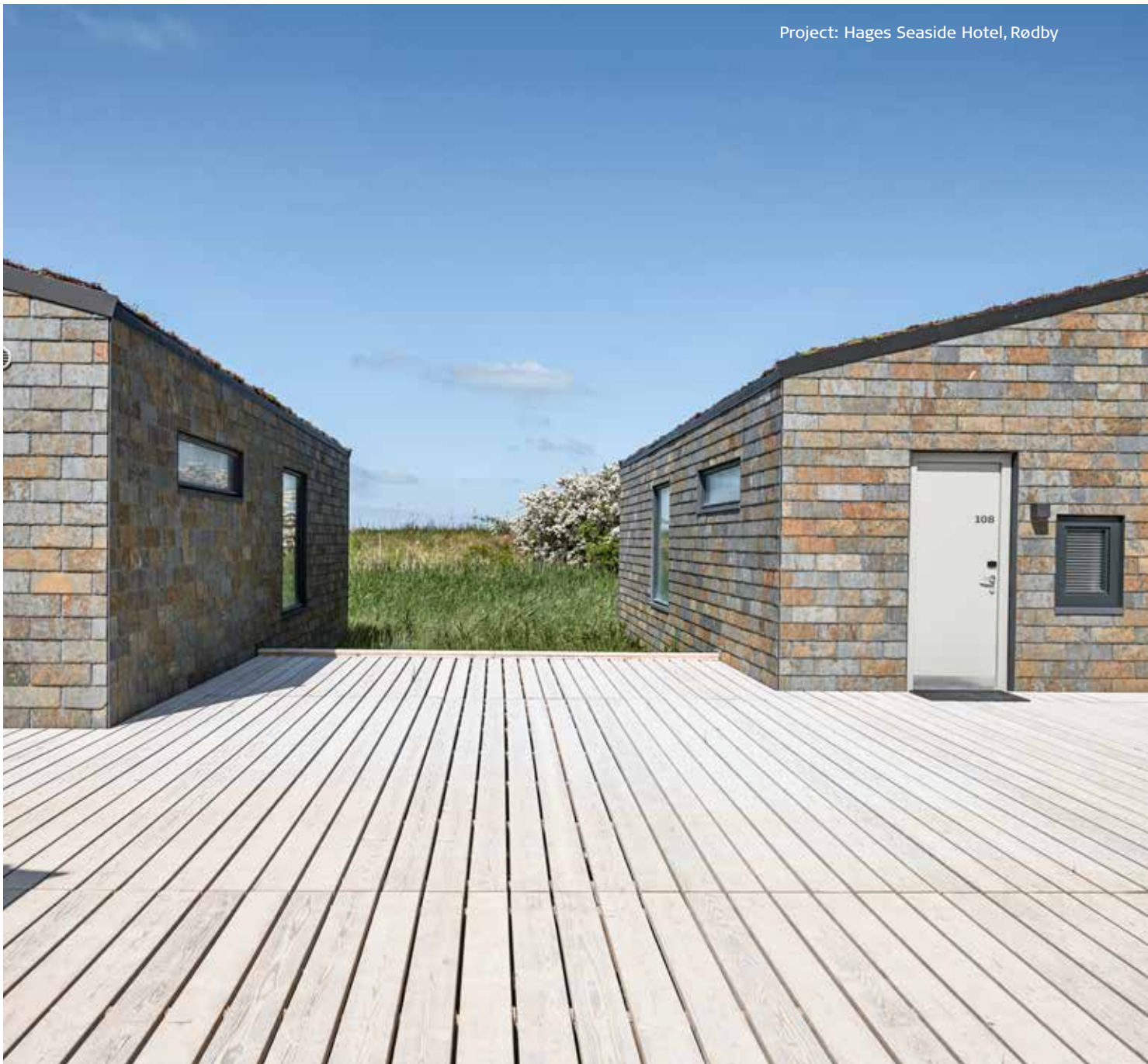
SATURE® PRESERVE

- // For finishing treatment of cut surfaces
- // As a primer for undressed wood
- // For finishing after cleaning



Duration grade

Project: Hages Seaside Hotel, Rødby





Frøslev Sature® has the durability grade 1v for 'very durable'. In Europe, wood species are divided into five grades depending on their durability. The chart below shows the ranking of Frøslev Sature® compared to a number of other wood species. The duration for the wood species mentioned in the chart only applies to heartwood as sapwood for undressed wood is classified as "not durable".



