Worksheet

ClayTec®
Clay at its best.

Fine-finish surfaces

YOSIMA clay design plaster

YOSIMA clay surfacer

ClayFix clay paint

YOSIMA clay design plaster

Preparing the substrate, general information

The plaster substrates must be completely dry, level, firm, load-bearing, clean, dust-free, sufficiently rough (keyed), and free of grease. Highly alkaline substrates such as concrete must be treated with fluorosilicate, particularly when using strong or dark colors; otherwise, light discoloration may occur.

In principle, substances such as lignin, nicotine, rust, or various salts, may bleed through from the substrate when applying open-pored YOSIMA clay design plasters, resulting in discoloration or variations in color. Therefore, preliminary testing (sample areas) must always be carried out. If bleeding substances cannot be reliably ruled out, the substrate must be professionally sealed. This is especially important when using light colors such as WE 0. Dark substrates may show through thin applications of light-colored plaster.

All surfaces must be sufficiently and uniformly absorbent. Permanent moisture or salt contamination must be excluded; this also applies to deeper plaster layers. The substrate and ambient air temperature must be at least 5 °C until completely dry.

Particular attention must be paid to the stability of the substrate, the mechanical strength, and proper joint reinforcement of drywall constructions. Clay design plasters are demanding surface finishes; cracks are difficult to repair afterward. In solid construction, installing reinforcing mesh in the base coat can help stabilize the substrate.

A high-quality surface finish begins with proper substrate preparation. **A uniform degree of dryness** of the plaster during processing is critical for the final appearance. Plaster worked while still wet (early) will appear rougher, whereas plaster worked later (drier) will appear finer. Material may even be rubbed out of areas that dry too quickly. Smoothness or roughness is perceived as differences in color. Therefore, the following aspects must be carefully considered:

Evenness: Thin-layer coatings can only be applied with consistent thickness on very even substrates, allowing uniform setting. Variations in flatness lead to "cloudy" surface appearances. Preparing clay base coats for YOSIMA clay design plaster is more time-consuming than for coarse or fine clay topcoats. An intermediate layer of ClayTec clay topcoat fine 06 is recommended for optimal results.

Uniform absorption: Plaster sets faster on highly absorbent surfaces than on less absorbent ones, which may result in visible differences. Therefore, uniform absorption must be ensured across all materials, including patching areas and drywall fillers. As preparation for YOSIMA clay design plaster, ClayTec "Primer YELLOW" is recommended for all common absorbent substrates. For non-absorbent substrates (e.g., oil-based coatings, paint, tiles, adhesives), PU or epoxy resin products must be used.

Caution with old gypsum drywall panels! The paper facing may contain yellowing substances that can bleed through.

Structure of a gypsum drywall surface prepared with "Primer YELLOW"

Structure of a well-prepared clay base coat surface

Stir the primer regularly during application. Use a mixing paddle and a stainless steel spatula to repeatedly loosen any settled material from the bottom of the bucket.

YOSIMA clay design plaster

Priming serves to equalize the absorption of the substrate. It also slows down setting and helps extend the working time. Highly absorbent substrates may need to be primed twice. Non-water-soluble substrates can, to a limited extent, also be prepared by careful and even pre-wetting (fine mist spray).

Closing shrinkage cracks in the substrate: Cracks may also become visible in the surface, as the material thickness is greater in filled crack areas than on the surrounding surface. Cracked base coats must therefore be sponged or skimmed with a fine layer. Hairline cracks are generally not critical.

As with all plastering work, surfaces of adjacent building components must be protected from contamination by masking and similar measures.

Preparing various substrates

ClayTec clay base coats straw, Mineral 20, SanReMo

- Allow to dry completely.
- Close larger shrinkage cracks.
- Sponge or felt the entire surface to achieve a fine texture.
- Brush off and lightly pre-wet.

ClayTec clay topcoat fine 06

- Ideal substrate for YOSIMA clay design plaster; excellent results possible.
- After drying, brush off and lightly pre-wet.

Existing mineral plasters

- Completely remove wallpaper and paste residues.
- Check for bleeding substances.
- Carry out patching with mineral mortar similar to the existing plaster.
- Stabilize heavily sanding substrates using ClayTec deep foundation and strengthener.
- Reinforce problematic areas if necessary.
- Apply "Primer YELLOW."

Concrete

- Remove form-release agents.
- Treat fresh concrete surfaces with sintered layers, especially when using dark or strong colors, with fluorosilicate
- Concrete is rarely sufficiently even for direct application with "Primer YELLOW" and colored plaster.
- Otherwise, prepare with "Primer YELLOW" and clay topcoat fine 06.

