

Week 2 Glossary of Terms: Material Science and Mix Design

- **Binder**
The component in plaster that holds particles together and hardens as it dries or reacts.
- **Aggregate**
A granular material such as sand or crushed stone used to improve the strength and texture of plaster.
- **Setting Time**
The period it takes for plaster to begin hardening after mixing with water.
- **Slaking**
The process of hydrating quicklime to create slaked lime, used in traditional plasters.
- **Hydraulic Lime**
A type of lime that sets through a chemical reaction with water, allowing it to set in damp conditions.
- **Air Lime**
Also known as non-hydraulic lime; it sets by reacting with carbon dioxide in the air.
- **Alkalinity**
The pH level of a material; recycled plaster typically has high alkalinity, affecting pigments and additives.
- **Fiber Reinforcement**
Natural or synthetic fibers added to plaster mixes to increase tensile strength and reduce cracking.
- **Pigment Compatibility**
The ability of colorants to remain stable and vibrant when mixed with plaster materials.
- **Porosity**
The measure of how much air or water a plaster surface can absorb; impacts breathability and moisture control.
- **Recycled Gypsum**
A byproduct from drywall or industrial processes reused as a base material in sustainable plasters.
- **Clay-Based Plaster**
Plaster that uses clay as a binder, known for its breathability and ecological qualities.

- **Surface Preparation**

The cleaning and priming of a wall to ensure proper adhesion of plaster finishes.

- **Curing**

The controlled process of drying and hardening plaster to ensure durability and minimize cracking.

- **Application Layer**

The specific coat or thickness of plaster applied at one time, often divided into base, brown, and finish coats.