GYPSUM.

EXTRA-HARD PLASTER
Technical data sheet

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Manufacturer: GYPSUM s.r.l.

The material
Product realized from the selection of alpha hemihydrate plaster, which is suitable for the production of GRG elements, reinforced in the production phase with glass fibre, and can be moulded into any shape and size.
Extra-hard plaster has a class A1 fire resistance.

The product
Extra-hard is a plaster that stands out for its hardness comparable to stone, as well as for its excellent mechanical characteristics even at low thicknesses. Another peculiarity of this material is its porosity, which is significantly reduced compared to common types of plaster. Because of these characteristics, Extra-hard is particularly suitable for the manufacture of non-structural decorative elements for interiors that should offer great resistance to impact and abrasion, such as skirting boards, chair boards, columns and bases, door contours, elevator landings, wall coverings up to a height of 150 cm, complex geometric shapes, artefacts that are used in public spaces such as hotels, shopping malls, restaurants, etc..
The products are made by mould casting and the fineness of the material guarantees a faithful reproduction of every detail.
Extra-hard complies with the European standard EN 13279-1.
The products arrive on site ready to use and, once laid and grouted on the joints, can be painted with any type of paint.
The elements made of Extra-hard are extraordinarily strong, even when built at thin thicknesses (minimum 7/8 mm).

The material and technique used to form the reinforcements depend on the type of article to be produced, usually as follows:

- glass fibre: this is a particular fibre that is drowned in the product during processing, creating very resistant products. This framework, without the addition of any other systems, is sufficient to guarantee that the finished products offer excellent resistance.
- steel rods: they can be placed inside the casting, in addition to the glass fibre, where necessary, suitably positioned and in the necessary quantity according to our experience. In addition to strengthening the product, the steel rods help to suspend it during the installation phase; they are usually inserted in prefabricated elements such as false ceilings, domes, columns, large-sized products, etc.
- wood: in addition to the reinforcements listed above, if necessary and on the basis of our experience, a wooden reinforcement can be arranged that strengthens the product, allowing its transport and handling in total safety.
- galvanized tubular structures: in addition to the reinforcements listed above, it is possible to set to the artefact a metal structure made with galvanized tubulars structures diam. 20 mm which are shaped by hand. This type of reinforcement not only strengthens the structure, but it also guarantees its geometrical tightness, even in the case of large-sized elements, helping transport, handling and installation.
- Metal carpentry: if required by the project, or on the basis of our experience, during the production phase it is possible to set to the artefact a suitably dimensioned galvanized tubular metal carpentry, which allows the manufactured product to be fixed to metal structures prepared on site. This is the ideal system for the installation of artefacts, even of large dimensions, in shipyards, construction sites, for scenography, etc.

The production cycle requires a forced and controlled drying process of the manufactured articles in a special hot air dryer (about 50°C), in order to guarantee to get the final mechanical performances in a very short time.

The project

GYPSUM works alongside architects and designers to give the best technical support during the design phase, assessing the customer's request to provide the right construction suggestions of the artefacts, whether it is possible to split them into parts and the correct implementation.

Our technical staff will support the designer through 2D and/or 3D CAD drawings, as well as through physical samples.
Whether it is a single piece or a series production, we are able to guarantee a constant and high quality standard of the product.

Technical features

The materials used during production are the result of lengthy research. For this reason every raw material and every additive are carefully chosen and purchased only from suppliers who can guarantee to supply consistent-quality materials.

Residue over 200 μm	% <0.2
Water/chalk ratio	100/260
Fluidity with Vicat	mm 180
Start of hardening	min 22-25
End of hardening	min 28-30
Expansion to 2 hours	% 0.2
Compressive strength	N/mm^2 36
Dry weight	18 kg/m^2
Reaction to fire	Class A.1

Use instructions

The products should be kept in a covered place, should be handled with care and should be laid shortly after being removed from the packaging.
A site check is necessary to verify that the conditions in place are suitable for the product's use, also taking into consideration the sector tolerances that affect production.

Note

We are at your disposal for any further information.
GYPSUM reserves the right to modify the content of this sheet without notice.