

POTTER'S

choice

DRY FORM DIPPING GLAZE MIXING AND USING INSTRUCTIONS

 Thank you for purchasing AMACO dry form glaze for dipping!



AMACO dry glazes are based on the same popular formulas as the AMACO brushing glazes, in a dipping format to speed up studio production. **Please read through the instructions entirely before mixing and using the glaze.**

To help you, we have videos on our website. Please visit www.amaco.com/dipping for our video series on glaze mixing, specific gravity, and using AMACO dry form dipping glazes.

www.amaco.com/dipping

MATERIALS

Make sure to assemble all the needed materials before mixing your glaze. The dry glaze is meant to be mixed all at once, so instructions are for the entire bucket of glaze, not small quantities.

| | |
|--|--|
| Dry glaze | Gram scale (recommend digital scale with 2 decimal places) |
| Bucket (included) | Small container for weighing glaze |
| Instructions | Test tiles |
| Dust mask / Respirator (NIOSH approved) | Underglaze and applicator or underglaze pencil (for labeling test tiles) |
| Mixer (prop style mixer blade attachment on drill or stand mixer) | OPTIONAL: 30 mesh sieve/ screen |
| 4 gallons Distilled water (final glaze will use 2.7 to 3.5 gallons) | |

MIXING INSTRUCTIONS

1. Put on NIOSH approved respirator. (Wear whenever dust from glaze is present.)
2. Add **two (2)** gallons of water slowly to dry / powder glaze in the provided bucket.
3. Let water soak into dry glaze for 20 minutes to avoid excess dust.
4. Use mixer to blend materials. Blend for 30 minutes at medium to high speed.
5. OPTIONAL: Pour glaze through 30 mesh sieve (sieving is not recommended for PC-29, PC-52, and PC-59).
6. Let glaze sit overnight (12 hours minimum) to fully hydrate glaze materials.
7. Use mixer on high speed to reblend for 10 minutes. (If glaze has hard-panned go to Troubleshooting Guide on page 2).
8. Check Specific Gravity (see specific gravity instructions on page 3).
 - a. Compare the specific gravity to the chart on page 4.
 - b. If the specific gravity is HIGH, add water in small increments and recheck.
 - c. If the specific gravity is LOW, let the glaze sit overnight (do not remix) and remove some water from the top of the glaze and set aside (in high iron glazes the water may be red but will not cause loss of glaze materials).
9. Once Specific Gravity is within the recommended range, your glaze is ready to use. (SUGGESTION: notate the specific gravity and date mixed on the bucket.)
10. Mix (with a mixer or a large whisk) before each use to ensure the glaze is homogenous. Periodically recheck specific gravity and adjust accordingly.

BEFORE USING YOUR GLAZE

Once glaze is mixed and specific gravity is within the recommended range, test your glaze to find the length of dip needed for the appropriate thickness. Most AMACO glazes are meant for a single 5 second dip in glaze, but always test your dipping glaze before applying to a large amount of ware.

Test by marking three or more tiles (with underglaze or an underglaze pencil) for 3 seconds, 5 seconds, and 7 seconds. Mix well before dipping. Using a timer, dip top of each tile in glaze, holding tile in glaze

DIPPING INSTRUCTIONS

Always mix glaze from bottom of bucket before using. The glaze may settle if it's been sitting for a long time. It's normal for glazes to settle soft (thicker at the bottom but can be mixed easily) over time. Check specific gravity for your glaze before using if it's been sitting for an extended period of time.

Dip ware into glaze for the appropriate number of seconds. Glaze can be poured inside vessels, held for the appropriate amount of time,

for the marked amount of time. Fire to the appropriate cone. Find the tile with the desired application of glaze. If all results are too thin or too thick, and your specific gravity is within the recommended range then the length of time the piece is dipped may need to be adjusted.

It is not recommended to alter the glaze beyond these instructions. Too much water can cause the glaze to settle or "hard-pan"; too little water can result in a glaze that is too thick, and may run or crawl.

then the glaze poured back into the bucket. **Do not dip ware multiple times to build up a thicker layer of glaze.** For a thicker layer of glaze, hold the ware in the glaze bucket for a longer period of time.

The appropriate coating of raw glaze (dry, before firing) should be at least the thickness of a dime, or 1.5 millimeters. Thicker or thinner coatings of glaze may not give the desired effects when fired.

TROUBLESHOOTING GUIDE

WATER QUALITY

We recommend using distilled water for mixing AMACO dry form dipping glazes. Tap water may contain soluble salts which can cause glazes to clump and settle or gel. Reverse osmosis or filtered water is

not a substitute for distilled water. Softened water can cause glazes to appear thinner and eventually settle or "hardpan".

LAYERING

AMACO layering brochures show layering of brushing glazes. AMACO Dry form glazes for dipping are meant to be used as a single application, not layered. Layering dipping glazes is not recommended because multiple dips of glaze may cause the initial coating of glaze to lose adhesion. When this happens the glaze may crack and peel before firing, and flake off the ware or crawl during firing.

Some potters have had great results with layering dipping glazes. Our best recommendation for layering the dipping glazes is to make the second dip of glaze as soon as the first dip is dry to the touch -- firm but still cool (slightly damp). Also, minimizing the area of overlap can help avoid peeling and crawling.

