

GYPSUM.

LAMINATED POLYSTYRENE

Technical data sheet

Revision: 24/04/2020

Manufacturer: GYPSUM s.r.l.

The material

Product made by modelling a desired shape of expanded polystyrene (EPS) of suitable density, subsequently coated with a layer of noble hardening material, which makes the finished product resistant to impact and suitable for indoor and outdoor use.

The polystyrene used in the production cycle is self-extinguishing class E, the coating layer is made with incombustible substances that improve its reaction to fire.

The product

Laminated polystyrene is a material characterized by an extremely light weight and high mechanical resistance of the visible face, thanks to the covering with special hardening materials. Due to its characteristics, this material is particularly suitable for the realization of non-structural architectural decorations of external facades, for wall coverings for interior and exterior, for fittings, sets, etc.

The products are made by cutting the polystyrene with a laser and, in the case of complex shapes, milling it with a CNC system. Then, a layer of hardening resin is spread on the exposed face by spraying (Pluma Silex) or by coating (Pluma Stone).

PLUMA SILEX: product made by finishing polystyrene with a spray system, using mixtures based on cement, silica, polymers and other additives, which generates a resistant surface with a slightly "peel like" texture. If required over this hardening layer, further processing can be carried out to make a perfectly smooth finish, by smoothing with plaster-based products for indoor use or cement-based products for outdoor use. Please consult our offices for all the details.

PLUMA STONE: product made by finishing polystyrene with the coating system (extrusion), using a mixture based on selected aggregates, mixed with specific polymers

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and other additives, which generates a very resistant surface, which is extraordinarily elastic and with a well-defined appearance. It is possible to produce artefacts with a maximum size of 500x300x2000h mm.

Products made with laminated polystyrene allow fine and durable finished works to be realized.

The production cycle needs a forced and controlled drying of the products in a special hot air dryer (about 50°C), in order to guarantee achievement of the final mechanical performance in a very short time.

The products arrive on site ready to use and, once laid and grouted on the joints, must be painted with outdoor products. We recommend an elastomeric cycle.

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 for the artefacts, the possibility of splitting 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.

- Polystyrene

Foamed polystyrene: white or with graphite, type AE

Polystyrene density: 15-30 kg/mc

- Hardening material type: Pluma Silex

Polystyrene density: 15-30 kg/mc.

Hardening material: resin based on cement, silica, polymers, other additives.

Curing time: 21 days at 18-20°C.

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Curing material layer approx. 1 mm for each layer applied.

Flexibility: discrete.

Surface hardness: depending on the number of layers.

Resistance to atmospheric agents: with two layers suitable for outdoor use; with three layers excellent hail resistance.

Temperature resistance: no change from -20°C to +80°C.

- Hardening material type: Pluma Stone

Hardening material: silica resin, carbonates, acrylic polymers, other additives.

Curing time: 21 days at 18-20°C.

Curing material: layer 3 mm +/- 0.5.

Flexibility: excellent, possibility to bend profiles.

Surface hardness: excellent.

Resistance to atmospheric agents: suitable for outdoor use, excellent hail resistance (UNI 10890:2000 standard).

Temperature resistance: no change from -20°C to +80°C.

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.

GYP SUM reserves the right to modify the content of this sheet without notice.