ClayTec clay boards and wood fiberboards (HFA)

- Fill joints ≥ 1 mm (approx. 1/32 in.) across their full depth with fine clay mortar; level thickness variations.
- Fill screw holes and indentations.
- After drying, apply a 3 mm layer of clay adhesive and reinforcing mortar. Embed glass fiber mesh 112 fully into the wet surface.

Gypsum plasterboard and gypsum fiberboard with half-rounded tapered or tapered long edges (HRAK/AK)

- Check structural stability.
- Panels must be free of residual moisture.
- Reinforce joints properly using suitable gypsum filler and reinforcing strips (≥ 100 mm wide), made of glass fiber mesh (mesh size ≥ 3 mm), embedded in filler (not self-adhesive), or polyester mesh (e.g., Kobau Elastic).
- Reinforce all transverse joints as well.
- If necessary, level the entire surface with gypsum filler.
- Prepare with the primer recommended by the board manufacturer.
- After drying, apply "Primer YELLOW" carefully and without gaps.

Gypsum fiberboards with sharp edges on all sides

- Check structural stability.
- Panels must be free of residual moisture.
- Reinforce bonded joints if necessary; always reinforce filled joints with ≥ 100 mm wide reinforcement strips made of glass fiber mesh or polyester mesh.
- Smooth the entire surface if necessary.
- Prepare professionally with the deep penetrating primer recommended by the manufacturer.
- After drying, prime surfaces with "Primer YELLOW" carefully and without any defects.

Gypsum plasterboard and gypsum fiberboard walls (existing buildings)

- Check the stability of the overall structure.
- Seal surfaces securely with an appropriate blocking primer in accordance with the manufacturer's instructions.
- After drying, carefully and completely apply "Primer YELLOW."
- Apply a 3 mm layer of clay adhesive and reinforcing mortar. Embed glass fiber mesh 112 fully into the wet surface.

Porous dispersion coatings

- Carefully check strength.
- Sand very smooth surfaces.
- Apply primer "Primer YELLOW."

Glass fiber wallpaper

- Carefully check adhesion strength.
- If sufficient surface grip is present, plaster can usually be applied without primer (sample test required).
- Otherwise, prepare with "Primer YELLOW."

In all cases: carry out a sample application!

All information regarding substrates, especially in existing buildings, is based on experience. Due to varying factors (e.g., strength, surface grip, absorption, bleeding), different approaches may be required. The condition of the actual substrate must always be assessed on site using a sufficiently large sample area. Responsibility for the evaluation and any resulting consequences lies with the contractor.

YOSIMA clay design plaster

Mortar preparation

The mortar is prepared with clean water (e.g., potable water) in a clean mixing container. Approximately 5.5–6.5 liters of water are required per container; the exact amount may vary depending on the color.

First, pour in the water. Then gradually add the contents of the 20 kg bucket while mixing with a drill (≥ 800 watts), or preferably with a mechanical mixer (recommended: Collomix AOX-S with KR paddle, Festool MX 1600/2 with HS3R 160 mixing paddle).

After a resting time of at least 30 minutes, the mortar must be thoroughly remixed and, if necessary, adjusted to a workable consistency by adding more water. When kept covered, the mortar remains workable for up to 24 hours. The material is only pre-mixed at the factory; final color homogenization must be achieved on site through thorough mixing.

Pigments may be added for individual color adjustments. A wide range of high-quality pigments is available, for example from KREMER www.kremer-pigmente.de. Pigments must always be mixed into the dry material. Excessive pigment addition must be avoided, as it may significantly alter the formulation and cause cracking or chalking. The suitability of pigmented mortar must be verified by visual inspection and sample application on the respective substrates

Pigments can also be incorporated into the moist plaster surface to create accents and effects (sample application required).

A sufficient quantity of mortar must be mixed for continuous surfaces.

The reasons for this are:

- Slight color variations between different buckets of finished product cannot be ruled out.
- Mixed material gradually becomes thinner; the mortar consistency influences both the surface appearance and the color effect.
- Different storage times may result in color variations.

For large surfaces, a correspondingly large batch of material must therefore be prepared.

Mix the contents of the bucket into water. Let soak for 30 minutes.

After 30 minutes, remix thoroughly. The image shows the ready-to-use consistency.

Mortar application

Clean or new tools must always be used. The layer thickness must not exceed 2 mm.

