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## Fine-finish surfaces



YOSIMA clay designer plaster



YOSIMA clay surfacer



CLAYFIX clay paint



# YOSIMA

## Clay designer plaster

### Preparing the substrate, general information

The plaster substrates must be absolutely dry, level, firm, stable, clean, dust-free, sufficiently rough (non-slip) and free from grease. Highly alkaline substrates such as concrete must be treated with fluorosilicate, particularly if strong, dark colours are used, otherwise light-coloured discolorations may appear. Substances such as lignin, nicotine, rust, various salts etc. can always penetrate coatings of open-pored YOSIMA clay designer plasters from the substrate and lead to discolorations or variations in colour. This is why you should always carry out preliminary tests (sample areas). If penetrating substances might be present, the substrate must be professionally sealed. Pay particular attention to this when using light colours such as WE 0. Dark substrates can show through thin layers of light-coloured plaster! All surfaces must be sufficiently and uniformly absorbent. Permanent moisture or salt must be prevented; this also applies for deeper layers of plaster. The plaster base and room air must be at least 5° C until the plaster is absolutely dry.

Pay special attention to the security of the plaster bases, the mechanical stability and the safe joint reinforcement of drywall constructions. Clay designer plasters are sophisticated surface coatings; cracks are very hard to repair later on. The installation of a reinforcement fabric in the layer of undercoat plaster can greatly stabilise the plaster base.

A masterful surface finish begins with the preparation of the plaster base. A **uniform degree of dryness** of the plaster during processing is crucial for the quality of the later coloured plaster surface. Why? Plasters that are processed when wet (early) are rougher; those that are processed dry (later) are finer. Material may even be rubbed out of areas that dry too quickly. Smooth or rough surfaces are perceived as having different colours. This is why special attention must be paid to the following aspects:

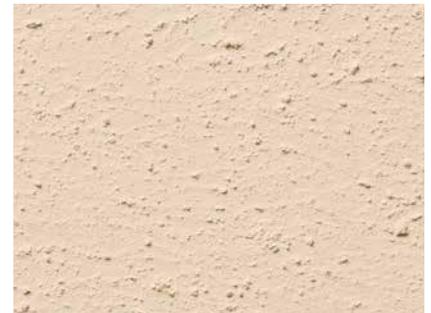
**Evenness:** thin-layer coatings can only really be applied in an even thickness and then set uniformly on very level substrates. Differences in evenness lead to "cloudy" plaster surfaces. The preparation of clay undercoat plaster areas for YOSIMYA designer plaster is more time-consuming than for the following coarse or fine clay topcoat. We recommend an intermediate layer of CLAYTEC Clay topcoat fine 06 for brilliant results.

**Equalised absorption properties:** the plaster dries faster on very absorbent surfaces than on other surfaces, differences may only appear later on. You should thus pay attention to uniform absorption properties for all materials during touch-up plastering work in the substrate. The same applies for fillers in drywall construction.

We can supply CLAYTEC YELLOW primer for all common absorbent substrates in construction as preparation for YOSIMA Clay designer plaster. PU or epoxy resin products have to be used for substrates with no absorbent properties (coats of oil and paint, tiles, adhesives etc.).

### PRO'STIP

Take care with old gypsum cardboard panels! The cardboard may contain yellowing substances that bleed through.



Structure of a gypsum cardboard panel prepared with YELLOW primer



Structure of a well-prepared surface of clay undercoat plaster

### PRO'STIP

Stir primer regularly during work. Use an agitator paddle and stainless spatula to repeatedly loosen the sediments from the bottom of the bucket.

Priming helps to equalise the absorption properties of the substrate. It also slows down the drying process and helps prolong the processing time. Very absorbent substrates may have to be primed twice. Non-water-soluble substrates can also be prepared to a limited extent by careful or uniform wetting (spray mist!).

**Sealing shrinkage cracks in the substrate:** Cracks can also appear on the surface because the application thickness of the YOSIMA clay designer plaster differs around cracks. Cracked undercoat plaster surfaces therefore have to be sponged over or covered with a fine layer. Hairline cracks do not pose any problems.

## PRO'STIP

As with any plastering work, the surfaces of other parts of the building must be protected against pollution by masking etc.