HARD-PANNING OR SETTLING

If your glaze settles to the bottom of the bucket in a hard layer (hard-pans) thoroughly mix the glaze with a high-speed mixer for an additional 15 minutes. If it continues to hard-pan, AND your specific gravity is correct, add one cup (8 fl oz or 237 ml) of AMACO

Suspendaid to the bucket of glaze, mix with a high-speed mixer for at least 10 minutes and let sit overnight. If the glaze continues to hard-pan, contact AMACO Customer Care for additional support. *

RESOURCES

Online resources are available at www.amaco.com/clay_how_tos

Mixing and dipping AMACO glazes: www.amaco.com/dipping

*For more assistance with dipping glazes, contact the AMACO Customer Care team at customercare@amaco.com or 800-999-5456 (Monday-Friday, 8am to 5pm EST).

SPECIFIC GRAVITY

Specific gravity is a measurement of weight of fluid per unit volume. It gives the relative ratio of liquids to solids in your material. If the specific gravity of your glaze is outside the recommended range you

may encounter problems with the glaze not adhering to the ware, or the glaze not building up enough material, causing the glaze to give undesired effects.

MATERIALS

Liquid to be tested
Gram scale

Small container (16 oz plastic bottle will work well)
Calculator

TO DETERMINE SPECIFIC GRAVITY

1. Use gram scale – tare container weight to 0.
2. Fill container exactly to top with distilled water and weigh.
 - a. Record the **water weight** _____ grams.
3. Pour out water.
4. Fill container exactly to top with glaze (skim the top with a tool if necessary).
5. Weigh the container of glaze.
 - a. Record the **glaze weight** _____ grams.
6. Divide the glaze weight by the water weight (glaze weight ÷ water weight = specific gravity).
 - a. **Specific Gravity** _____ grams.

FOR EXAMPLE:

Glaze weight = 243.4 grams

Water weight = 172.6 grams

$243.4 \text{ g glaze weight} \div 172.6 \text{ g water weight} = 1.41 \text{ Specific Gravity}$

Compare the specific gravity of your glaze to the chart on page 4 of these instructions.

If your glaze specific gravity is higher than the recommended range, add more water 60mL (1/4 cup) at a time until the right range is reached.

If your glaze specific gravity is lower than the recommended range, leave the glaze to settle overnight, remove some of the water from the top of the glaze and set aside. Blend the glaze well and check the gravity again.



View our video on finding specific gravity including a PDF worksheet at:
<https://www.amaco.com/dipping>

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SPECIFIC GRAVITY CHART

25 pound dry
 Dry Dipping Glazes

| Series Number | Name | Water Weight | Water Volume | Specific Gravity (grams/ml) |
|---------------|----------------------|---------------------|--------------------------|-----------------------------|
| 1 | Saturation Metallic | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.39 - 1.41 g/ml |
| 4 | Palladium | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.40 - 1.42 g/ml |
| 12 | Blue Midnight | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 20 | Blue Rutile | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 21 | Artic Blue | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 23 | Indigo Float | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 24 | Sapphire Float | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 25 | Textured Turquoise | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 27 | Tourmaline | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 28 | Frosted Turquoise | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.40 - 1.42 g/ml |
| 29 | Deep Olive Speckle | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.39 - 1.41 g/ml |
| 30 | Temmoku | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.40 - 1.42 g/ml |
| 31 | Oatmeal | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.40 - 1.42 g/ml |
| 32 | Albany Slip Brown | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.40 - 1.42 g/ml |
| 33 | Iron Lustre | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 34 | Light Sepia | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 35 | Oil Spot | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 36 | Ironstone | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 37 | Smoked Sienna | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 38 | Iron Yellow | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.39 - 1.41 g/ml |
| 39 | Umber Float | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 40 | True Celadon | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.39 - 1.41 g/ml |
| 41 | Vert Lustre | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.39 - 1.41 g/ml |
| 42 | Seaweed | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.40 - 1.42 g/ml |
| 43 | Toasted Sage | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 44 | Sage | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 45 | Dark Green | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.39 - 1.41 g/ml |
| 46 | Lustrous Jade | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 48 | Art Deco Green | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.39 - 1.41 g/ml |
| 49 | Frosted Melon | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.40 - 1.42 g/ml |
| 50 | Shino | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.39 - 1.41 g/ml |
| 52 | Deep Sienna Speckle | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.39 - 1.41 g/ml |
| 53 | Ancient Jasper | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 55 | Chun Plum | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 56 | Ancient Copper | 19.8 lbs or 9.1 kg | 2 1/3 gal or 9.1 liters | 1.48 - 1.50 g/ml |
| 57 | Smokey Merlot | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.38 - 1.40 g/ml |
| 59 | Deep Firebrick | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.39 - 1.41 g/ml |
| 60 | Salt Buff | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.41 - 1.43 g/ml |
| 61 | Textured Amber | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.39 - 1.41 g/ml |
| 62 | Textured Amber Brown | 27.8 lbs or 12.6 kg | 3 1/3 gal or 12.6 liters | 1.39 - 1.41 g/ml |
| 64 | Aventurine | 19.8 lbs or 9.1 kg | 2 1/3 gal or 9.1 liters | 1.48 - 1.50 g/ml |

 means the glaze settles lumpy but mixable.



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