

// **FBT PR 45 to 200 mm**

Insulating panels without additives evaluated by the CSTB
ATEX n° 2721 in walls and n° 2722 in roof (attics and floors)



// **FBT INSULATION**

develops a range of semi-rigid insulating panels in natural plant material, fibres for new construction and renovation of buildings.

Produced in Rhône-Alpes with Camargue rice straw, the natural vegetable insulation **FBT PR** has a very low environmental impact. Healthy, non-irritating, it provides thermo-acoustic and installation comfort.

// **A BIOSOURCED MATERIAL IN THE GENERAL INTEREST**

The building is at the heart of France's strategy to fight climate change. The use of **FBT PR** insulators contributes to the storage of atmospheric carbon and the preservation of natural resources. It is encouraged by public authorities when buildings are constructed or renovated.


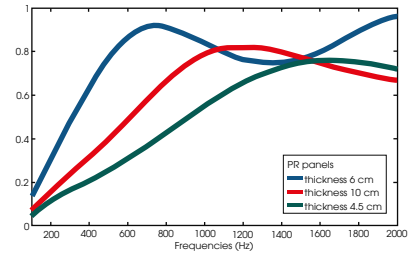
// **RICE STRAW, AN ECOLOGICAL AND INNOVATIVE CHOICE**

This vegetable raw material, low carbon by excellence, is a waste of rice growing. Naturally resistant to moisture, it does not compost and is burned every year in the field due to lack of use, turning an environmental problem into insulation means acting to limit the waste of other raw materials.

// **THE ADVANTAGES OF FBT PR PANELS**

- innovative in their composition (patent pending)
- very low ecological footprint, low carbon
- healthy, with no impact on health
- thermally and acoustically efficient
- durable over time, do not settle

Technical data

Composition	92 % rice straw 8 % binder, hot melt fiber	
Thermal conductivity (λ)	0.039 W/m.K	NF EN 12667
Density	50 kg/m ³ \pm 5	NF EN 1602
Water vapour transmission factor	$\mu = 2.8$	NF EN 12086
Specific heat capacity	1 790 J/kg.K	TPS method (Transient Plane Source)
Reaction to fire	Euroclass E	NF EN 13501-1
Resistance to keratophagous, crawling, flying insects (mites, ants, cockroaches, flies,...) and dust mites	PR not suitable for consumption by insects that starve to death, without developing and without creating contamination	TEC laboratory test, in accordance with CSTB requirements, Annex D of the CUAP document
Maximum operating temperature	80 °C	
Indoor air quality	A+	 <p>* Information on the level of emission of volatile substances to indoor air with a risk of inhalation toxicity, on a class scale from A+ (very low emissions) to C (high emissions)</p>
VOCs (Volatile Organic Compounds) and aldehydes	No emission of volatile pollutants or carcinogenic, mutagenic or reprotoxic substances	
High sound absorption capacity	PR 45 mm : $\alpha_w = 0.5$ (H), class D PR 60 mm : $\alpha_w = 0.6$ (H), class C PR 100 mm : $\alpha_w = 0.8$ (H), class B PR 120 mm and thicker : $\alpha_w \geq 0.9$ (H), class A according to NF EN ISO 10534-2 : 2003	

FBT PR	Panel thickness (mm)	Thermal resistance R (m ² K/W)	Phase shift (hours)	Sd value* (meters)	Packages	
					panels / pallet	m ² / pallet
PR 45	45	1.2	1h35	0.13	104	74.88
PR 60	60	1.5	2h05	0.17	80	57.60
PR 80	80	2.1	2h50	0.22	56	40.32
PR 100	100	2.6	3h30	0.28	48	34.56
PR 120	120	3.1	4h10	0.34	40	28.80
PR 145	145	3.7	5h00	0.41	32	23.04
PR 160	160	4.1	5h35	0.45	30	21.60
PR 170	170	4.4	5h55	0.48	24	17.28
PR 200	200	5.1	7h00	0.56	24	17.28

PR : Rice straw
Dimensions of the panels: 1.2 x 0.6 m, 0.72 m². Pallet of 1.2 x 1.2 m x 2.55 m.

* Resistance to water vapour diffusion.

EASY TO INSTALL

The panels are easily embedded in the gaps between the studs or rafters, with a spring effect.

- The panels do not settle, do not disintegrate.
- Scraps are limited and easily reusable for caulking.
- Easy handling and cutting. Little dust.

Airtightness system as recommended vapour barrier: Sd: 90 m.

Detailed implementation in Technical Experimentation Assessments, ATEX n° 2721 walls and n° 2722 roofs (attics and floors). Documents available for download at www.fbt-isol.com



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