Using Milestone Decals on ENAMEL

Milestone decals are printed on paper that is coated with a water-release adhesive made of dextrin. A layer of wax paper protects the decal. Store decals in a cool, dry place when not in use.

Applying

1. Prepare the decals
   Remove the layer of wax paper and carefully cut out your decal. Place any unused decals aside to keep them dry. Thoroughly clean your enamel piece in warm water. Do not dry with a towel or paper, as this may introduce lint to the surface.
2. Wet the decal in a bowl of lukewarm water until it uncurls. This usually takes about 30 seconds, depending on the temperature of the water and the size of the decal.
   TIP: Be sure to remove your decal from the water before it floats off the backing paper – otherwise you might accidentally apply it upside down and it will not adhere properly. If this does happen, refer to the image of the decal on our website to confirm that the decal is right-side up.
3. Place the wet decal, still on the backing paper, on top of your clean enamel and let it sit for 2–3 min. This allows the glue under the decal to soften. The decal should release from the backing paper easily with no resistance. If it is not releasing easily, quickly re-wet it and let it rest a little longer on your enamel while the glue softens. Larger decals may need to rest longer in water.
   TIP: Blank areas of your decal sheet can be wet and used to supplement the glue that helps your decal stick to your ware.
4. Gently slide the decal from the backing paper at the desired position onto the clean enamel. The decal should sit glue side down on the enamel (think sticker, not temporary tattoo). Using first a small squeegee (or rubber/silicone spatula) and then a lint-free cloth, gently press and push out the water from the center of the decal toward the edge in a clockwise motion. Repeat the process with increased pressure. Ideally, you will squeeze all water and any air bubbles from underneath the decal.
5. Once applied, you shouldn't be able to move the decal. Clean the surface with a damp, lint-free towel to remove any watermarks. If possible, let the decorated enamel sit in a dry environment before firing.

Safety

The decals should be fired in a well-ventilated room, preferably one that ventilates to the outside.

Firing

General considerations:

- Make sure the kiln is well-ventilated up to 1000°F (538°C).
- Decals should be fired very slowly below 500°F (260°C).
- The non-metallic decals are somewhat translucent. To help keep their density, it is best to use them on white or light enamel surfaces.
- Low-temperature decals (~1150°F and ~1050°F) can have a pink coating that sets them apart from ~1400°F decals. Fire them on the matching schedule. The pink burns away in the kiln.

Firing ~1400°F/ 760°C

Firing range 1250–1450°F (675–790°C)

- First Step Firing

This firing is a two-step process. The decorated enamel should be slowly fired to between 700°F (370°C) and 900°F (480°C) to burn off all the organic components.

Rate	Temperature	Hold
80°F (44°C)/hr	250°F (120°C)	:20 min.
250°F (139°C)/hr	800°F (425°C)	:15 min.

After the first firing, remove the enamel from the kiln. You can move straight on to the second step or do it at a later date.

- Second Step Firing

Preheat the empty kiln to between 1250°F (675°C) and 1450°F (790°C). Place the pre-fired enamel in the kiln for a couple of minutes (depending on the type of metal and the size of the piece) and promptly remove it. The firing temperature can be adjusted within this range to match your specific enamel. The decals should be glossy. If not, return the enamel to the kiln for a longer hold or a higher temperature.

Rate	Temperature	Hold
N/A	1250°F (675°C) to 1450°F (790°C)	1 to 5 min.

Firing ~1150°F/ 620°C

Firing range 1150–1200°F (620–650°C)

Rate	Temperature	Hold
80°F (44°C)/hr	250°F (120°C)	:20 min.
250°F (139°C)/hr	700°F (370°C)	:15 min.
600°F (333°C)/hr	1150°F (620°C) to 1200°F (650°C)	0 to 10 min.

Firing ~1050°F/ 565°C

Firing range 1050–1100°F (565–590°C) · Glow decals (leaded)

Rate	Temperature	Hold
80°F (44°C)/hr	250°F (120°C)	:20 min.
250°F (139°C)/hr	700°F (370°C)	:15 min.
600°F (333°C)/hr	1050°F (565°C)	0 to 10 min.

Underfired decals

Not glossy after firing? Fire them again.

- A powdery decal that wipes off is very underfired. Handle the piece carefully, put it back in the kiln and fire it again.
- A matte decal that does not wipe off can still be fired hotter or with a longer hold for a glossy finish.
- When refiring, stay within the firing range and hold times for your decal's schedule.