



Low Fire Glazes

Glaze basics, including surface options & trouble-shooting

Ceramic Firing Ranges

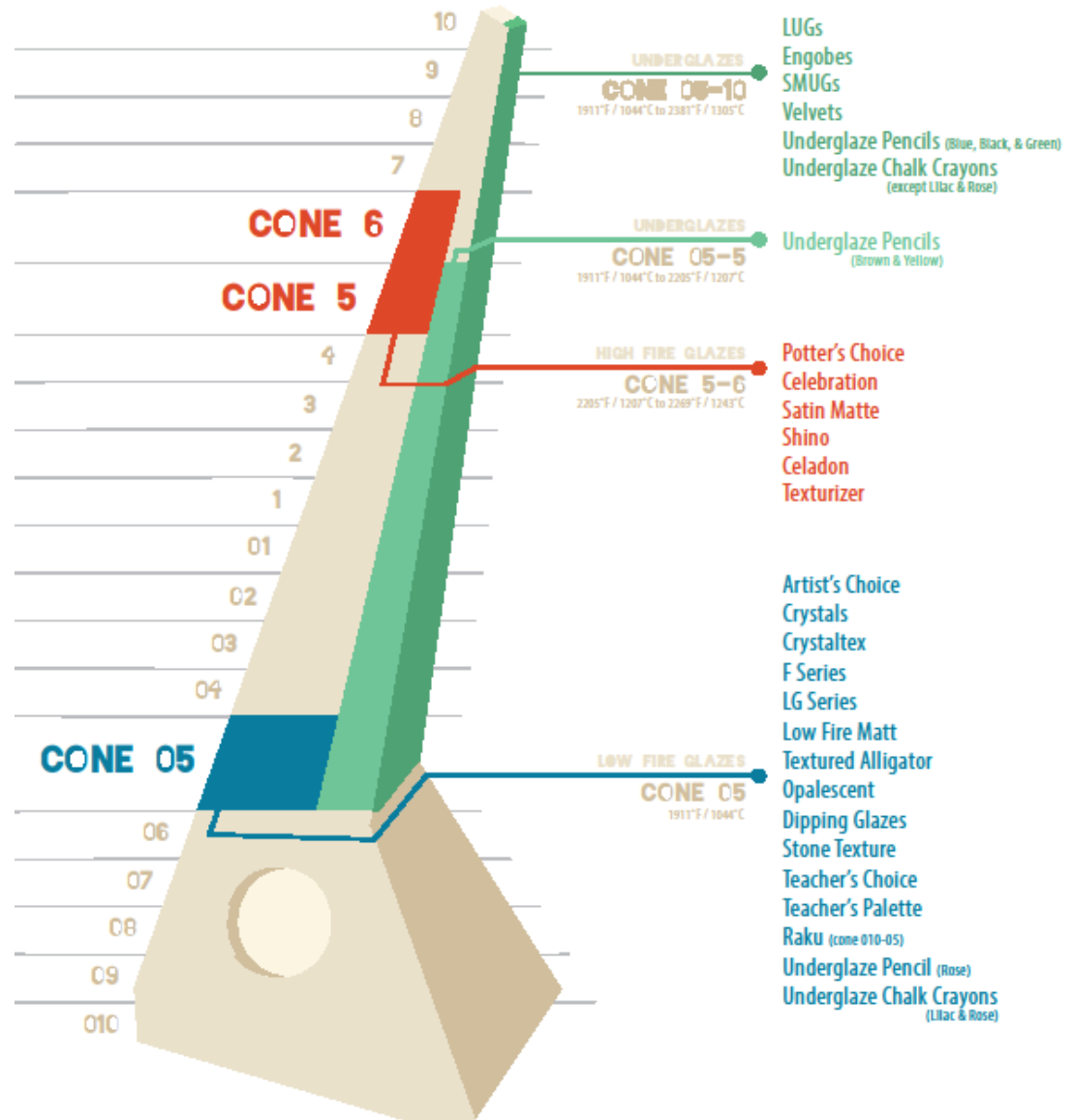


Low-Fire, Cone 05



Mid/High-Fire, Cone 5

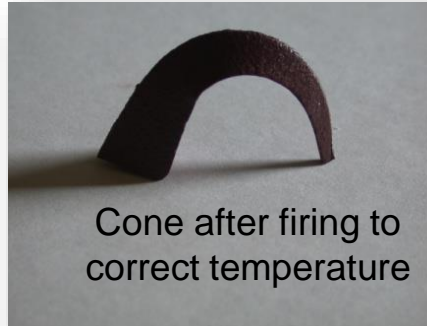
FIRING CHART





What are Cones?