## Preparing various substrates

### CLAYTEC clay plasters

- Wait until absolutely dry
- Seal larger shrinkage cracks
- Smooth all surfaces with felt or sponge to produce a fine structure
- Alternatively: prepare with a thin layer of CLAYTEC clay topcoat fine 06. This produces particularly brilliant results

### Old mineral plasters

- Completely remove all wallpaper and wallpaper paste residues
- Check for bleeding materials
- Touch-up plastering with mineral mortar similar to the old plaster mortar
- Fix heavily sanding substrates with CLAYTEC deep penetrating primer and stabiliser
- Problematic areas may have to be partially reinforced
- YELLOW primer

### Concrete

- Wash off the formwork lubes
- Professionally treat fresh concrete surfaces that have sintered skin, and in particular surfaces that are to be treated with dark or strong colours, with fluorosilicate
- Concrete is only sufficiently smooth for the YELLOW primer and the direct application of coloured plasters in exceptional cases

- Otherwise prepare with YELLOW primer and clay topcoat fine 06

### Synthetic resin-bound old plasters

- Check the strength
- Fill furrows with mineral filler if necessary
- YELLOW primer

### Clayboards, clay-hemp boards, wood fibreboards (HFA)

- If necessary, fill gaps  $\geq 1$  mm in width with clay adhesive and reinforcing mortar.
- When dry, coat with a 3 mm thick layer of clay adhesive and reinforcing mortar. Work glass fibre mesh flat into the surface while this is still wet.
- For LEMIX Heavy clayboards, use clay plaster fine 06 instead of clay adhesive and reinforcing mortar.

### Gypsum panels with joint recess

- Check the stability of the overall construction
- Panels must be free from residual moisture
- Fill and reinforce joint areas professionally, e.g. with Kobau elastic mesh 10/10 ('with the red thread') or glass mesh joint tape.
- Smooth the entire surface if necessary.
- Prepare professionally with the deep penetrating primer recommended by the manufacturer.
- After drying, prime surfaces with YELLOW primer carefully and without any defects.

### Gypsum panels without joint recess

- Check the stability of the overall construction
- Panels must be free from residual moisture
- Stick together according to the manufacturer's instructions.
- Prepare professionally with the deep penetrating primer recommended by the manufacturer.
- After drying, prime surfaces with YELLOW primer carefully and without any defects.

### Porous dispersion coatings

- Check the strength carefully
- Roughen up very smooth substrates
- YELLOW primer

### Glassfibre mesh wallpapers

- Check the strength carefully
- If there is sufficient grip, the plaster can usually be applied without a primer (work sample). Otherwise prepare with YELLOW primer

## In every case: try out a sample of work!

All of the information on substrates is based on experience. A different procedure may be advisable in individual cases for various reasons (e.g. grip, absorption properties, strength). Consequently, the specific substrates should always be assessed on site; this is the responsibility of the contractor. A sufficiently large work sample must always be prepared for the assessment. The work sample also enables checking of the surface and colour results.

## Preparing the mortar

The mortar is prepared with clean water. Approx. 5.5-6.5 l of water is needed for mixing each container, the water needed can vary depending on the colour. First pour in the water. The content of the 20 kg bucket is then gradually mixed into the clean water using a drill ( $\geq 800$  watt), or better an agitator (recommendations: Collomix AOX-S with KR stirrer, Festool MX 1600/2 with beater HS3R 160).

After mixing for at least 30 minutes, work the mortar through again thoroughly and make ready for use by adding more water if necessary. The mortar can be used for up to 24 hours if the container is covered. The mortar is mixed coarsely in the factory. The final colour homogenisation has to be carried out on the building site through hands-on mixing!

Pigments can be added for individual colour preferences. A wide range of top quality pigments are available, for example from KREMER: [www.kremer-pigmente.de](http://www.kremer-pigmente.de). The pigment is always mixed into the dry mass. Do not add too much, otherwise this would alter the recipe ratios so much that the plaster could crack or chalk. The worker must check the suitability of plaster dyed with pigments by means of a visual inspection and sample of work on the various substrates.

Pigments can also be worked into the moist plaster surface to achieve colour highlights and effects (sample of work!).

## PRO'STIP

An adequate amount of mortar has to be made up for connected areas.

This is because:

- Slight differences in colour between various buckets of finished product cannot be ruled out.
- Mixed materials gradually becomes thinner; the consistency of the mortar affects the surface and colour.
- Differences in colour can occur after different storage periods.

This means that a sufficiently large tub of material has to be prepared for larger areas!



Mix the content of the bucket into water. Then leave to soak for 30 minutes.



Mix well again after 30 minutes, the picture shows the consistency of ready-to-use mortar

## Mortar application

You must always use clean or even new tools. Do not apply layers thicker than 2 mm!

