

flex  build

**Technological cooperation between ČR  
and Greece in the area of waste management  
14.5. + 16.5. 2007**





## Incoming material – industrial waste

- laminated food packing
- municipal laminated food packing



# Technology

- the waste is crushed, washed, and dried
- the compound is homogenized, and
- subsequently processed



# Technology



## Production ....





## Finished product, i.e. Flexibuild boards - properties

Thickness: 10 mm +/- 0.8

Density: 810 kg/m<sup>3</sup> +/- 30 kg/m<sup>3</sup>

Length / width: 2850 x 1190 mm

Board weight: 26 kg/board +/- 2

Thermal conductivity coefficient : 0.083W/m.K

Bending strength: 5.5 MPa +/- 0.75

Screw holding power: 62.2 N/mm +/- 17

Modulus of elasticity in bending: 438 MPa +/- 70

Flammability: C1– flammable with difficulty

Tensile strength perpendicular to plane: 0.08Mpa +/- 0.02

Swelling: 5.4 % +/- 1.92 cyclic

Not harmful with respect to hygiene and health. No emissions of volatile matters. Reduced soaking absorption and high water tightness when transferring through the cross section outside edges.

## Flexibuild Carton

The basic board covered with a cardboard 140 - 220 g/m<sup>2</sup> on the face side, usually of grey color. The face side is straight, the longer edges can be pressed to ensure easy joining.

**Possible applications:** The board is intended for interior lining to be finally surface treated with coat application. The tiles or thin-layered plasters can be applied after penetration using, for example, DUVILAX VV.



## **Finished product, i. e. Flexibuild panels - properties**

**Thickness: 6cm +/-2mm**

**Density: 260 kg/m<sup>3</sup> +/- 25 kg**

**Length/width: 2850 x 1190 mm**

**Board weight: 53 kg/board +/- 3**

**Panel thermal resistance: 1.29m<sup>2</sup>K/W**

**Heat transmission coefficient: 0.77W/m<sup>2</sup>K**

**Screw holding power: 62.2 N/mm +/- 17**

**Swelling: 5.4 % +/- 1.92 cyclic**

**Flammability: C1– flammable with difficulty**

**Soundproof acc. to ČSN ISO EN 140-3 51db +/- 5**

**Loading capacity: up to 100kg/m<sup>2</sup>**

**Not harmful with respect to hygiene and health, without emissions of volatile matters.**

**Reduced soaking absorption and high water tightness when transferring through the cross section outside edges**

## Flexibuild Sandwich Carton

The Flexibuild Sandwich Carton consists of two Flexibuild Carton boards and a 4 cm thick layer of EPS 100 S polystyrene in-between.

Flexibuild Sandwich is joined with Duvilax diffusion under pressure and at increased temperature.

**Possible applications:** The panels can be used as self-supporting interior and exterior partitions. They can be covered with tiles or thin-layered plasters. The partitions can be installed between the ceiling and the floor using PUR foaming. The panels can also be used for making complete separate rooms and small buildings including ceilings. The panels can be fitted with window and door parts, and equipped with some installations.



## Product range of Flexibuild Sandwich panels

**Flexibuild Sandwich** with a 4 cm thick layer of EPS 100S polystyrene and a cover board, type Basic, Carton, Pattern, Alu, or Waterproof.

Total panel thickness: 6 cm

**Flexibuild Sandwich** with a 10 cm thick layer of EPS 100S stabilized polystyrene and a cover board, type Basic, Carton, Pattern, Alu, or Waterproof.

Total panel thickness: 12 cm

Loading capacity: 200kg/m<sup>2</sup>

Heat transmission coefficient: 0.34W/m<sup>2</sup>K

**Flexibuild Sandwich** consisting of five layers, i.e. 2 layers of 4 cm EPS 100 S stabilized polystyrene and three Flexibuild boards.

Total panel thickness: 11 cm.

Loading capacity: 250kg/m<sup>2</sup>

Heat transmission coefficient: 0.4W/m<sup>2</sup>K

**Flexibuild Sandwich** having a total thickness of 5 cm and consisting of two layers. The panel with smaller dimensions is intended for outside finish.

