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LIME-CEMENT MIXTURE WITH IMPROVED THERMAL AND ACOUSTIC CHARACTERISTICS

Patent

ES-2548221

Code

CONSTR_UAH_03

Application areas

- Industrial Manufacture, Material and Transport technologies
- Other Industrial Technologies

Type of Collaboration

- Technical cooperation
- Commercial agreement with technical assistance
- License agreement

Main Researchers

Prof. Irene Palomar Herrero
Prof. Gonzalo Barluenga Badiola

CONTACT



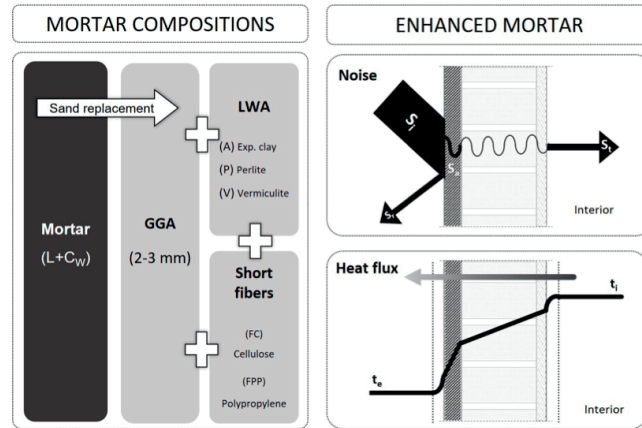
OTRI Universidad de Alcalá
Escuela Politécnica Superior
Campus Científico-Tecnológico
28805, Alcalá de Henares
(Madrid)
(+34) 91 885 45 61
otriuah@uah.es



@otriuah



OTRI Universidad de Alcalá



ABSTRACT

The present invention is a modified mixture of lime and cement with improved thermal and acoustic characteristics. The new mixture can be used on interior and exterior walls, in new construction and rehabilitation or in built heritage restoration. The mixture is characterized by the following components: a hydraulic binder, an aerial binder, a gap-graded siliceous or calcareous aggregate, lightweight aggregates with a maximum size of 4 mm (expanded perlite, expanded shale, expanded clay or a mixture thereof), short fibres of cellulose or polypropylene and/or mineral pigments.

In the scope of the present invention, is preferable to use a mixture of White cement and aerial lime as binder that accelerates lime setting time. It allows adapting to aesthetic requirements, because of being pigmentable with the use of metal oxides.

The group seeks manufacturers of building materials and construction companies specialized in rehabilitation to reach licensing agreements, collaboration and commercial agreements with technical assistance.

ADVANTAGES AND INNOVATIONS

- The compositions of the mixture improve thermal and acoustic aspects compared with conventional mixed mortar.
- The mechanical strength provided by the compositions of the mixture is enough to be used as a finishing material on an external wall.
- No need to be protected with a better mechanical and durability performance finishing on the face where you have applied the mixture.
- The sound absorption coefficient of mortars improves.
- Improvement in the compound's thermal capacities.
- Applicable on interior and exterior walls, in new construction and rehabilitation or restoration of built heritage.