

## **DEFINITION OF PLASTERING:**

The word “plaster” comes from the Greek language meaning “to daub on”. This is a process of covering rough surfaces with a plastic material to obtain an even, smooth, regular, clean & durable surface. On the other hand we say that A mixture of lime or gypsum, sand, and water, sometimes with fiber added, that hardens to a smooth solid and is used for coating walls and ceilings.

## **PLASTERING MATERIALS:**

1. Cement
2. Lime or clay
3. Aggregates
4. Water
5. Accelerator
6. Admixture

### **□ SAND USED IN PLASTERING**

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- River Sand: Fine, round, polished, it may have impurities like pebbles, contains gravels smaller in size, suitable for plastering.
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- Fine Sand: All particles i.e. 100% pass through #16 (ASTM) sieve used for plastering. Size: 1/16 in  
Fineness Modulus: 2.2-2.6

### **□ KINDS OF PLASTERING :**

There are several different types of Plaster available such as :

- (a) Lime Plaster
- (b) Cement Plaster
- (c) Mud Plaster
- (d) Stucco Plaster
- (e) Plaster on lath

## LIME PLASTER

When lime is used as the binding materials, it is called lime plaster. Lime plaster is type of plaster composed of hydrated lime, sand and water. Lime plaster is similar to Lime mortar, the main difference is the based on use rather than composition. Hydraulic lime is harder and stronger. Mortar for lime plaster is usually prepared by mixing sand and lime in equal proportions. Cement is small quantity added to the mixture to improve its strength.

### MUD PLASTERING:

The surface to be plastered is prepared exactly in the same manner as that for lime or cement plaster. Mud plaster is generally applied in two coats, the first coat being 18mm thick while the thickness of the second coat is kept 6mm.

## ❑ STUCCO PLASTERING

Stucco is the name given to a decorative type of plaster which gives an excellent finish. Stucco plaster can be used for interior as well as exterior surfaces. It is usually laid in three coats making the total thickness of the plaster to about 25mm. the first coat is called the scratch coat ; the second a finer coat , also known as the brown coat, and the third is called white coat or finishing coat.

When cement is used as the binding materials, it is called cement plaster. It is especially suited for damp condition. Cement plaster is usually applied in one coat. The thickness of coat can be 12mm, 15mm or 20mm depending upon the site conditions and type of building. When the thickness of plaster is more than 15mm. 6 MM thickness of cement plaster and cement mortar 1:3 or 1:4 is recommended for cement plastering on RCC surfaces.

### SPECIAL TYPES OF FINISHING

- smooth Cast
- Rough Cast
- Pebble Dash
- Scrapped Finish
- Textured Finish

## Smooth Cast

It is a finish which presents levelled and smooth surface. The mortar for the finish is made by mixing cement and fine sand in ratio of 1:3.

## Rough Cast

- It is a finish in which the mortar for the final coat contains a proportion of fairly big size coarse aggregates. The mortar for the finish is made by mixing cement fine sand & coarse aggregates in the ratio of 1: ½ : 3.

## Pebble Dash

- It is a finish in which small pebbles or crushed stones of suitable size are thrown on to a freshly applied final coat of mortar and left exposed. Ratio:
- cement : coarse sand =1:3

### 49 ☐ Textured Finish

In this finish, ornamental patterns or textured surfaces are produced by working with various tools on the freshly applied final coat.

### 50 ☐ Defects in plaster work

Cracking

Efflorescence

Falling out of  
plaster

Blowing of  
plaster

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### 51 ☐ Cracking

- a. Old surface not being properly prepared.
  - b. Movements in the backing either on account due to shrinkage caused by the drying of the backing material.
  - c. Excessive shrinkage of plaster due to the application of mortar in thick coats.
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### 52 ☐ Efflorescence

It is solvable salt are present in bricks or the mortar they absorb moisture

From atmosphere and go in to solution which appears on the surface in the form of whitish substance as the moisture dries out and the salts crystallize.

Remove of efflorescence by applying a solution zinc sulphet and water and brushing off the surface when dry.

Falling out of plaster

The adhesion of the plaster to the background may not be perfect.

The suction of the backing materials may not be uniform. Excessive thermal changes in plaster.

Blowing of plaster

This consists of information of small patches of plaster swelling out beyond the plastered surface and chiefly due to improper slaking of lime particles in the plaster.

## **ADVANTAGES OF PLASTERING**

- a) Easy in application
- b) No surgery is required.
- c) Plaster is the most common form of interior wall finishing
- d) If properly mixed and applied, a plaster coating creates a stronger and more durable.

## **DISADVANTAGES OF PLASTERING**

- a) When plaster cracks then difficult to repair.
- b) Repairing is very expensive.
- c) Despite the extra labor of hanging and finishing drywall, it tends to be less expensive than plastering

## **PAINT**

□ What is paint?

Paints generally consist of three components: Pigment, Binder, and Solvent. The pigment gives colour, the binder makes sure the pigment stays where you put it and the solvent makes the paint fluid and evaporates when you have applied the paint.

□ Constituents of an Oil Paint:

- *A base*
- *An inert filler or extender Coloring pigment*
- *A solvent or thinner*
- *A drier*

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## 62 **Characteristics of a Good Paint**

- *stick well to surface & able to seal porous substrata*
- *consistency should provide easy workability*
- *thickness should be adequate for good protection & decoration*
- *paint film should dry easily*
- *able to withstand adverse weather effect without losing gloss*
- *offer resistance to failure by checking, cracking & flaking*
- *possess good moisture resistance*
- *color should not fade*

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## 63 **Types of Paints**

- *Aluminum paints*
- *Anti-corrosive paints*
- *Asbestos paints*
- *Bituminous paints*
- *Bronze paints*
- *Cellulose paints*
- *Casein paints*
- *Cement based paints*
- *Enamel paints*
- *Oil paints*
- *Rubber base paints*