- Pyrometric Cones
- Cone 05 or Cone 5?
- Do I need to use them?



Cone after firing to correct temperature



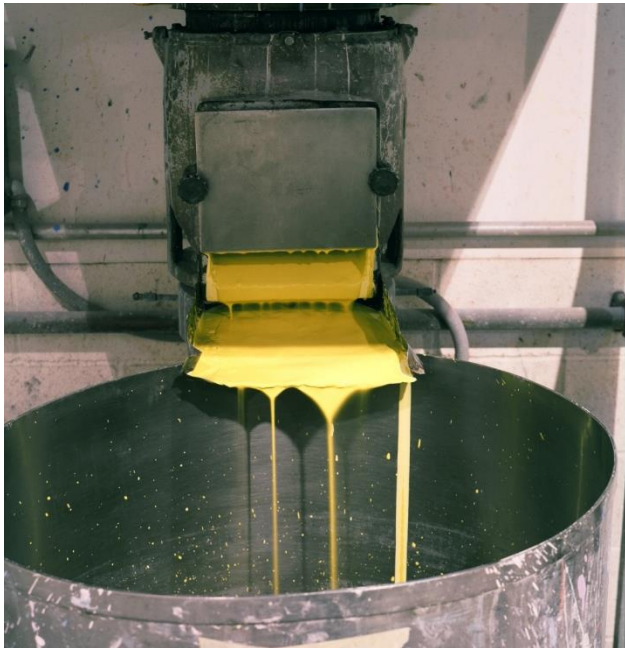
Types of cones and packaging pre-fire



Use cones in each firing, even when using computerized kilns!

What is a glaze?

- 1) **Silica** (Glass)
- 2) **Flux** to lower the melting point.
- 3) **Alumina** (Clay) for adhesion & consistency.
- 4) **Colorant** (Pigments)



Glaze Surface Effects:

Chemicals used in glazes have specific characteristics & can be used in different proportions to create the following surface variations:

- Gloss / Matt
- Smooth / Textured
- Transparent / Translucent / Opaque

AMACO Glaze Types

AMACO Premium Glazes:

- Liquid & ready to use
- Sizes: Pints, Gallons
- Lead-Free
- Dinnerware Safe



Understanding Glaze Labels



Glaze series name & Firing cone



7 digit batch code

With glazes you trust, you can focus on what really matters.

Exploration. Imagination. Tactile Learning. Expression. Innovation. Self-Esteem. Transformation.

Directions!



Safety info



AMACO Glaze Safety & Label Information

All AMACO products are Lead-**Free**.

Look for the following additional symbols:



ACMI Approved



Dinner-Ware Safe



Colors may be layered



Mixable



LG-58 Brilliant Red

Glaze Surface Effects

Matt + Textured + Opaque

ST, Stone Texture Glazes



Glossy + Smooth + Transparent

LG, Liquid Gloss Glazes



Low-Fire Glazes

Transparent/Translucent Gloss



F Series

America's first lead free glazes created in 1950! Vibrant transparent hues that pool in texture and fire to high gloss finish.



LG, Low Fire Gloss

38 brilliant, semi-transparent glossy colors that break and pool during firing to highlight surface texture.

Low-Fire Glazes

Variegated, Gloss



O, Opalescent - *All Dinnerware Safe*
Pearl-like, iridescent gloss glazes that flow and pool in texture. Shown over black underglaze in recessed areas.



A, Artist Choice - *All Dinnerware Safe*
Glazes that recreate gas reduction firing in low fire electric kilns. Shown over red clay.

Low-Fire Glazes

Matt Surfaces



LM, Low Fire Matt - *All Dinnerware Safe*

Opaque glazes that provide a smooth, satin finish. Don't flow, so great for accenting details and sculptural work.



LT, Textured Alligator

A collection of gloss and matt finishes. Because they are formulated to flow, they also accentuate any surface texture.

Low-Fire Glazes

Specialty, Semi-Opaque Gloss



CTL, Crystaltex

Multi-colored crystals that fan out horizontally or flow down vertical surfaces in matte and gloss finishes.