During application with the stainless steel spreader or Japanese trowel, begin by applying a thin layer 'spread over grain'; the final coat is applied after drying. This facilitates work and produces some very good results. The mortar can of course be applied in one go.

The plaster can also be applied with a notched trowel or notched spreader (4 mm serrations). This results in a simple and uniform distribution of the material over the surface. The mortar is then levelled and the surface is ready for further treatment. However, we do not recommend application with a notched trowel on clay plaster. Apply in long sweeps or in smaller 'organic' movements in changing directions. Avoid right angles, steps and straight lines at all cost. Always start from the fresh edge ('whilst still wet'). Progress diagonally, e.g. from bottom left to top right.

Plaster ridges can be easily smoothed with the finishing spatula directly after application. If walls and ceilings are plastered in a room, begin with the ceiling followed by two opposite



CLAYTEC offers Japanese trowels, templates and other selected professional tools.

walls. When dry, the connections to the remaining two walls should be protected with painter's tape to prevent any damage to the finished areas by trowels or floats. This means you can rub and smooth the plaster firmly into the corners and edges and work with the same forcefulness as if on the larger area.

The mortar can also be sprayed on using a plastering machine. Spraying is usually used to facilitate only the application of the mortar. Information and contact addresses for various manufacturers can be found on our website [www.claytec.de/service/maschinentechnik](http://www.claytec.de/service/maschinentechnik). The contacts named there have tested our products with the respective machines in practical tests and thus offer competent advice.



Removing the mortar



Application with the smoothing tool



Levelling off with the finishing spatula



First felting treatment

### Plaster processing and surface

To ensure uniform processing of all surfaces, do not let partial surfaces dry too quickly. Draughts, currents of air from windows that are left open nearby and radiators dry out the surfaces quickly; in warm rooms, the upper parts of wall dry faster than the lower parts. Cracks can also appear if the mortar dries too quickly. So: keep all windows closed and radiators turned off! You can air and heat the room moderately after processing.

Processing any surface begins with the first felting when the plaster surface changes from shiny-wet to matt-moist. This smoothing distributes sand and additives over the surface. Of course, the surface can be considered finished now or after one of the further felting processes; its appearance is then correspondingly coarse.

The surfaces can be processed in various ways. Structures produced by swirling the trowel or other rustic treatments are possible. You can also work with a felt, wood or plastic board in addition to the sponge board. In principle, the later the processing takes place (i.e. the drier the plaster), the finer the surface will be.

### PRO'STIP

When masking borders, the edge of the masking tape must be set back by the thickness of the applied plaster – approx. 2 mm. If it is not, the plaster will be damaged when the tape is removed. The tapes must be removed immediately after the surface treatment, in other words, when the plaster is still moist.

### PRO'STIP

When applying mortar with textural additives, you must repeatedly use fresh material from the bucket. Trowelled off material forms pockets; it repeatedly has to be returned to the bucket and mixed with fresh material.

### PRO'STIP

The metal tools common in the plasterer's trade can be used; a stainless steel edge, for example, often goes well with the surfaces of the clay designer plaster. The absorption properties of the fastening flange areas must not differ greatly from those of the remaining surfaces, otherwise they will show through later on. This is why the profiles are fastened beneath the undercoat plaster.

# YOSIMA clay designer plaster

## Felted surfaces

You can produce either very coarse or very fine surfaces by felting, depending on how many times you felt. You should use the large orange smoothing board for felting. The pores of finer smoothing boards fill up with mortar too quickly; they are suitable at most for a final, very fine felting treatment. The smoothing board should be moist, not wet. This is best achieved by rolling it over a bucket with rollers, such as those used by tile layers. A **second felting treatment** can be carried out 2-4 hours after the first depending on the absorption properties of the substrate and weathering. A **third felting treatment** can be carried out after a further 2-3 hours. The plaster must still be dark, in other words moist. No light areas must have appeared.

## Smoothed surfaces

Smoothing is more difficult and time-consuming than felting. The distribution of straw or other additives calls for experience. You can start smoothing soon after the first felting treatment.

Make sure the smoothing tools you use are of a high quality, e.g. make sure to only choose tools from reputable manufacturers. Metal abrasion could otherwise take place. Ideal tools for this work are the **CLAYTEC Japanese trowels**. These have been developed over centuries in Japan. They are perfectly balanced and allow effortless work thanks to the ingenious transfer of the force from the handle to the blade. They are characterised by the best grade of steel. We import this traditional tool directly from Japan. More detailed information can be found on our website <https://www.claytec.de/de/produkte/japankellen>

You can produce very large, smooth areas with the Japanese plastic smoothing tool; you should take the wear and tear and thus the consumption of soft smoothing tools into account in your calculations.

