

Clay One-Coat Plaster

Technical Information Sheet

Description

Clay one-coat plaster is a blend of clay, fine aggregate and organic fibres that is supplied as a dry powder. It has an indefinite shelf life if stored dry and requires only mixing with clean water to be ready for use. It hardens by drying - no chemical reaction takes place – and so remains workable for a long time and can be re-worked by the addition of water at any time.

Quality of the product is monitored by tests carried out by the manufacturer :

- Tests of physical properties to ensure suitability of clay and aggregates.
- Tests to ensure uniformity and performance of the batched product.

Clay one-coat plaster is available in the following quantities :

Product	Bag Weight kg	No. of bags/pallet	Recommended coat thickness mm	Yield m ³ /bag	Coverage m ² /bag
One-coat	30	42	10 - 15	0.025	2.5 – 3.75

Design

Clay one-coat plaster is suitable for use as a one-coat plaster or a coarse-textured finish coat on internal surfaces of walls and ceilings. It attaches by mechanical bonding to all stable and dry substrates, including masonry, clayboard, reedboard, lime and clay undercoat plasters. One-coat plaster can be applied to plasterboards but the surface of the board must be sealed to prevent instability due to water absorption.

Clay one-coat plaster is a practical alternative to using gypsum or lime plasters and is compatible with ‘breathing’ construction in historic and new buildings.

Clay one-coat plaster can withstand minor movements of the background material without cracking. However it should be reinforced when there is a possibility of structural movement or if different backgrounds are being covered.

Physical properties of plaster :

- Density 1500 kg/m³
- Thermal conductivity (k) 0.66 W/mK

Resistance to Damage :

- Precautions common to good construction practice should be taken to avoid damage to the new plaster before completely dry.
- In domestic applications the dried surface has good resistance to abrasion however careful detailing is required in high-use applications such as schools and hospitals.

- Corners should not be reinforced with metal beading as this will lead to differential wear of the softer plaster. They should be slightly rounded (2mm radius or greater) to reduce the risk of damage.

Resistance to Fire :

- Clay plaster is non-combustible.

Resistance to Moisture :

- The plaster will deteriorate if applied onto damp backgrounds or if used unprotected in damp environments. Careful attention to detail is required in kitchens, bathrooms, shower areas, etc.
- Contact the supplier for advice on particular applications.

Thermal/Moisture Movements :

- Clay plaster is dimensionally stable when used in dry internal conditions and as part of a 'breathing' wall construction.
- Short plant fibres in one-coat plaster act as reinforcement and create voids which together control cracking due to drying shrinkage and thermal movements. The dried plaster is less brittle than conventional plasters and can withstand small movements of the substrate.

Directions for Use :

Mixing

- Add the dry plaster gradually to clean water in a large bucket using a plasterer's wheel or drill attachment to ensure even mixing.
- The consistency should resemble conventional lime or gypsum plasters ie. not so dry and sticky that it cannot be spread nor so wet that it cannot be applied.

Application

- Clay one-coat plaster can be applied using tools and techniques common to conventional lime and gypsum plasters. It is also suitable for use with plaster spraying machines.
- Surfaces to be plastered should be stable, dust-free and lightly dampened before applying plaster.
- Smooth surfaces eg. boards, masonry with flush joints, should be keyed using a spatter coat of plaster slurry or a brushed on primer mixed with sand.
- The surface of paper-faced plasterboards should be sealed as recommended by the manufacturer to prevent the board from absorbing water during the drying process and becoming unstable.
- Joints between boards should be filled and scrimmed using jute scrim in a wetted up plaster mix.
- Clay one-coat plaster can be applied directly to the surface of Clayboards.
- When applied over clay undercoat plaster, the previous layers should be fully dry and shrinkage complete before applying finish coats. Undercoats should be roughened to ensure a good mechanical key for subsequent layers.

- One-coat can be applied in a single layer of up to 15mm thickness or 5mm when used as a finish coat.
- When patching, the edges of the area to be joined should be well wetted
- Finish plasters can be applied as soon as the undercoat has dried and shrinkage is complete.

Drying

- Drying times vary considerably with the ambient conditions, applied thickness and the suction of the background. In ideal conditions, a 15mm thick topcoat will be dry after 3-4 days.
- To encourage controlled drying, ensure plastered areas are well ventilated. Excess heat or forced ventilation may cause cracking. If cracking occurs, the affected area can be wetted and re-trowelled.
- Each coat should be allowed to dry before applying further coats.

Site Notes

- Clay one-coat plaster is supplied in paper sacks that can be broken by rough handling.
- They should be stored off the ground and protected from damp.

Health and Safety

- There is a small risk of inhalation of dust when handling clay plaster in the dry state.
- Clay plaster is non-irritant in contact with exposed skin.

Environmental Impact

For a full environmental assessment of this product refer to NBT Environmental Assessment Sheets.

Further information on this product can be obtained by contacting NBT direct.

If you have any questions or queries please do not hesitate to contact Womersley's Limited on Tel 01924 400651 or call in at our workshop.