When applying with a stainless steel trowel or Japanese trowel, first apply a thin layer "over the grain." After drying, the final coat is applied. This method facilitates application and leads to very good results. Application in a single pass is also possible.

The plaster can also be applied using a notched trowel or notched spreader (4 mm / notch). This allows for even distribution of the material across the surface. The mortar is then leveled and further processed. However, application with a notched trowel is not recommended on clay plaster.

Application should be carried out in long strokes or smaller, organic movements with changing directions. Right angles, straight lines, and step patterns must be avoided. Always work from a fresh edge ("wet-on-wet"). Work diagonally, for example from bottom left to top right.

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

Plaster ridges can be easily removed with a surface spatula (squeegee) immediately after application. If both walls and ceilings are plastered in one room, begin with the ceiling, followed by two opposing walls. After these have dried, protect the adjoining edges of the remaining two walls with painter's tape (e.g., Tesa Professional, Kip 3808 Washi-tec) to prevent damage to finished surfaces caused by trowels or floats. This allows the surface to be rubbed and smoothed firmly right up to the edges, maintaining consistent movement across the entire area. The suitability of tape removal without damage must be tested on a sample area.

The mortar can also be spray-applied using a machine. In most cases, spraying is used primarily to facilitate material application.

Scoop mortar from the bucket onto the trowel.

Apply mortar with the trowel.

When masking edges, the tape edge must be set back by the plaster thickness of approx. 2 mm. Otherwise, the plaster may tear when the tape is removed. Remove the tape immediately after surface finishing, while the plaster is still moist.

Level the surface with a spatula.

Start first felting pass when plaster has dried from wet to moist.

When applying mortars with textural additives, always use fresh material from the bucket. Leveled-off material forms clumps and must be returned to the bucket and remixed regularly.

Plaster processing and surface finish

To ensure uniform workability, excessively rapid drying of partial areas must be avoided. Drafts, airflow near open windows, and heating systems can cause uneven drying. In warm rooms, upper wall areas dry faster than lower ones. Excessively rapid drying may also lead to cracking. Therefore: keep windows closed and heating turned off during application. After processing, moderate ventilation and heating are permissible. Surface finishing always begins with the first felting pass at an early stage, when the plaster changes from a wet, glossy state to a moist, matte appearance. This process distributes sand and aggregates evenly across the surface. At this stage—or after subsequent felting passes—the surface may already be considered complete, resulting in a correspondingly coarser finish (see brushing on page 7). Surfaces can be finished in various ways. Trowel textures, brush strokes, or other coarse treatments are possible. In general, the later the finishing process is carried out (i.e., the drier the plaster), the finer the surface becomes.

Metal profiles commonly used in plastering may be used. For example, a stainless steel edge often complements the surfaces of clay design plaster well. The absorption properties of the fastening flange areas must not differ significantly from those of the surrounding surfaces; otherwise, they may become visible later. For this reason, the profiles are installed beneath the base coat plaster.

YOSIMA clay design plaster

Felted surfaces

By felting, both very coarse and very fine surfaces can be achieved, depending on the number of passes. Felting is generally carried out using a coarse orange sponge float. The pores of finer sponge or felt floats fill up too quickly with mortar; they are suitable at most for a final, very fine finishing pass.

The sponge float should be damp, not wet. This is best achieved by rolling it over a roller bucket, as commonly used by tile setters.

A second felting pass can be carried out 2–4 hours after the first, depending on the absorbency of the substrate and ambient conditions. A third pass may follow after an additional 2–3 hours. At this stage, the plaster must still appear dark (i.e., moist); lighter areas must not yet be visible.

In general, felting should be carried out using as little water as possible.

For a uniform result, the mortar surface must be evenly dried at the time of finishing.

Rolling the sponge float

Smoothed surfaces

Clay plaster, wood fiberboards (HFA), and gypsum drywall boards are not suitable substrates for smoothed finishes. Smoothing is more difficult and time-consuming than felting. The distribution of straw or other aggregates requires experience. Smoothing can begin shortly after the first felting pass.

High-quality tools must be used for smoothing (e.g., from reputable manufacturers), otherwise metal abrasion may occur. ClayTec Japanese trowels are particularly suitable. These tools have been developed over centuries in Japan and are precisely balanced, allowing efficient work through optimal transfer of pressure from the handle to the blade. They are characterized by high-quality steel. This traditional tool is imported directly from Japan.

Since YOSIMA clay design plaster is water-soluble, the working time can be extended by carefully moistening the plaster surface. Caution: Excessive water on the surface may cause shrinkage cracks and chalking.