## PRO'STIP

The mortar surface must have dried evenly at the time of processing to ensure a homogeneous result!



Rolling out the smoothing board

## PRO'STIP

Because YOSIMA clay designer plaster is watersoluble, you can prolong its period of workability by carefully moistening the plaster surfaces.

**Caution:** if too much water is allowed to enter the plaster surface, this can cause shrinkage cracks and chalking!

## PRO'STIP

Light plasters with the herbs additive should dry quickly. Otherwise, the natural chlorophyll of this vegetable additive bleeds into the surrounding plaster. Minor discolorations can be compensated by sponging over the surface again (with only a little water).



Felting



Surface



Smoothing



Surface



Japanese smoothing tool and fine plaster trowel, fine plastic trowel, corner trowels

### Wipe clear, brush off, work in pigments

The plaster surfaces finally have to be wiped or brushed off. This removes any loose grains from the surface. It also improves the long-term durability and wear resistance. In terms of appearance, this operation produces deeper, more brilliant colours and structural additives are better accentuated.

The plaster first has to be left until absolutely dry (at least 48 hrs.). Light-coloured surfaces should be wiped over with a clean, moist sponge in 2-3 strokes. The sponge is best rinsed with fresh waster from a spray gun or hose. Do not use too much water when wiping over dark and strong colours in particular because the colour could otherwise appear uneven (cloudy).

Alternatively, you can also brush off the plaster: after carefully moistening the plaster with a pressure sprayer, the moist-matt surface should be rubbed over carefully with a paperhanging or short-haired brush and thus lightly polished at the same time.

Pigments for special effects can be worked into the moist surface with a brush, sponge, sponge board or smoothing tool.

### Masking and clean connections between areas

In the case of adjacent panels of different colours, you can proceed as follows: remove yellow masking tape that separates the plastered areas immediately after wiping or brushing over the surfaces; the plaster surface should still be slightly moist. When fully dry, the surface is protected by a strip of masking tape before plaster is applied to the next area. Finished surfaces can also be protected by masking tape if you have to work in corners. Try removing the masking tape without causing any damage on a work sample.

### PRO'S TIP

Unlike all of the other colours, YOSIMA WE 0 can be wiped clean with not just a soft sponge but also an orange sponge board when dry. You can even rub over the surface again after this operation.



Applying the first colour up to the masking tape



Removing after wiping over



Renewed masking after drying



Applying the second colour

## The essentials at a glance

- Prepare substrates carefully; use YELLOW primer if necessary.
- Pay attention to the stability and securely reinforced joints of gypsum panels.
- The surfaces must be smooth enough for the max. 2 mm thick application.
- Seal any shrinkage cracks.
- The absorption properties must be equalised and slowed down if necessary.
- Areas with bleeding materials have to be sealed.
- Do not use too much water when mixing the plaster.
- Leave the plaster to soak for 30 minutes; it then has to be mixed well.
- The water for the mortar and for preparing the surface must be clean.
- Containers and tools must be clean, particularly for light plasters.
- Mix materials from several containers for connected areas.
- Make sure to apply an even layer thickness.
- Breaks in work should be avoided.
- Avoid any turbulence from radiators or draughts during work.
- The surfaces are processed and wiped clean with only a little water.
- **Try out a sample of work!**

## Long-term use, repairs, reworking

Clay designer plasters are sophisticated coatings, which is why special attention has to be paid to the adequate strength and stability of the substrates and a careful treatment of the plaster surfaces. Nevertheless, cracks that may appear later or damage caused by use can be reworked with YOSIMA clay designer plaster. Sufficient dry material has to be reserved for this because the raw materials loam and clay can vary slightly in colour over time for material reasons. The following procedure has proven successful when repairing defects:

- Moisten the defect (spray mist).
- Leave the water briefly to soak in.
- Repair the area immediately around the defect with a fine tool.
- After a short drying period (surface matt-moist), rub the area to be repaired carefully with a sponge into the existing area; sponge over the complete area too if necessary.

Levelling coats are possible with CLAYFIX clay paint, though this will affect the brilliance and depth effect of the YOSIMA clay designer plaster.

The surfaces can be sponged over with a little water to remove any surface dirt or to freshen up the colour, or reworked with CLAYFIX fine-grain clay paint.

The YOSIMA clay designer plaster may have to be painted or wallpapered over in the more distant future. The CLAYTEC clay plasters worksheet describes how to treat clay plaster surfaces in such cases.



