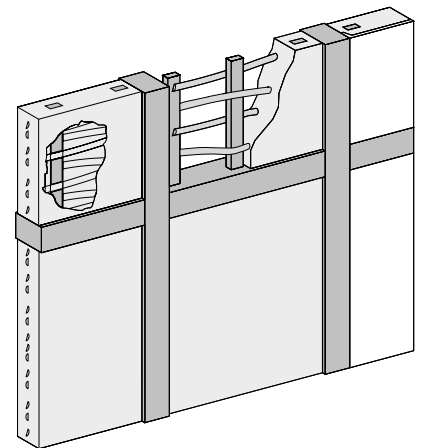
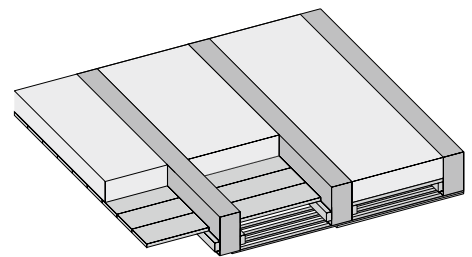


Straw clay

Item No. 04.004, 04.005

- Historically authentic
- Malleable during processing
- Solid after hardening



Straw clay raw mixture for repairing and renewing infills and for filling timber-frame ceilings. Puddled clay or daub is the original clay building material used in timber-frame construction. The straw and clay mixture was prepared using animal power and applied by the dauber - the clay craftsman. The earth-moist mixture is best prepared using an agitator paddle and spread over the wattle or laths using a trowel while it is malleable and ductile. Straw clay ANTIK contains an especially large amount of long straw.

Straw clay

Item No. 04.004, 04.005

Clay product type Straw clay according to section 3.4 of the earth building standards issued by the Dachverband Lehm (German clay construction trade association).

Field of application Repair and renewal of clay infills for restoring timber-framed buildings, for clay fillings in historical wood-beam ceilings.
04.005 Straw clay Antik. As a particularly authentic product for the preservation of buildings, Straw clay Antik contains a very large proportion of long straw.

Composition

04.004 Straw clay: natural building clay up to 5 mm, sand 0-8 mm, barley straw up to 10 cm

04.005 Straw clay Antik: natural building clay up to 5 mm, sand 0-8 mm, half barley straw up to 10 cm and half unchopped barley straw. Note: the unchopped straw is also shredded in the preparation process.

Material parameters

04.004 Straw clay: bulk density 1600 kg/m³ (thermal conductivity 0.73 W/mK, μ 5/10)

04.005 Straw clay Antik: bulk density approx. 1400 kg/m³ (thermal conductivity 0.59 W/mK, μ 5/10).

Delivery forms, yield Earth-moist in 1.0-t Big Bags (yields 700 l straw clay mixture ready for processing)

Storage Store in a dry place. Earth-moist straw clay must be processed no later than 3 months after manufacture. During winter, earth-moist goods must be prevented from freezing in storage, otherwise their workability will be impaired by the frost.

Material requirements When calculating the material requirements, approx. 20-25% must be subtracted for the volume of the wattle or ceiling battens, using the example of an 8.0-cm-thick building element.

Preparation Straw clay is a rich mixture. Depending on the desired consistency, the malleable building material is prepared by adding approx. 10-15% water in a pan or trough compulsory mixer, ideally in a lifting mixer or kneader. It can also be prepared in small quantities in mortar buckets or tubs by intensively working it through using a spade, rake or powerful motorised paddle mixer.

04.005 Straw clay Antik contains a very large proportion of long straw and is a particularly authentic product for the preservation of historical buildings. Ideally, it should be prepared using a Claytec 182/582 straw clay mixing paddle for FESTO Duo stirrers.

Processing Timber-frame infills: first, apply straw clay to one side of the wattle or the batten lattice. This coat is applied to the outer surface. The mixture is thrown on or pressed through the wattle. Flatten down the resulting ridges of straw clay on the inner surface and smooth over. After a drying time of 1-2 days (depending on weather conditions), apply an additional, full-surface coat to the inside. Carefully roughen (perforate) the outer surface while still fresh to facilitate the application of a lime plaster.

Ceilings: apply the straw clay to the battens and press it through to the lath (reed matting 70 pcs. 34.001). Lightly compact the layer and trowel it flush with the top surface of the beam.

04.005 Straw clay Antik can be applied by hand, board or trowel to wattle or batten lattices and used to make simple clay timber struts.

Drying Timber-frame infills: depending on ventilation and weather conditions, an 8.0-cm-thick layer of straw clay usually takes 1-2 weeks to dry out sufficiently to eliminate the risk of frost damage.

Ceilings: after application, ensure that the straw clay dries rapidly by providing sufficient cross-ventilation (i.e. all windows and doors open 24 hours a day) or using drying equipment.

Subsequent processing Timber-frame infills are usually plastered on the outside using gräfix coarse lime basecoat render with hair (CLAYTEC 21.200). Read the CLAYTEC worksheet Timber-frame construction for information on selecting a suitable plaster structure and applying the plaster.

Notes The straw clay must be completely dry before plastering the surface or subsequently installing wooden floors or the like. It is normal for shrinkage cracks to appear during the drying period. They can be plastered over without any further preparation.

If the historical building elements being repaired are made from a lean, sandy straw clay, it is advisable to adapt the new straw clay to the substrate by adding sand.

*Better classification is possible subject to inspection of fire-protection documentation (earth building standards 2009, p. 97, issued by the Dachverband Lehm (German clay construction trade association)).

For instructions on working with this product as well as additional information from the worksheet "Timber-frame restoration" see:

