

General Printing Instructions for Sublimation Coffee Mugs

CERAMIC MUG SUBLIMATION

There are a few important things to know about mugs before you sublimate:

-The mugs are similar to all other sublimated products in that the transfer and mug surface need to make direct contact and reach about 400 degrees before sublimation will occur and ceramic takes longer to heat than most products.

-The mug needs to have a poly-coating in order to accept the sublimation ink. Optimal image quality will be achieved using mugs specifically designed for sublimation.

Sublimation mugs can be sublimated using a mug press or using an oven with a silicone mug wrap or shrink wrap. The directions for both a mug press and oven are below. If you are using a wrap a convection oven is recommended.

-Because not all mug presses and ovens are created equally the dwell time in a press can vary. The settings below are based on a GKDK3 mug press from George Knight.

-Placing the mug into warm water after sublimation cools the ceramic faster and prevents outgassing.

METHOD 1 - USING A MUG PRESS:

Supplies needed:

- sublimatable substrate (mug)
- sublimation transfer
- scratch paper
- heat tape
- bucket of lukewarm water

Mug heat press settings:

- temperature - 400 degrees F
- dwell time - 5:00 - 6:00 minutes (see the press manufacturer for recommended dwell time for ceramic mug)
- pressure - light to medium

Note: The recommended settings above may need adjustments for best results. Settings will vary depending on the mug press brand and model ink and paper and atmospheric conditions.

2nd Note: Be sure that the artwork does not go beyond the size limits of the mug press.

Steps:

1. Cut your transfers so that the transfer is slightly larger vertically than the mug.
2. Wrap the transfer around the mug and tape the two ends near the handle.
3. Wrap a piece of scratch paper around the transfer and mug and tape the two ends.
4. Center the mug in the mug press.
5. Close the mug press using the mug heat press settings above.
6. Remove items from the press immediately. Use heat resistant gloves if necessary - the items will be very hot.
7. Dip the mug into warm water.
8. Once cool enough to handle remove from water and remove transfer and scratch paper.

Tips:

- Do not place mugs into cold water after sublimation - cracking may occur. Use warm water only.
- If the image of the final product appears light increase the pressure or the dwell time slightly (30-60 seconds).
- If the image on the final product appears blurred or substrate appears yellowed or has brown spots on the rim of the top or bottom of the mug reduce the dwell time slightly (15-30 seconds).
- Too much pressure can cause trapped moisture in the paper to "jet" away pulling ink with it in a spiked-peaked formation. To avoid this reduce the pressure.

METHOD 2 - IN A CONVECTION OVEN (using a silicone wrap)

Supplies needed:

- silicone mug wrap
- sublimatable substrate (mug)
- sublimation transfer
- scratch paper
- bucket of lukewarm water

Oven settings:

- temperature - 380-400 degrees F
- dwell time - 12 - 14 minutes (depending on the wrap and oven type)
- mug wrap pressure - light to medium

Note: The recommended settings above may need adjustments for best results. Settings will vary depending on the oven brand and model ink and paper and atmospheric conditions.

2nd Note: Be sure that the artwork does not go beyond the size/dimension limits of the mug wrap.

3rd Note: Convection ovens are recommended over traditional ovens for even distribution of heat.

4th Note: Preheat the oven to 400 degrees F before placing the mug into the oven.

Steps:

1. Cut your transfers so that the transfer is slightly larger vertically than the mug.
2. Wrap the transfer around the mug and tape the two ends near the handle.
3. Wrap a piece of scratch paper around the transfer and mug and tape the two ends.
4. Wrap the silicone wrap around the mug and push the metal prongs through the metal loops and squeeze together with both hands until secured.
5. Using the oven settings above stand the mug up in the oven. If placing multiple mugs leave space between each to allow for proper heat & air circulation.
6. Remove items from the oven after the appropriate dwell time using heat resistant gloves if necessary - the items will be very hot.
7. Remove the mug wrap and dip the mug into warm water.
8. Once cooled enough to handle remove from water and remove the transfer and scratch paper.

Tips:

- Do not place mugs into cold water after sublimation - cracking may occur. Use warm water only.
- If the image of the final product appears light increase the pressure or the dwell time (1-3 minutes).
- If the image on the final product appears blurred or substrate appears yellowed or has brown spots on the rim of the top or bottom of the mug reduce the dwell time slightly (15-30 seconds).

METHOD 3 - IN CONVECTION OVEN (using shrink wrap)

Supplies needed:

- sublimatable substrate (mug)
- sublimation transfer
- shrink wrap
- heat gun
- heat tape
- convection oven

Oven settings:

- temperature - 380-400 degrees F
- dwell time - 11 to 13 minutes

STEPS:

1. Position transfer onto the mug using heat tape to secure the transfer to the substrate.

2. Place mug and transfer into shrink wrap cylinder.
3. Using the heat gun carefully direct hot air onto the shrink wrap until tight around the Polar Camel and transfer.
4. Place mug in oven with recommended settings listed above.
5. Pull from oven and remove wrap and paper. Caution contents will be hot use heat resistant gloves for safety.
6. Place the mug into a bucket of warm water.

Tips:

- If the image of the final product appears light increase the pressure or the dwell time slightly (30-45 seconds).
- If the image on the final product appears blurred or substrate appears yellowed or has brown spots reduce the dwell time slightly (30-45 seconds).