# YOSIMA

## Colour clay surfacer

### Preparing the substrate, general information

The plaster bases must be of the same quality and prepared in the same way as described for the YOSIMA clay designer plaster on page 2-3. In addition, the pores must be largely sealed (quality level Q3, smoothed). Pronounced alkaline surfaces must be treated with fluorosilicate. This applies in particular when dark, strong colours are used. Thickness compensation or filling of imperfections is not possible with the clay surfacer. All surfaces are pre-treated with CLAYTEC WHITE primer.

Note: Colour surfacer is not really suitable for smoothing the YOSIMA clay designer plaster. Smoothed YOSIMA designer plaster areas would have to be primed, finely rubbed surfaces treated with at least three layer of filler.

### In every case: try out a sample of work!

All of the information on substrates is based on experience. Consequently, the specific substrates should always be assessed on site; this is the responsibility of the contractor. A sufficiently large work sample must always be prepared for the assessment. The work sample also enables checking of the surface and colour results.

### Preparing the filler

The bucket size is based on the volume required for problem-free preparation. The 5 kg dry mass is first stirred dry for 2 minutes at a sufficiently high speed with a drill ( $\geq 800$  watts) or agitator. Recommendations: Collomix XO 1 R with KR stirrer or KRK 80 for the drill with plastic basket (to protect against abrasion from the bucket wall), Festool MX 1600/2 with beater HS3R 120, or cordless screwdriver PDC 18 with spiral agitator HS2 120 with ring. Brand-new agitators with sharp burrs can also cause this kind of abrasion. They can be deburred with a file or grinding disc. The stirred dry mass is successively stirred into approx. 3.7 - 4.1 litres of clean water. Depending on the colour, the average water addition can vary (classic tones + approx. 15%, green tones + approx. 30%). The working consistency is paste-like and varies according to the desired application and tool. Leave the mixture for 30 minutes and then stir thoroughly again.



Clay topcoat fine 06, area Q3



WHITE primer on top of this

### PRO'S TIP

Only make up small amounts of up to 2 kg when working with agitator paddles and plastic basket. It is almost impossible to mix up larger amounts homogeneously. But remember: always have enough malleable material available for larger areas!



Mixing



Consistency

# YOSIMA colour clay surfacer

Particularly good working properties are achieved by longer rest periods, e.g. overnight (12 hours). This dissolves even the smallest of lumps that would otherwise not only interfere during application but in the worst case could even cause smears on the surface as coloured clay inclusions.

If necessary, add a little more water when finishing the work.

Mix sufficient filler from several containers for connected areas. Breaks in work should be avoided. Due to the natural raw materials, colour deviations and moderate shading are possible.

Once mixed, the filler remains usable for 24 hours if kept covered.

### Filler application

The surfaces must be very clean to apply the filler. The thickness of the first coat of filler is 0.1-0.2 mm, so only the pores of the substrate are filled and closed. The filler is levelled off on the surface. Apply the filler and remove any excess material immediately. After drying, intermediate sanding with 150 grit sandpaper is usually carried out. After removing the dust, the next layer is applied and levelled off as described above. Coating takes place in wide, large-area sweeps, to produce surfaces of a homogeneous colour.

For veined 'spacklings' or differently designed surfaces, the application is carried out in short, small-surface sweeps. We recommend that your first apply an extensive homogeneous layer as described above. It is easier to produce spackling with bold colours than with classic tones.

### PRO'STIP

Keep the edge of the bucket clean at all times with a sponge. Otherwise, dried residues could fall into the paste-like mixture.

### PRO'STIP

Before applying each layer of filler, carefully remove any dirt from the substrate, for example with a clean, soft hand brush. This also applies for Q3-smooth surfaces of clay topcoat fine with WHITE primer!

### PRO'STIP

Do not work directly from the mixing bucket. The amount of material you want to work with should be transferred to a smaller container so as to prevent any soiling of the overall mixture. Keep the lid on the mixing bucket during work. Do not return any residual material to the bucket!



Stain filling application



Stain filling execution



Tool selection

### Smoothing and surface finishing

Smoothing is done with light pressure and a 'closed trowel' as much as necessary to achieve a smooth closed surface. Depending on the surface smoothness requirements, the described application can be repeated once or twice. Topcoats that have not been treated additionally by sanding (see below), can be further smoothed. If abrasion is tolerable, we recommend steel trowels (CLAYTEC Japanese trowels 181/58 180-240 or 181/61 210-300), otherwise plastic trowels (CLAYTEC Japanese trowels 181/04 210-240).