Felting

Surface

Light-colored plasters with the Herbs additive should dry quickly. Otherwise, the natural chlorophyll in this plant additive may discolor the surrounding plaster. Minor discoloration can be evened out by sponging again with a small amount of water.

Smoothing

Suface

Japanese smoothing trowels and fine plaster trowels, cove and corner trowels.

Brushing, surface stabilization

Final brushing of the plaster surfaces is a necessary step. This removes loose particles from the surface and improves long-term durability and abrasion resistance. Visually, this process enhances color depth and brings out structural aggregates more clearly.

The plaster must first be allowed to dry completely (at least 48 hours). The surface is then lightly and evenly moistened using a fine mist spray. Once no glossy areas remain, the surface is brushed with a wallpaper brush until no more loose material is released.

Large surfaces may be treated in sections. Especially with dark and strong colors, water must be used sparingly during brushing, otherwise the color effect may become uneven ("cloudy").

For YOSIMA classic color shades, this step can also be used to apply a colorless surface stabilizer that reduces abrasion. A suitable product is wall glaze binder (Kreidezeit K760). Mix 100 g with 1.5 liters of cold water until lump-free. After allowing it to swell for one hour, mix thoroughly again. Then dilute with 8 liters of cold water, ensuring that no lumps remain (sieve if necessary). Apply the mixture carefully and evenly as a fine mist spray. Coverage is approximately 50–60 m² per batch. Runs and drips must be avoided. The surface is then brushed as described above.

Previously brushed or already used surfaces can be subsequently stabilized using a soft brush (never a roller). Work from bottom to top to allow any drips to be spread evenly. Apply lightly and quickly, avoiding repeated brushing over the same area.

The effectiveness of stabilization must always be tested in advance on a sufficiently large sample area.

Pigments for special effects can be worked into the moist surface using a brush, sponge, sponge float, or trowel.

Applying the first color up to the masking tape

Removing the tape after wiping down

Reapplying masking tape after drying

Applying the second color shade

Masking and clean surface transitions

For adjacent areas of different colors, proceed as follows:

Masking tape (e.g., Tesa Professional, Kip 3808 Washi-tec) used to separate plaster areas should be removed immediately after wiping or brushing, while the plaster surface is still slightly moist. After complete drying, protect the finished surface again with tape before applying the next section.

The essentials at a glance

- Prepare substrates carefully; use "Primer YELLOW" if required.
- Ensure stability and properly reinforced joints for gypsum boards.
- Surfaces must be sufficiently even for application thicknesses up to 2 mm.
- Close shrinkage cracks.
- Equalize and, if necessary, reduce substrate absorbency.
- Seal surfaces containing bleeding substances.
- Do not mix the plaster with excessive water.
- Allow the plaster to rest for 30 minutes, then mix thoroughly.
- Use clean water for both mixing and surface finishing.
- Keep containers and tools clean, especially when working with light-colored plasters.
- Mix material from multiple containers for continuous surfaces.
- Maintain a consistent application thickness.
- Avoid visible joints or interruptions in work.
- Avoid drafts and heating airflow during application.
- Process surfaces with minimal water and brush afterward.
- **Always carry out a sample application.**

Long-term use, repair, and reworking

Clay design plasters are demanding surface finishes; therefore, adequate strength and stability of the substrate, as well as careful handling of the surfaces, are essential. Cracks or damage caused by use can be repaired using YOSIMA clay design plaster mortar. For this purpose, sufficient dry material should be retained, as the natural raw materials (clay and loam) may vary slightly in color over time. The following procedure has proven effective for repairs:

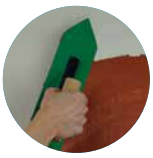
- Repairs should always be carried out in very small, localized areas.
- Lightly moisten the repair area using a small brush.
- Allow the water to absorb briefly.
- Repair the affected area using a suitable fine tool.
- Repairs deeper than the application thickness of the YOSIMA clay design plaster (approx. 2 mm) must be carried out in multiple layers, allowing drying between layers.
- After a short drying period (surface matte-moist), gently texture the final layer with a sponge edge as required, including slight blending into the surrounding surface if necessary.

Leveling coats using ClayFix clay paint are possible; however, this will reduce the brilliance and depth effect of YOSIMA clay design plaster.

For color refreshing after extended use, surfaces may be lightly moistened with a fine mist spray and felting using minimal water. Especially with dark colors, water must be used very sparingly, otherwise the surface may appear uneven ("cloudy").

