FREYR and FREYA outdoor cladding elements

PRODUCT DESCRIPTION

eco-Profil composite profiles consist of poly-olefine (polyethylene, polypropylene), re–claimed wood fibre, UV-inhibited pigment systems and selected process additives.
The recovered wood fibre (60%) utilised in ***eco-Profil*** is compounded with plastic into a rigid board with various applications, mainly outdoors.

eco-Profil products are manufactured to exacting, reproducible specifications. They exhibit exceptional resistance to corrosive substances, oil and fuels, insects, fungus, salt spray, and other environmental stresses. The composite material hardly absorbs moisture, therefore it will not rot, splinter or crack.

eco-Profil products are manufactured in several dimensional sizes, shapes, and colours. Our wall cladding boards (siding board) are available in three popular colours: Bahama Brown, Ayers Red and Ash Grey. Freyr is mounted into an evenly flat surface and shows a nice random wood grain pattern. Freya is intended for "avant garde" architecture and does not show the wood grain pattern.

eco-Profil products have excellent weathering resistance. However, the colour will change slightly over the service life of the product. The profile requires no waterproofing, painting, staining, or similar maintenance, even when used in exterior applications. However, if requested, the product can be stained or painted with water-borne (preferred) or solvent systems.

BASIC USES

eco-Profil products are used in many conventional wood lumber applications, and are often the product of choice for exterior applications where weathering resistance and low maintenance are required.
Used in both residential and municipal applications, eco-Profil products are cost effective alternatives for all wet, corrosive, and environmentally harsh conditions.

ECO-PROFIL CLADDING TYPICAL PROPERTIES

Composition	poly-olefine (PE, PP) and wood fibre
Density	1020 – 1080 kg/m^3
Dimensions	thickness 10 mm (+/- 0.5mm) width 178mm (+/-1mm) useful width: 168 mm
Available standard lengths (other lengths on demand)	2.4, 3.6 metres
Flexural modulus (stiffness)	up to 5 000 MPa
Coefficient of thermal expansion	< 0.02 mm/m °C
Water absorption	<2% wt
Surface finish	Brushed, wood grain (no wood grain for Freya material)

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WEATHERING PROCESS

All wood-composite products are expected to incur some weathering over time. During the first 12 weeks of exposure to the elements, ***eco-Profil*** will weather to a slightly darker and mostly warmer shade of colour. From that moment onwards, virtually no further change in colour will be observed.
eco-Profil elements are designed and manufactured to keep their mechanical stability over time. The products for outdoor applications are stabilised so as to keep from plastic degrading, even when exposed to severe weather conditions.

INSTALLATION

When utilizing ***eco-Profil*** products for siding, cladding, or fencing careful attention must be paid to joist spacing.
We developed a special hidden stainless steel fastener for the Freyr and Freya boards. Also, if they allow the thermal expansion of the boards, simple screws and nails can be used directly to fix your siding. In any case, stainless steel elements are recommended.

eco-Profil has made detailed installation instructions available for the Freya and Freyr boards.
Special attention needs to be paid to the end-to-end gap between boards, to allow for thermal expansion.
Good ventilation behind the cladding is also of paramount importance for a lifelong success.

CLEANING

An ***eco-Profil*** surface can easily be cleaned using a soft brush and mild cleaning agents. Solvents are not recommended for use on eco-Profil. If needed, hypochloric solutions ("eau de Javel") can be used for thorough cleaning. Alternatively, a high pressure water jet (up to 80 bars at 20cm distance) can be used. Please make sure to spray along the wood grain direction.
In the unlikely case that oily or corrosive products would leave remaining stains onto your precious eco-Profil product, the surface can be manually sanded with rough sandpaper (#80 grain). Please, again, sand in the wood grain direction.

LIMITATIONS

This type of lumber product has less rigidity (modulus of elasticity) than wood lumber. It is not recommended for use as a true structural member at this time. Examples of applications that are inappropriate would be load bearing walls, deck framing, and floor joists. It is recommended that an engineering study be performed prior to use of wood-plastic composites for such applications.
eco-Profil products can be fabricated and installed with the same tools used to work wood lumber. The product will cut and drill very cleanly, as there is no grain to split or chip.

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