The surface can be sanded dry by hand or by machine after the hardening process has been completed. Fine 220 to 500 grit sandpaper is suitable.

### PRO'STIP

If several craftsmen are working on one area, it is advisable for one person to apply the plaster and another one to smooth it; this ensures a uniform surface 'signature'.

They should repeatedly swap around on larger areas so that each of them works on every partial area.



Smoothing



Sanding

### PRO'STIP

The better the surface is smoothed, the less sanding is required. **Smoothing is easier than sanding!**

### Surface variants

The trowelling technique is an individual technique. The surfaces and optical effects are largely determined by craftsman's particular 'signature'. YOSIMA colour clay surfacer invites professionals to experiment and create their own personal masterpieces. There are numerous possibilities.

One special application is the 'sand-through' technique. With this, two different-coloured fillers are applied on top of each other, e.g. a bold top colour over a light base colour. When dry, the topcoat is partially removed by sanding to reveal the layer below. The use of templates extends the number of possibilities.

Marbled effects can be produced by first scrunching up a thin plastic masking film and then spreading this out on the still wet surface of the filler. It is pressed in lightly with a rubber roller and then pulled off immediately. The next layer of filler is applied and smoothed when this is dry. The ridges of the base layer remain visible and look like veins.

### Working with templates

The templates are fixed flat to the substrate with removable adhesives. Take particular care in the area of the motif edges. Then apply YOSIMA colour clay surfacer. Remove the template immediately after application.

Attractive relief decorations can be achieved by combining sculptural and flat elements, with YOSIMA clay designer plaster, colour clay surfacer or CLAYFIX clay paints. Clay paints are applied with a stippling brush.

### Possible subsequent processing of the surface

Further surface treatment with special primers and/or suitable natural wax is possible. We will be happy to provide separate information on this. Please note the more or less strong darkening of the colour due to this kind of deep and gloss treatment.

Treat all areas with deep penetrating primer before applying the wax. Its uniform application is an operation that calls for great manual skill. The deep penetrating primer should be sprayed onto areas of a homogenous colour in particular to avoid any drips and stains.

A waxed area can be exposed to splashes to a certain extent and thus be a substitute for tiling, for example at hand washbasins or other surfaces with only moderate exposure to splashes. The protection is not usually sufficient for shower or bath areas or at cookers and sinks. Wax surfaces can be cleaned with clear water without any strong detergents.

### PRO'STIP

Colour clay surfacer is not processed like lime filler! Colour clay surfacer is neither 'compacted' nor 'ironed' but is smoothed without applying any pressure until the desired surface look is achieved.



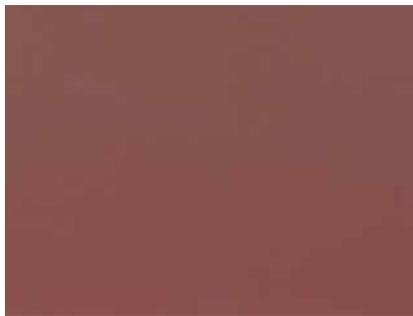
Marbled effect: film on the filler surface



Pull off



Applying the marbled topcoat



Matt surface



Glossy surface

## PRO'S TIP

A rich-coloured, glossy and well-protected surface can be achieved on speckled areas with carnauba wax emulsion. This requires pre-treatment with deep penetrating primer. The emulsion is applied very carefully with a sponge and is not rubbed in. Subsequent processing of individual spots is possible when dry. Additional polishing improves the gloss level.

### Joint connections and edges

Yellow adhesive tape, e.g. from TESA or KIPP, is suitable for protective masking and at joint connections. Simple painter's masking tape is not waterproof enough, the filler can run under the edges of the tape. At the end of work and when the areas are absolutely dry, pull off the tape at an acute angle.

Mechanical edge protection can best be provided with corner profiles. Unprotected edges are very sensitive; unsightly spalling can easily occur. Profiles are also recommended for less critical edges because it is difficult to produce an edge with only a trowel. The profiles must be installed in the plaster base.



Pull off at an acute angle

### Long-term use, repairs, reworking

Filled clay surfaces are not particularly sensitive but being high-quality finishes they should be treated carefully during use.

An adequate amount of the colour clay surfacer should be kept in stock for a long period for repairs or reworking areas. Minor damage is only reworked locally in the affected areas. Spackled areas are easier to repair than areas with a homogeneous colour; untreated surfaces better than waxed ones. Major damage is almost impossible to repair, new plaster has to be applied in the area of defects. The surfaces are then coated again; lightly sand the compacted filler surfaces in preparation.