If YOSIMA clay design plaster is to be painted or wallpapered in the future, the surfaces may need to be stabilized with a suitable primer.

The effectiveness of all repair and reworking methods must always be verified in advance using sufficiently large sample areas.



YOSIMA clay surfacer

Preparing the substrate, general information

The plaster substrates must be of the same quality and prepared as described for YOSIMA clay design plaster on pages 2–3. Our product clay filling and smoothing putty is particularly well suited as a substrate. In addition, the pores must be largely closed (quality level Q3, smoothed). Highly alkaline surfaces such as lime or concrete substrates must be treated with fluorosilicate, especially when using dark, strong colors. Thickness compensation or the filling of imperfections is not possible with the clay surfacer. Surfaces are generally pre-treated with ClayTec "Primer WHITE." When using clay filling and smoothing compound, priming may be omitted.

Note: The clay surfacer is less suitable for smoothing YOSIMA clay design plaster. Smoothed YOSIMA designer plaster surfaces must be primed; finely felted surfaces require at least three surfacer applications.

Clay filling and smoothing putty, Q3

In all cases: carry out a sample application!

All information regarding substrates is based on experience. The actual substrate must always be assessed on site; this is the responsibility of the contractor. A sufficiently large sample area must be prepared for evaluation. The sample also serves to verify the surface appearance and color result.

ClayTec clay filling and smoothing putty is available in the shades natural brown and natural light (for light-colored clay surfacing). It can be applied in thicknesses from 0–3 mm. Small areas can, if necessary, be finished free of ridges; larger areas generally require sanding and dust removal before the subsequent clay surfacer application.

Preparing the surfacer

The bucket size is designed to allow proper mixing. The 5 kg dry material is first mixed dry for 2 minutes at sufficiently high speed using a drill (≥ 800 watts) or a mechanical mixer. Recommendations: Collomix XO 1 R with KR paddle or KRK 80 for drill use with a plastic basket (to prevent abrasion from the bucket wall), Festool MX 1600/2 with HS3R 120 mixing paddle, or cordless drill PDC 18 with HS2 120 spiral mixer with ring. Brand-new mixing paddles with sharp edges may also cause abrasion. These should be deburred using a file or grinding disc if necessary. The pre-mixed dry material is then gradually added to approximately 3.7–4.1 liters of clean water (e.g., potable water). Depending on the color, the average water addition may vary (classic colors approx. +15 %, green tones approx. +30 %). The working consistency is paste-like and should be adjusted according to the intended application and tools used. After a resting period of 30 minutes, the material must be thoroughly remixed.

When using mixing paddles with a plastic basket, only small quantities up to 2 kg should be prepared. Larger amounts are difficult to mix uniformly. However, keep in mind that sufficient workable material must always be available for larger surfaces.

Mixing

Consistency

YOSIMA clay surfacer

Particularly good workability is achieved with longer resting times, for example overnight (approx. 12 hours). This helps dissolve even very small lumps, which could otherwise interfere during application or, in the worst case, cause streaking on the surface due to colored clay inclusions.

When remixing before use, a small amount of additional water may be added if necessary.

For continuous surfaces, sufficient material from multiple containers must be mixed to avoid visible joints. Due to the natural raw materials, slight variations in color and moderate shading are possible.

Once mixed, the surfacer remains workable for up to 24 hours if kept covered.

The rim of the bucket should be cleaned regularly with a sponge. Otherwise, dried residue may fall into the paste-like mixture.

Before each surfacer application, dust must be removed very carefully from the substrate, for example using a clean, soft hand brush. This also applies to Q3-smooth surfaces made of clay topcoat fine with "Primer WHITE."

Surfacer application

The surfaces must be very clean before applying the surfacer. The first layer is applied at a thickness of 0.1–0.2 mm, meaning that only the pores of the substrate are filled and closed. The surfacer is applied and then immediately leveled off ("applied to zero"). Excess material is removed right away. After drying, intermediate sanding with 150-grit sandpaper is generally required. After removing dust, the next layer is applied and smoothed as described above. For uniform color appearance, application should be carried out in wide, sweeping motions across large areas.

For veined or "spot" finishes and other decorative effects, application is carried out in short, smaller movements. It is recommended to first apply a uniform base layer as described above. "Spot" finishes are easier to achieve with strong colors than with classic colors.

Do not work directly from the mixing bucket. The amount of material needed should be transferred to a smaller container to avoid contaminating the entire mixture. Keep the mixing bucket closed with the lid during work. Do not return leftover material to the bucket.