Quality and durability

Grade 1 Very durable	Grade 2 Durable	Grade 3 Moderately durable	Grade 4 Slightly durable	Grade 5 Not durable
ThermoAsh	ThermoWood Pine	Western Red Cedar	European larch	Maple
Abodo	Eastern Red Cedar	Cypress	Common spruce	Beech
Sature	Oak	Yellow cypress	Scotch pine	Ash
Teak	Jatoba	North American Douglas	Red oak	Radiata pine
Merbau	Bangkirai		European Douglas	

Source: træ.dk and own tests

Moisture shrinkage



Project: Villa in Hådsten | Profile: 3365 H, 3366 H, terrace boards



When new, Frøslev Sature® will often have a moisture content of approx. 25-30% and should dry or be stored until a level of less than 18% before installation and use of Sature® care products.

Storage before installation

To ensure free ventilation around the façade and terrace profiles, removing the packaging before storage is recommended. Then cover them with a tarpaulin to protect them against dirt and the rain. Storing the profiles with no contact with the ground is important.

The storage space must be properly ventilated and must not be affected by severe temperature fluctuations or extreme exposure to sunlight. Avoid unfit storage such as closed containers where condensate and very high temperatures may occur.



The production process



Project: Kalundborg Harbour Bath

FRØSLEV SATURE® EXPLAINED

Frøslev Sature® is a natural silicate modification consisting of silicate (sand and water). Silicon is the second-most common element on earth. Sand (silicate) is based on silicon which, by nature, is not biodegradable. Frøslev Sature® is therefore highly resistant to fungal attacks.

Frøslev Sature® is impregnated under pressure at Frøslev's own plants using the impregnating liquid Sature®, which consists of silicate (sand and water).

The wood is impregnated all the way to the core. The process involves a physical blockage of the cells in the wood. Therefore, modification of wood using silicate is a form of petrification. Once the fluid has been put into the wood, the water will evaporate, and all that is left are silicate molecules in cavities and in the pore structure.

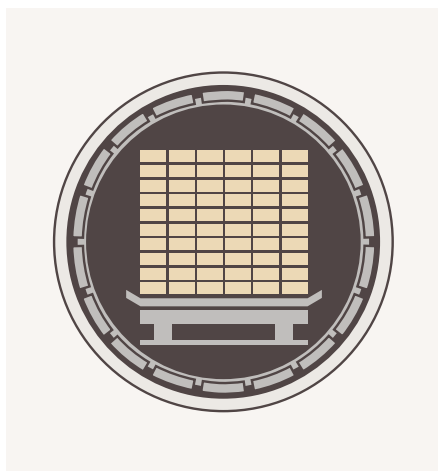
The impregnation increases the density, strength and hardness of the wood by 20-25% and makes the wood

more resistant to wood-decay fungi.

Tested and validated

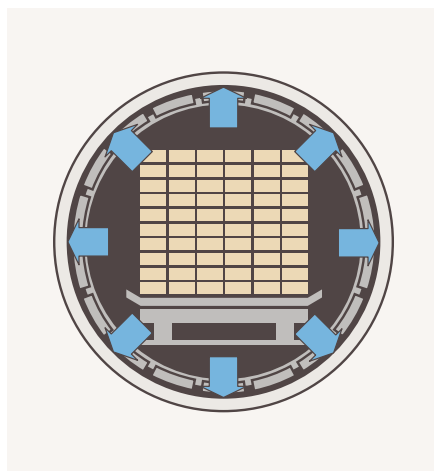
Frøslev has worked 10 years to develop Sature®. Several universities and independent testing institutes participated with advice and testing in the development phase during which the hardness, strength and durability of the wood were tested in the harshest climate conditions in the world, among other places in Austria, France and Borneo.

