

Yesograf. Improving the properties of gypsum and plasters

Material which improves the mechanical resistance up to 250% of inorganic materials widely used in construction such as gypsum



Contact information

Address: ETS de Arquitectura de Madrid – UPM, Av. Juan de Herrera, 4, 28040, Madrid

Phone number: 910674700

Website: etsamadrid.aq.upm.es

Email: mar.barbero@upm.es

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[Technological solutions](#)

Research and innovation areas

- [Industry, Materials and Circular Economy](#)

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Brief description of the technology solution and the added value it provides

Yesograf is an addition that improves the mechanical resistance of gypsum and plaster composites, presented as a fine powder (up to 250%), increasing thermal conductivity (up to 115%) and protects buildings from electromagnetic wave sources, at zero cost. Yesograf implies the revaluation of materials and contributes to a better durability of the compound in contact with water.

Description of the technological base

Yesograf is a material which adds an inert industrial waste as a fine powder and, when it is added to gypsum and plasters, mechanical resistance is improved and thermal conductivity, acoustic insulation and electromagnetic insulation are increased. Currently, it has zero cost as an additive, and it improves in a significant way gypsum based materials that commercially have low resistance.

In addition, based on these mixtures and adding sands, this solution enables to prepare mortars. These mixtures can be used in construction on site or in prefabricated materials such as gypsum boards or sandwich panels, among others.

“Addition, at zero cost, as a fine powder that improves mechanical properties and increases thermal conductivity of materials which are used for radiant solutions”

Detail of a partition with Yesograf on both sides (1), metallic or wooden strip as a structure (2) and insulation between boards (3). Preferably placed when it is dry.

Market demands

Materials technology

- It is necessary an increase in the resistance and durability of materials based gypsum or plaster used in construction.

Energy efficiency

- Since RD 235/2013 was published, the certificate of energy efficiency for buildings is required.

“Yesograf improves properties of gypsum and plaster based materials, which are a great share of this market”

Competitive advantages

- Improvement of mechanical resistance up to 250% in inorganic materials widely used in construction such as gypsum.
- Thermal conductivity increased a 115%.
- Global inner thermal losses can be reduced up to 8%, resulting in energy savings in buildings.
- Materials revaluation. Zero cost solution.
- Innocuous addition
- Protects buildings from electromagnetic waves sources, acting as a cover.

Previous references

- Wide experience in industrial applications development.

Intellectual property

- Patent granted in Spain [P201431878]
- International patent through PCT [PCT/ES2015/070906]

Development stage

- Concept
- R&D
- **Lab Prototype**
- Industrial Prototype

- Production

Contact

Contacto solución tecnológica

Nelson Flores Medina; e: nelson.flores@upm.es

M^a Mar Barbero Barrera; e: mar.barbero@upm.es

Rosa Bustamante Montoro; e: rosa.bustamante@upm.es

Contacto UPM

Área de Innovación, Comercialización y Creación de Empresas

Centro de Apoyo a la Innovación Tecnológica – UPM

e: innovacion.tecnologica@upm.es