Stain filling application

Stain filling execution

Tool selection

Smoothing and surface finishing

Smoothing is carried out using a "closed trowel." Clay surfacer is not processed like lime-based fillers. It is neither compressed nor polished ("burnished"), but instead smoothed gently without pressure until the desired surface appearance is achieved. This is especially important when working on drywall substrates.

Depending on the required smoothness, the described application process may be repeated one or two additional times. Final layers that are not sanded may be further smoothed. If some abrasion is acceptable, steel trowels are recommended (e.g., ClayTec Japanese trowels 181/58 180–240 or 181/61 210–300).

After complete hardening, the surface can be sanded dry by hand or machine. Suitable sandpaper ranges from 220 to 500 grit.

If several workers are working on the same surface, it is recommended that one person applies the material while another smooths it, ensuring a consistent surface "signature."

On larger surfaces, workers should rotate regularly so that everyone has worked on each section.

YOSIMA clay surfacer

Smoothing

Sanding

The smoother the surface is finished, the less sanding is required. Smoothing is easier than sanding.

Surface variations

The troweling technique is an individual method. The appearance of surfaces and visual effects is largely determined by the craftsman's personal style. YOSIMA clay surfacer encourages professional experimentation and the development of individual mastery. The possibilities are numerous.

A special application is the sand-through technique. In this method, two layers of surfacer in different colors are applied on top of each other, for example a strong top color over a lighter base color. After drying, the top layer is partially sanded to reveal the layer beneath. The use of templates further expands the design possibilities.

Marble effects can be achieved by first crumpling a thin plastic sheet and then spreading it over the still-wet surfacer surface. It is lightly pressed down using a rubber roller and then immediately removed. After drying, the next layer of surfacer is applied and smoothed. The ridges of the base layer remain visible, creating a veined appearance.

Marble effect: foil on the surfacer surface

Working with templates

Templates are fixed to the surface using a removable adhesive. Particular care must be taken along the edges of the design. The YOSIMA clay surfacer is then applied, and the template is removed immediately afterward.

Decorative relief effects can be created by combining textured and flat elements using YOSIMA clay design plaster, clay surfacer, or ClayFix clay paint materials. Clay paints are applied using a stippling brush.

Remove

Possible further surface treatment

Further surface treatment is possible using special primers and/or suitable natural waxes. Additional information is available upon request. It should be noted that such treatments may result in more or less pronounced darkening of the color.

In general, surfaces are treated with a deep primer before applying wax. Achieving a uniform application requires a high level of craftsmanship. Particularly on uniformly colored surfaces, the primer should be spray-applied to avoid drips and staining.

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.

Applying the marbled topcoat

YOSIMA clay surfacer

Matt surface

Glossy surface

A rich, glossy, and well-protected surface can be achieved on decorative "spot" finishes using carnauba wax emulsion. In this case, no prior treatment with deep primer is required. The emulsion is applied carefully using a sponge without rubbing it in. After drying, individual areas may be re-treated if necessary. Additional polishing increases the level of gloss.

Joint transitions and edges

Masking tape (e.g., Tesa 4333 Sensitive, Kip 309 Washi-tec) is suitable for protective masking and for transitions between surfaces. Standard painter's tape is not sufficiently water-resistant, as the surfacer may seep under the edges. After completion of the work and once the surfaces are completely dry, the tape should be removed at a sharp angle.

Mechanical edge protection is best achieved using corner profiles with a defined edge. Unprotected edges are highly sensitive and prone to damage such as chipping. Profiles are also recommended for less exposed edges, as creating clean edges using only the surfacer is difficult. The profiles must be integrated into the base plaster layer.

Remove at a sharp angle

Long-term use, repair, and reworking

Clay-based skim-coated surfaces are not particularly sensitive; however, as high-quality finishes, they should be handled with care.

For repairs or reworking, a sufficient quantity of the original YOSIMA clay surfacer should be retained for long-term use. Minor damage should be repaired locally in small areas only. Decorative "spot" finishes are easier to repair than uniformly colored surfaces; untreated surfaces are easier to repair than waxed ones. Major damage is difficult to repair. In such cases, the affected areas must be rebuilt and then recoated. Prior to recoating, compacted surfaces should be lightly sanded.

If the surfaces are to be wallpapered or painted at a later stage, they should be sanded to a matte finish and treated with a deep primer. Any wax must be removed using a suitable cleaning agent before sanding.

