



Lakeside Pottery Ceramic, Restoration, and Kintsugi Studio

[HOME PAGE](#)

Achieving Professional Results with Cold Glaze

Using cold glaze effectively demands careful preparation, attention to detail, and understanding key factors. This guide covers essential steps to achieve a flawless, durable finish.



What Is Cold Glaze?

Cold glaze is a clear, tough coating applied to ceramics at room temperature without kiln firing. Usually a two-part resin—such as epoxy or polyurethane—it cures chemically to form a hard, glossy, transparent layer that deepens colors and creates a smooth, glass-like finish. This versatile technique allows artists and restorers to produce a high-gloss, protective surface without heat, broadening creative and restoration possibilities.

1. Preparation

Surface Preparation

- Ensure the ceramic surface is impeccably smooth, as any imperfections will be visible through the glaze.
- Sand between glaze layers with Micromesh sandpaper (2400 or 3200 grit) to refine texture and improve adhesion.

Workspace Setup

- Work in a clean, dust-free environment to avoid contamination.
- Maintain consistent temperature and humidity, as fluctuations can affect glaze performance.

Paint Curing (if applicable)

- When applying cold glaze over paint (like acrylic), ensure the paint is fully cured to prevent color shifts (e.g., yellow intensifying).
- Acrylic paints can be cured faster by baking at 140°F (60°C) for 24 hours instead of air drying.

2. Choosing the Right Glaze

Epoxy-Based Cold Glazes

- Highly durable and resistant to scratches and stains (e.g., Sylmasta).
- More sensitive to UV light, potentially yellowing with prolonged direct sunlight exposure.

Non-Epoxy Alternatives

- Options like polyurethane resin or shellac offer better UV stability but are softer and less resistant to wear.

Water-Based Glazes

- Suitable for less demanding uses but tend to be softer and less durable against scratches, stains, and cleaning chemicals.

Choose your glaze type based on the balance between durability and UV exposure needs.

3. Mixing and Thinning

- Proper thinning is vital: too thin causes drips and poor coverage, too thick leads to an orange peel texture.
- Use only manufacturer-approved thinners for chemical stability.
- Mix thoroughly but avoid over-mixing to reduce air bubbles.

4. Application Equipment

Airbrush Quality

- Use reliable, high-quality airbrushes (e.g., Paasche, Iwata, Badger).
- Regular cleaning and maintenance prevent clogs and inconsistent spray.

Needle and Aperture

- Match needle size and aperture to glaze viscosity; thicker glazes may need larger openings.

5. Airbrush Pressure

- Maintain proper pressure:
 - Too high can cause spiderwebbing (fine threads) or disturb glaze settling.
 - Too low leads to uneven flow and coverage.
- Test settings on scrap material before final application.

6. Application Technique

- Keep a consistent 6–8 inch distance from the surface, adjusting as needed.
- Use smooth, steady strokes, tapering off at the ends to avoid buildup.
- Apply multiple thin layers, letting each cure fully before the next.
- Avoid applying new layers too soon, which causes a wrinkled, “crepe paper” texture.
- For the final layer, dilute slightly for a mirror-like finish, being careful to avoid drips.

7. Object Orientation and Support

- Position objects to minimize drips and ensure even coverage.
- Use stable supports or stands to hold pieces securely during application.

8. Drying and Curing

- Allow full curing of each layer to prevent texture defects.

- Cure in a stable, draft-free space away from direct sunlight to avoid uneven drying and epoxy UV degradation.

9. Cleaning and Maintenance

- Thoroughly clean airbrushes and tools after each use to prevent glaze buildup.
- Keep the workspace clean to avoid dust contamination.

10. Additional Considerations

Environmental Factors

- High humidity can cause cloudy finishes; excessive heat may speed drying and cause cracks.
- For epoxy glazes, consider applying a UV-protective topcoat if pieces will be exposed to sunlight.

Safety Measures

- Wear gloves, masks, and ensure good ventilation to protect from fumes.

Substrate Compatibility

- Some surfaces may require primers or sealers to ensure proper glaze adhesion.



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