

ZIGMA GROUP, INC. USA (ZIGMA GYPS)

GYPSUM

Also known as Plaster-of-Paris, gypsum plaster is a building material that features similar properties to mortar or cement. It is created by heating gypsum, a soft, naturally-occurring mineral, to roughly 300 degrees Fahrenheit (150 °C), and then mixing it with water. The resulting paste hardens as it cools, forming a relatively soft, pliable finished product. Unlike mortar or cement, which dry much harder, gypsum plaster can be sanded or otherwise manipulated once cured, making it a good option for aesthetic, non-load bearing purposes.

Gypsum plaster derives its other name, Plaster-of-Paris, from the discovery of a large cache of gypsum in Paris, and its resulting proliferation as a building material in the city throughout the 1700s. Though its use can be traced back much farther — with samples dating from as far back as 7,000 BC in Mesopotamia — it gained widespread popularity throughout Europe after the Great Fire of London in 1666. During that fire, the city was nearly completely destroyed because flames spread through the close-packed arrangement of wooden buildings. Its utility as a fireproof material remains strong today.

GYPSUM PLASTER

Gypsum plaster is renowned for its use as an art medium, specifically for frescoes. Much of the reason that many Renaissance-period Italian frescoes remain intact and vibrant is due to the permeability of the plaster. This allowed inks to sink beyond the surface, much like the ink in a tattoo. This type of plaster is also a popular material in making casts for stone or metal sculptures, as it can be finely worked. Plaster can be used as a sculpture material itself when dried over a metal frame, though it is not particularly durable in this form.

In modern use, gypsum plaster is common in a number of industries. Orthopedic casts that incorporate plaster-soaked pieces of cloth remain a vital tool in the medical field to support and protect broken bones. In dentistry as well, plaster is used to create models of oral features for dental work. Gypsum plaster is still featured in architecture, particularly aesthetic pieces, and is used extensively in specialty industries, including film and theatre, where it can simulate materials such as bark or stone.

PLASTER OF PARIS

Plaster board is the building plaster used in the construction of decorative material such as core, niche and sculptures. Plaster of Paris may be used both for plaster board casting and in affixing the plaster board.

Technical Specifications

Physical Form	White powder
Plaster/Water Rate	100 gr. plaster / 70 gr. water
Usage Period	6-9 minutes
Freezing Period	19-25 minutes
Resistance	8 N/mm ² (7 days later)
Flexural Strength	3 N/mm ² (7 days later)
Specific Bulk Density	650-700 gr/lt
Grain size	Over 50 μ % 16-18 *160 μ over % 0-1,0 PH: 7-8
Surface hardness	60 shore D
Standard	TSE EN 13279-1,2 (Tip C1, reinforced with fiber, construction plaster for plaster elements)

The Surface and the Setting to be Applied

- It should be free of dirty material such as dust, oil and paint.
- The surfaces such as extremely dry, hot and highly absorbent should be moisturized with water.
- The surface of the ceilings should be roughened before applying the plaster or undercoated with a material to ensure attachment of the mortar.
- It should be paid attention that there is no air current and air circulation at the atmosphere during application.
- The application temperature should be between +5 and +40 °C.

Application

6,5-7 liters of water is poured down into the mixture bowl; Karanot Moulding Plaster is added sprinkling into the water. It is awaited for a period of approximately 2-3 minutes in order to cause the plaster to absorb the water. It is mixed with a hand mixer or with the help of a trowel in order to obtain a homogenous mixture. The prepared mortar is poured into the formwork prepared and lubed before. After pouring a layer, a layer of fiber or hemp is laid on that layer of plaster in order to make the mould more flexible and strong. Another layer of plaster is poured down of the laid fiber or hemp. The plaster poured down into the mold will start to warm after a while. The plaster first warmed and then cooled will let itself go after a while. The plaster taken out of the mould is left at the room temperature to dry before mounting.

Packaging

Polypropylene bags of 30 kg (\pm 2 %)

Storage

At most 20 bags should be stockpiled one on another at a dry place; the bags must not be in contact with the floor and they must be stored protected from humidity and condensation. They must be used within 9 months after production date.