ClayFix clay paint

Preparing the substrate, general information

As with all coating substrates, surfaces must be completely dry, smooth, firm, load-bearing, clean, dust-free, and free of grease and bleeding substances. Permanent moisture or salt contamination must be excluded. The substrate and ambient air temperature must be at least 5 °C until completely dry.

The smoothness, flatness, and surface quality of the substrate naturally influence the final result. To avoid misunderstandings during the acceptance of drywall substrates, designations according to quality levels should be used instead of general terms such as "ready for painting." Substrates should meet quality level Q3 or Q4.

ClayFix clay paint can be applied directly to most common substrates. If in doubt, "Primer WHITE" is suitable as a pre-treatment.

Drafts from open windows or heating systems must be avoided during application. As with all coating work, adjacent surfaces must be protected from contamination by masking or similar measures.

Caution with old gypsum drywall panels! The paper facing may contain yellowing substances that can bleed through.

Preparing various substrates

ClayTec clay plasters

- Felt or smooth surfaces sufficiently fine.
- Brush off surfaces.
- Apply "Primer WHITE."

ClayTec clay boards and wood fiberboards (HFA)

- Fill joints ≥ 1 mm across their full depth with fine clay mortar and level any thickness differences.
- Fill screw holes and indentations.
- After drying, apply a 3 mm layer of clay adhesive and reinforcing mortar or clay topcoat fine 06, depending on the board type. Embed glass fiber mesh 112 into the wet surface.
- Level the plaster over the overlapping reinforcement strips.
- Allow the mortar to set, then apply a thin fresh-on-fresh layer (minimum 1 mm).
- Alternatively, after drying of the reinforcement layer, apply ClayTec clay topcoat fine 06 (approx. 3 mm).

Gypsum plasterboard and gypsum fiberboard

- Prepare surfaces professionally for coating (usually quality level Q3).
- Carefully pretreat with "Primer WHITE."

Concrete

- Check for form-release agents.
- Treat with fluorosilicate, especially when using dark or strong colors.
- Apply "Primer WHITE" if necessary.

Existing mineral plasters

- Wash off chalking substrates.
- Remove all wallpaper and paste residues.
- Stabilize sanding substrates using ClayTec deep foundation and strengthener.
- Check for bleeding substances.
- Carry out patch repairs using a mineral mortar compatible with the existing plaster.
- Use "Primer WHITE" if necessary.

Synthetic resin-bound existing plasters

- Check strength.
- Fill rough areas with dispersion-based filler if necessary.
- Use "Primer WHITE" if required.

Porous dispersion coatings

- Carefully check strength (sample application).
- Sand very smooth surfaces.
- Fill rough areas if necessary (dispersion filler).
- Primer is usually not required.

Paper and glass fiber wallpapers

- Carefully check adhesion strength.
- Prime absorbent wallpapers.
- Foam vinyl wallpapers are not suitable.

In all cases: carry out a sample application!

All information regarding substrates is based on experience. In individual cases, a different approach may be advisable due to varying factors (e.g., surface grip, absorbency, strength). The condition of the substrate must always be assessed on site; this is the responsibility of the contractor. A sufficiently large sample area must be prepared for evaluation. The sample also serves to verify the surface appearance and color result.

Preparing the coating

ClayFix clay paint is mixed into approximately 10 liters of clean water for a thicker single-coat application or up to 15 liters for a thinner two-coat application. Mixing is carried out using a drill with a mixing paddle (Ø 100 mm) at the highest possible speed. Recommended tools: Collomix agitator XO 1 R with DLX paddle, Festool cordless drill PDC 18 with CS 120 mixing paddle, or mixer MX 1600/2 with CS 140 paddle. After approximately 3 minutes and again after a resting time of 30 minutes, the material must be mixed thoroughly for 1–2 minutes. The working consistency is pasty; the material must not drip from the brush. Multiple coats with a thinner consistency are also possible. During application, especially when using ClayFix clay paint with fine or coarse grain, the material must be stirred regularly to prevent the grain from settling. After longer standing times, sediment at the bottom of the container must be loosened using a stainless steel spatula. Brush-applied plasters and clay paints remain workable for up to 24 hours if kept covered or stored in a closed container. All colors can be mixed with each other.

Mix bucket contents into water

Remix thoroughly after 30 minutes of soaking

Add dry pigments

Mix with the lid closed

Pigments should always be added dry. This makes dosing and uniform distribution easier.

Coating application

ClayFix clay paint is best applied using an oval surface brush or a larger rectangular block brush. This produces the most consistent and visually appealing results. High-quality tools should be used. Application is carried out using a "figure-eight" (cross-brushing) technique, following traditional painting methods. The best results are achieved by alternating strokes in horizontal, vertical, and diagonal directions. Work quickly and in small sections.

