
Tips for Painting Clay Brick

Clay brick, more formally known as clay masonry units, present a unique coating challenge. They are formed by either extruding or pressing, and they require durable, cleanable finishes that are resistant to abrasion, chemicals, and UV damage.

Two of the biggest challenges are:

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- Alkalinity – The clay bricks themselves are not significantly alkaline in nature, but the mortar tends to be highly alkaline. When combined with moisture, it can be chemically destructive to oil-based or alkyd paints and not compatible with some water-based finishes.
- Efflorescence – Soluble alkaline salts can migrate to the surface and create an unsightly white highly alkaline deposit. This can happen before painting, during normal curing or when moisture is allowed to saturate the surface. It can also appear after painting when moisture is escaping through the paint film bringing soluble salts to the surface. The source of moisture must be eliminated to prevent reoccurrence.

Here are some tips for preparing a clay brick surface to help prevent these issues and achieve the desired life cycle. These are minimum surface preparation tips for all clay brick projects:

- Allow mortar joints to cure for a minimum of 28 days.
- Pressure wash the surface, if appropriate, to remove all dirt, loose mortar, scale, powder, mortar splatters, oil and grease. For details, view [1.6 Pressure Washing](#). TSP or an emulsifying cleaner should be used on oils and grease, if needed.
- Remove rust or stains by abrasion or chemical cleaning and completely remove all residue from chemical treatments from the surface. See [1.5 Rust Stain Removal](#) for details.
- Ensure the surface is completely dry before painting. Moisture content in, and on, the substrate should not be higher than 12%.

- Patch or fill any cracks, holes, broken corners, joints and other imperfections with appropriate filler and ensure it is flush with the adjoining surfaces.
- Consider any Environmental conditions before, during and after application. See [1.1 Environmental Conditions](#) for details.

A clay brick coating system should always start with alkali resistant primers. From there, latex systems can be used under normal conditions. Use a higher performing acrylic or acrylic modified coatings in industrial, high-traffic, and more aggressive areas.

Finish the exterior conventional epoxies with a colorfast acrylic or polyurethane topcoat for best results.

For more detailed information on architectural painting and maintenance, check out these MPI Online Coating Manuals:

[Architectural Painting Specification Manual](#)

[Maintenance Repainting Manual](#)

Professional Tip

Since most bricks are relatively rough, a flat finish is often specified to hide the imperfections. Low sheens can minimize surface imperfections and roughness while providing improved resistance to dirt retention and surface marking.