If surfaces are later to be wallpapered or painted over, sand the area matt in preparation and treat with deep penetrating primer. Any wax must be removed with a special cleaning agent before sanding.



# CLAYFIX

## Clay paint

### Preparing the substrate, general information

Like all coating bases, the surfaces must be absolutely dry, smooth, firm, stable, clean and free from dust, grease and bleeding materials. Permanent moisture or salt presence must be prevented. The coating base and room air must be at least 5° C until the coating is absolutely dry.

The smoothness, flatness and surface quality of the substrate naturally affect the results of work. In order to avoid any misunderstandings during the acceptance of drywall construction substrates, the designations according to quality levels should be used instead of general descriptions such as 'ready to paint'. The substrates should correspond to quality level Q3 or Q4.

CLAYFIX Clay paint can be applied directly to most common substrates. If in doubt, WHITE primer is suitable as a pre-treatment.

Draughts from open windows or radiators must be avoided during work. As with any coating work, the surfaces of other parts of the building must be protected by masking etc. against contamination.

### PRO'STIP

Take care with old gypsum cardboard panels!  
The cardboard may contain yellowing substances that bleed through.

### Preparing various substrates

#### CLAYTEC clay plasters, clayboards

- Rub or smooth clay plaster surfaces sufficiently fine
- Produce the clayboard reinforcement layer very carefully (= fill the drill holes and indentations before starting and allow these points to dry). Prepare surfaces with an extra thin layer of clay topcoat fine 06 if necessary
- Brush over the surfaces
- WHITE primer

#### Concrete

- Check the concrete for formwork lubes
- Treat with fluorosilicate, particularly dark and strong colours
- Use WHITE primer if necessary

#### Old mineral plasters

- Wipe over chalking substrates
- Remove all wallpaper and wallpaper paste residues
- Prepare sanding substrates with CLAYTEC deep penetrating primer and stabiliser
- Check for bleeding materials
- Touch-up plastering with a mineral mortar that corresponds to the old plaster
- Use WHITE primer if necessary

#### Synthetic resin-bound old plasters

- Check the strength
- Fill rough surfaces with dispersion filler
- Only prime highly absorbent surfaces

#### Porous dispersion coatings

- Check the strength carefully (sample of work)
- Roughen up very smooth substrates
- Fill rough surfaces if necessary (dispersion)
- A primer is not usually needed

#### Gypsum cardboard and gypsum fibreboards

- Prepare surfaces professionally for coating; surface quality generally Q3
- Careful pre-treatment with WHITE primer

#### Paper and glassfibre mesh wallpapers

- Check the strength (adhesive force) carefully
- Prime absorbent wallpapers
- Foam-vinyl wallpapers are unsuitable

### In every case: try out a sample of work!

All of the information on substrates is based on experience. A different procedure may be advisable in individual cases for various reasons (e.g. grip, absorption properties, strength). The specific substrate should always be assessed on site. This is the responsibility of the contractor. A sufficiently large work sample must always be prepared for the assessment. The work sample also serves to check the surface and colour results.

## Preparing the coating

CLAYFIX clay paint is stirred into approx. 10 litres (thicker 1-coat application) to 15 litres (thinner 2-coat application) of clean water using a drill and mixer attachment (100 mm diameter) at maximum possible rotation speed. Recommendation: Collomix agitator XO 1 R with DLX stirrer, Festool cordless screwdriver PDC 18 with spiral agitator CS 120 or agitator MX1600/2 with the beater CS 140. Stir the material well for 1-2 minutes after approx. 3 minutes and then again after it has been left to stand for 30 minutes. The material is processed into a 'gooey' consistency; it must not drip from the brush. It can also be applied in several layers with a thinner consistency. During work, especially with CLAYFIX clay paint with fine or coarse grain, the plaster has to be stirred repeatedly to prevent the grain from settling. If left to stand for longer periods, the sediments must be loosened from the bottom of the bucket with a stainless spatula. Brush-on plasters and clay paints can remain workable for 24 hours if kept covered or in a closed bucket. All colours can be mixed with each other.



Mix the content of the bucket into water



Mix well after leaving to soak for 30 minutes



Adding dry pigments



Mix in with the lid on

### PRO'STIP

Pigments are always mixed in dry. This makes dosing and homogeneous distribution easier.