Always work wet-on-wet during application. Painting over partially dried edges may result in visible lap marks.

Application with a roller rarely produces a seamless and uniform finish. However, a roller may be used to apply the material, followed by structuring the still-wet surface with a brush as described above.

ClayFix clay paint with fine or coarse grain can also be spray-applied efficiently and evenly, for example using a GRACO RTX 5500 PX. In this case, priming is not required. During application, do not heat, ventilate, or force-dry the surface using fans or blowers. For masking and clean edges, painter's tape such as Tesa 4333 Sensitive or Kip 309

ClayFix clay paint

Crosswise manner

Surface

Number of coats

As a rule, one coat is sufficient. A light-colored substrate with good absorbency is required. For ClayTec clay plasters, this is achieved with "Primer WHITE." For a particularly uniform and visually appealing finish, a second coat may be necessary depending on the substrate. In case of doubt, the sample application is decisive.

The second coat initially appears transparent and glaze-like while wet. Full opacity only becomes visible after drying.

Creative techniques

The water-soluble ClayFix clay paints are highly suitable for creative, individual techniques. From the wide range of possibilities, three example applications are presented here to provide inspiration and encouragement for your own projects.

Wrap technique

First, apply a base coat in the desired color and allow it to dry. For the second, accentuating layer, wrap a lint-free cloth or leather rag into a roll, dip it into a different color, and roll it across the surface. Special effect rollers are also available from specialist suppliers. The wrap technique creates a dynamic texture that becomes finer with multiple layers.

Stencil technique

The use of stencils has already been described on page 11 for YOSIMA clay surfacer.

Airbrush technique

Using a compressor and spray gun, repeating patterns, friezes, and borders can be applied quickly, cleanly, and with high precision. Historical ornaments such as the "egg-and-dart" motif are widely used. In older buildings, door and window openings can be emphasized with decorative borders. Three-dimensional effects can be achieved by applying a lighter or darker color selectively to certain areas of the motif (e.g., the upper right). Additional colors can further enhance this effect.

Multicolor technique

Highly vibrant and colorful effects can be achieved by blending multiple colors together while still wet ("wet-on-wet"). The brush is alternately dipped into two or more containers of paint.

Applying the second color

Finished coating result

ClayFix clay paint

Glazing technique

For the glazing technique, the surface is first coated with a base color, typically a light shade. For the second coat, the clay paint is heavily diluted; if necessary, a small amount of wallpaper paste may be added to ensure sufficient binding. After drying, the underlying surface remains partially visible. The result is a lively appearance with subtle variations, shading, and depth effects. Walls appear lighter, and rooms feel more open.

ClayFix clay paint can also be used on glassfiber wallpaper. In this case, it functions as both adhesive and coating in a single step, applied wet-on-wet. Conventional dispersion adhesives tend to seal the substrate, whereas clay paint maintains vapor permeability.

Pasting up glassfibre mesh wallpaper

Coating

Long-term use and reworking

When applying renovation coats or reworking surfaces, the water solubility of the ClayFix clay paint system must be taken into account. Coating with the same material can be carried out without prior preparation; however, excessive water application should be avoided. If the surfaces are to be painted later with more rigid coatings (e.g., dispersion paints), they should be stabilized with commercially available consolidators or, preferably, washed. A sample application must always be carried out.

The essentials at a glance

- Substrates must be firm and must not chalk.
- Drywall substrates must meet quality level Q3 or Q4.
- Highly alkaline substrates (e.g., concrete) must be treated with fluorosilicate when using dark colors.
- Areas containing bleeding substances must be sealed.
- ClayTec clay plasters and, if necessary, other substrates must be pretreated with "Primer WHITE."
- ClayFix clay paint must be allowed to rest for 30 minutes and then thoroughly mixed.
- Apply using a brush with alternating cross-brushing strokes.
- Avoid drafts and heating airflow during application.
- Fast and clean application is possible using airless spraying equipment.
- **Always carry out a sample application.**

Please note

The information provided in these worksheets is based on many years of experience in clay construction and the application of our products. No legal claims can be derived from this information. Adequate craftsmanship skills and relevant trade knowledge are assumed. The latest version of this worksheet is always applicable and can be obtained at claytec.de if required. These worksheets are subject to industrial property rights and may only be used to support the application of our products. Copying or publication, even in excerpts, is not permitted.

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