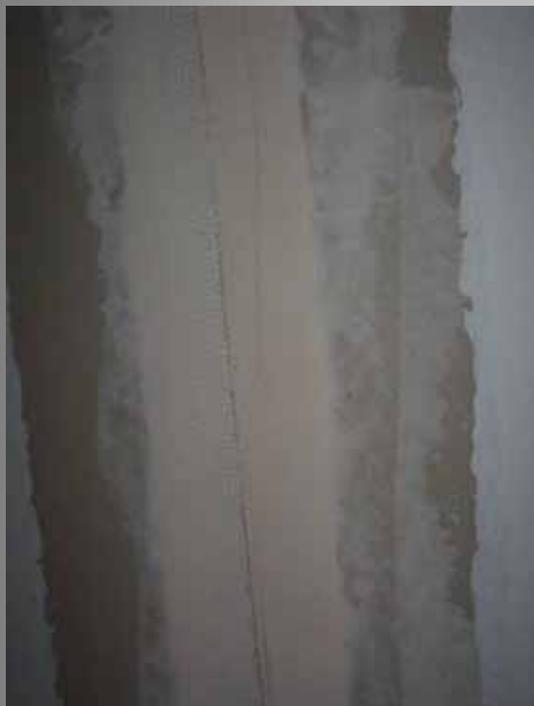
Heat transmission coefficient: 0.85W/m<sup>2</sup>K

## Joining of Flexibuild boards and panels

- joints shall be made with a necessary installation gap ranging from 3 to 5 mm
- joints shall be covered with joining gauze and filled with flexible cement
- after having dried the joints shall be ground, and cemented for the second time; when dry, then shall be ground again.
- now, the surface is ready for coat application

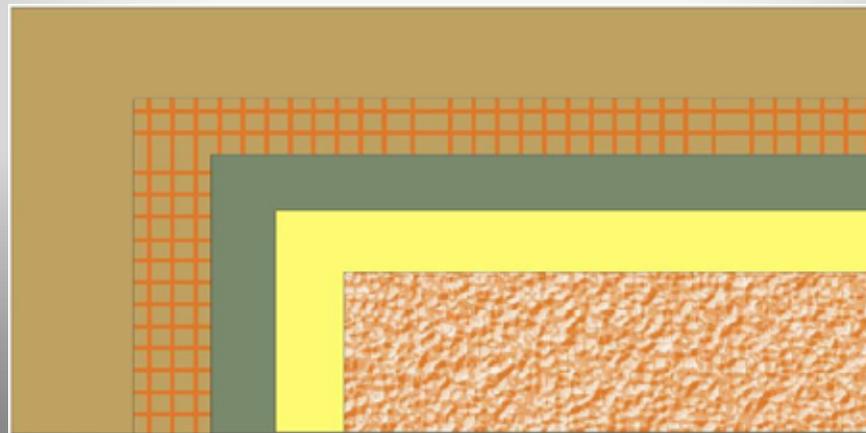


# Joining of Flexibuild boards and panels



## Flexibuild panel surface finish

The Flexibuild panel surface boards can be combined depending on the product range of boards of the Flexibuild system. Panel application and properties correspond to the type, properties and application of the respective boards.





# Example - House building



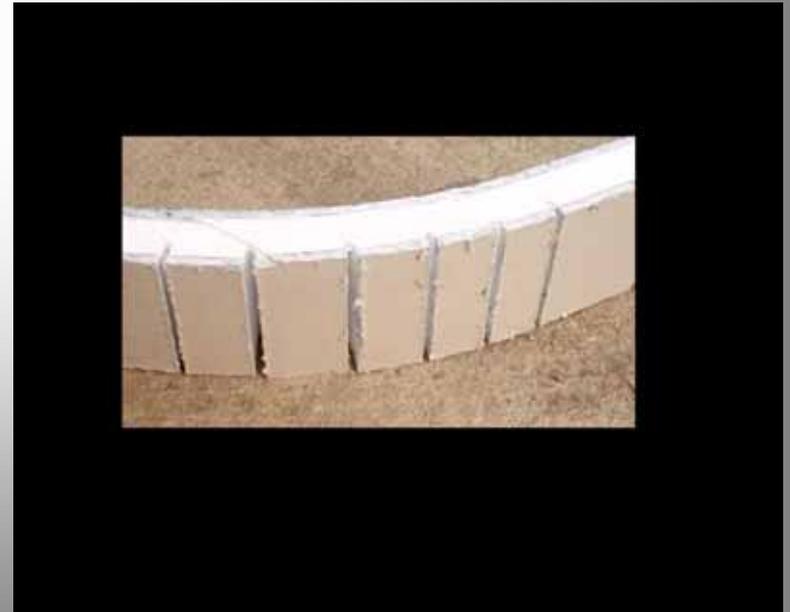
## Example – Installation of Flexibuild panels



# Example - Parts of kitchen fitments made from Flexibuild materials



# Example – House reconstruction, and a loft conversion using Flexibuild elements



# Example – House reconstruction, and a loft conversion using Flexibuild elements



## Example – Temporary building partitions



[www.flexibuild.cz](http://www.flexibuild.cz)

