



# BIO-BASED POSIDONIA/RICE STRAW PANEL

## Product description

Bio-based Posidonia/Rice Straw panel is an insulating panel intended for building applications. The panel is composed of posidonia leaves and Rice Straw mixed with a two-component epoxy resin of organic origin and pressed together to obtain a compact panel.

Rice straw has been combined with posidonia to create insulating panels that are strong and sustainable. The use of resin is essential to join the posidonia leaves together and ensure good final compactness. The resin used is made of components of bio-origin with 46% carbon from renewable sources.

## Safety data

- The Posidonia and rice straw insulation panel is a natural and biocompatible material used for thermal and acoustic insulation in buildings. It is composed of plant fibers bonded with a bio-based resin characterized by low volatile organic compound (VOC) emissions.
- Under normal handling and installation conditions, the material poses no significant health risks. The product does not contain any toxic or hazardous substances and is not classified as harmful to human health or the environment. However, mechanical processing such as cutting may generate small amounts of fibrous dust. Inhalation of this dust may occasionally cause mild irritation to the upper respiratory tract, nose, or throat, while direct contact with eyes or skin may result in temporary redness or discomfort.

## Applications



The bio-based Posidonia/Rice Straw panel is suitable for use in prefabricated façade modules and other building envelope systems.



Its lightweight and insulating properties make it ideal for modular construction, providing thermal and acoustic comfort while reducing the environmental impact.



The panel can also be used in wall and roofing elements, supporting a circular economy through the reuse of marine and agricultural by-products.

- In case of contact or irritation, rinse the eyes thoroughly with clean water and wash the affected skin with mild soap and water. If symptoms persist, seek medical advice. During machining or handling, ensure adequate ventilation, and when dust concentrations are high, use a P2-type dust mask. Wearing protective gloves and safety glasses is recommended to minimize potential irritation during cutting or panel manipulation.



Funded by  
the European Union

Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Health and Digital Executive Agency (HADEA). Neither the European Union nor the granting authority can be held responsible for them.





## Technical data

Property	Test/Standard	Value	Value
<b>Thickness</b>	EN 822, EN 823, EN 824, EN 825	From 50 mm up to 135 mm	From 50 mm up to 135 mm
<b>Density</b>	EN 1602	100 kg/m <sup>3</sup>	150 kg/m <sup>3</sup>
<b>Content of biobased</b>		86,50%	86,50%
<b>Content of recycled material</b>		75%	75%
<b>Compressive stress or compressive strength</b>	EN 826	13,8 kPa	63,9 kPa
		57,1 kPa*	93,2 kPa*
<b>Thermal conductivity</b>	UNE EN 12667:2002	0,046 W/mK @ 25°C	0,051 W/mK @ 25°C
		0,047 W/mK @ 25°C*	0,056 W/mK @ 25°C*
<b>Water absorption</b>	UNE-EN ISO 29767:2020	37,80%	34%
		16.8 ± 2.9 %*	16.8±1.9 %*
<b>Calorimetric cone test</b>	ISO 5660-1		10 s (TTI) 30.8 kW/m <sup>2</sup> (max. HRR) 57.4 kW/m <sup>2</sup> MARHE 202.8 m <sup>2</sup> /m <sup>2</sup> Smoke emission

\* Obtained values after accelerated aging tests applying cycles of 5 days at 70°C and 60% RH, 1 day at 70°C dry and 1 day at 70°C dry for one month.



Funded by  
the European Union

Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Health and Digital Executive Agency (HADEA). Neither the European Union nor the granting authority can be held responsible for them.