The production process



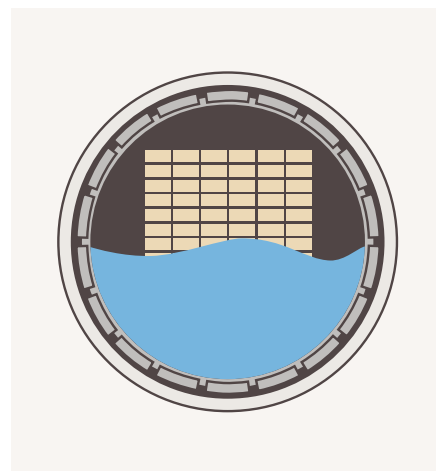
// Step 1

The wood is placed in specially developed steel tanks



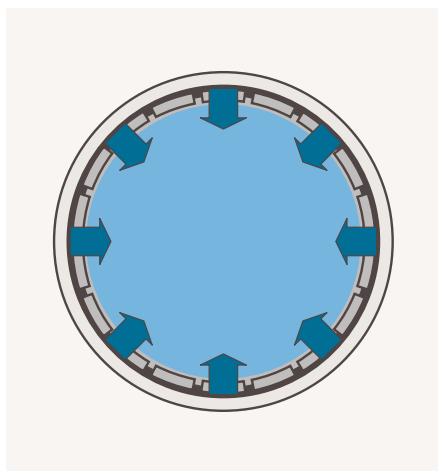
// Step 2

All air is sucked out of the tank



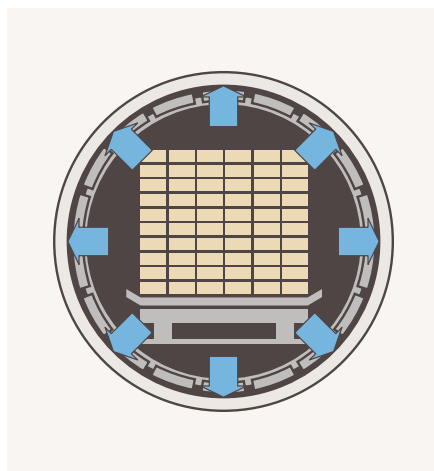
// Step 3

The tank is filled with the modified silicate fluid



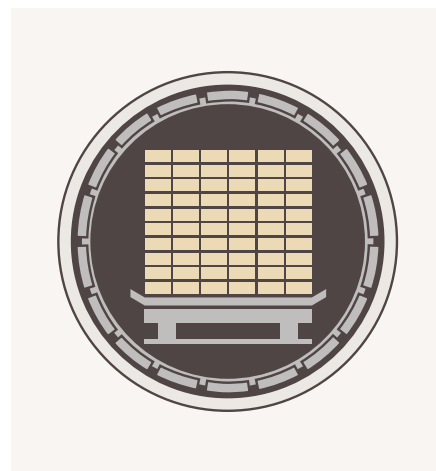
// Step 4

The silicate fluid is pressed into the wood at high pressure



// Step 5

Excess fluid is pumped out and saved for later use



// Step 6

Once dry, Frøslev Sature® is ready for use



Holiday home in Norsminde with a terrace made of Froslev Sature®



Hvalsø Kindergarten with a façade made of Froslev Sature®



Hopfenfänger, Bremen with a terrace made of Frøslev Sature®



Villa in Hadsten with a façade and a terrace made of Frøslev Sature®

WELCOME TO FRØSLEV

Frøslev knows wood. But it doesn't come out of nowhere.

Since 1931, we have produced and delivered quality wood for anything from large buildings to private residences.

Frøslev has Denmark's largest range of innovative wood products of a high quality and generations of knowledge and offers the entire package – every construction project with wood is then off to a good start and can last for years to come.

Find more information at froslev.dk

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— FIND MORE
INFORMATION
ABOUT WOOD AT
[FROESLEV.DK/EN](https://froslev.dk/en)

