Design fact sheet – Prototype 2

Description
Prototype 2 is an insulating material made of the following components:

a) OSB (Oriented Strand Board) timber board;

b) Textile waste from duvets (polyester).

Use
Internal insulation for walls

Dimensions
2000 x 2000 x (100 - 300) mm

Targeted mechanical properties
No minimal requirement as the prototype is non load-bearing.

Targeted thermal performance
– Thermal conductivity: the objective is to reach a value close to that of conventional insulation (~ 0.04 W.m⁻¹.K⁻¹).
– This value can be reached by changing the density of polyester.

Targeted performance to fire resistance
– UK Building Regulations: 30 minutes
– The fire strength will be highly influenced by the coating.

Characterisation of raw materials
February 2018

Tests on mini-prototypes
May - June 2018

Manufacturing and testing on full-scale prototype
September - October 2018