## Coating application

CLAYFIX clay paint is best applied with a fine oval brush or a larger rectangular lime brush (roller). This produces beautiful artisanal surfaces. Make sure to only use quality tools. The coating is applied as a 'figure of eight' (crosswise) according to the old painting technique. The best results are achieved if the strokes alternate between horizontal, vertical and diagonal. Work swiftly and on only small areas.

Application with as roller hardly ever leads to seamless and more uniform stroke pattern. But the roller can be used as an aid to application; the still wet surfaces are then textured with a fine or broad brush as described above.

CLAYFIX clay paint without textural additive can be sprayed very economically and especially homogeneously, e.g. with a Wagner PS 3.20.

During work, the room should not be heated, ventilated or dried with a blower.

### PRO'STIP

Always work wet-in-wet when applying. Jarring edges appear if dry borders are painted over.



Crosswise manner



Surface

### Number of coats

One coat is usually enough. A light substrate with good absorption properties is a necessary precondition. For CLAYTEC clay plasters, this is the WHITE primer. A second coat may be necessary for a particularly beautiful and even colour depending on the substrate. A sample of work is decisive if in doubt.

### Creative techniques

The water-soluble CLAYFIX clay paints are ideal for individual, creative techniques. Three application variants have been chosen from the numerous possibilities and are presented here. They should be seen as an inspiration and encouragement for your own special applications.

With the **wrap-around technique**, the surface is initially treated with a basecoat in the desired colour that is left to dry. A lint-free cloth or piece of leather is wrapped around a roller for a second highlight layer, dipped in paint and unwound over the surface. Special paint rollers that are available from the specialist tool trade are also suitable. The wrap-around technique produces a dynamic texture that becomes finer with every new layer that is applied.

Working with templates has already been described on page 11 for YOSIMA colour clay surfacer. The **airbrush technique** (working with a compressor and gun) can be used in particular to produce line motifs, friezes and borders very quickly, cleanly and in brilliant colours. Historic ornaments such as the 'egg and dart' are very widespread and popular. Doors and window openings in old buildings can be highlighted and emphasised by this ornamental surround. Three-dimensional effects are achieved by covering part of the certain areas of the motif (e.g. top right) with a lighter or darker colour a second time. This effect is further enhanced by more colours.

The **multiple colour technique** is used to achieve very lively and colourful effects. Several colours are brushed into each other while still moist. The brush is dipped alternately into two or more buckets.



Applying the second colour



Result of coating

### PRO'STIP

The second coat is applied when wet and is always initially a transparent-glaze. Its full opacity only becomes visible when dry.

For the **glazing technique**, the area is first coated with a base colour that is usually light. The clay paint is heavily diluted for the second coat; a little wallpaper paste may have to be added to ensure a sufficient bond. The substrate still shows through when dry. The surfaces look lively and invite your eye to continuously discover new textures, nuances and plastic effects. Walls appear lighter, rooms more open.

CLAYFIX clay paint can also be used for **glassfibre mesh wallpapers**. In this case it is the adhesive and coating in one; both functions are achieved in a single operation and it is applied while moist. Common dispersion adhesives more or less seal the substrate, but the walls remain breathable with clay paint.



Pasting up glassfibre mesh wallpaper



Coating

### Long-term use, reworking

Pay attention to the water solubility of the CLAYFIX clay paint system with refurbishing coats and during reworking. Coatings with similar materials can be carried out with no preparation, but be careful not to allow too much water to enter the surface. If you plan to paint over the surfaces later on with coatings that set firmly (e.g. dispersion paints), fix the surfaces or better wipe over with commonly available firming agents. Try out a sample of work!

### The essentials at a glance

- The substrates must be firm and must not chalk.
- Drywall construction substrates must have the quality level Q3 or Q4.
- Highly alkaline substrates (concrete) must be treated with fluorosilicate for dark colours.
- Seal areas with bleeding materials.
- Pre-treat CLAYTEC clay plasters and any other substrates with WHITE primer
- Leave the paint materials to soak for 30 minutes and then work through thoroughly.
- Apply with a brush in an alternating 'crosswise motion'.
- Avoid any turbulence from radiators and draughts during work..
- A faster and cleaner application is possible with an airless spraying device.
- **Try out a sample of work!**

### Please note:

the information in the worksheets is based on many years of experience in the execution of clay construction work and the use of our products. No legal obligation can be derived from this. Adequate experience as a craftsman and the necessary skills from the relevant building trades are assumed. The latest version of the worksheet is always valid; this is available from [www.claytec.de](http://www.claytec.de) if necessary. Copying and publication are not permitted, even in extracts. Copyright CLAYTEC GmbH & Co. KG

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