Teacher's Palette - All Dinnerware Safe

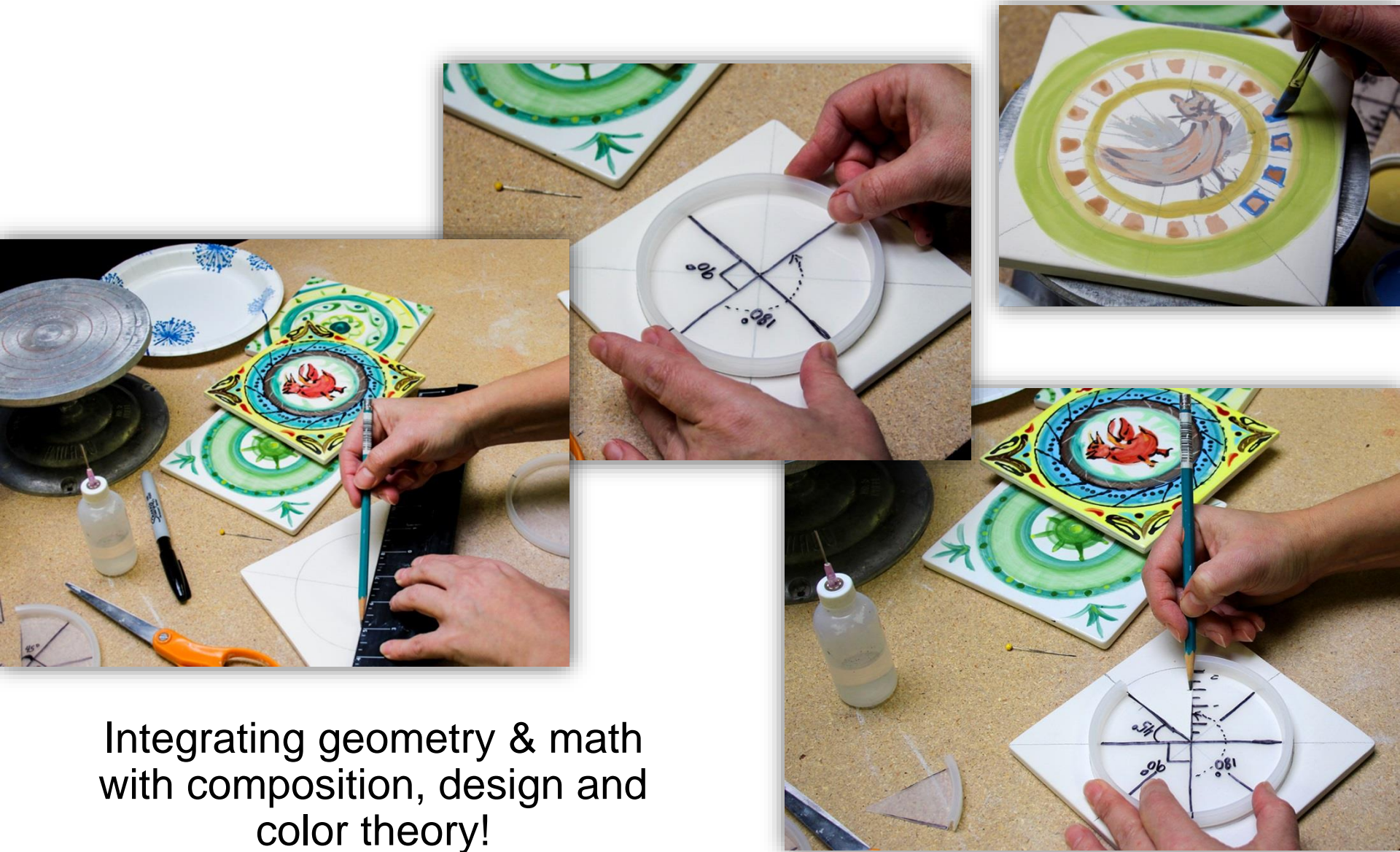
Semi-opaque gloss glazes that “stay put” for controlled brushwork. Colors are mixable and predictable when layered.

Teachers Palette Glazes



*Majolica Renaissance,
In-Glaze Painting on Ceramic Surfaces*

Majolica Renaissance, In-Glaze Painting on Ceramic Surfaces



Integrating geometry & math
with composition, design and
color theory!



Majolica Renaissance using Teachers Palette Glazes

Lesson Plan Video Link:

<http://www.amaco.com/amaco-lesson-plans/amaco-lesson-plan-61-majolica-renaissance/>



Choosing Glaze for Desired Effect

for enhancing texture

... Choose LG (Liquid Gloss)

LG-44 Olive Green

LG-45 Emerald Green



for painterly details

Choose TP (Teacher's Palette)

TP-11 Cotton

TP-53 Pig Pink

TP-52 Raspberry

Choosing Glaze for Desired Effect



FOR VIVID TRANSPARENT COLOR

Choose F (Lead Free)

31 vibrant transparent hues that pool to highlight texture and fire to a high gloss finish.

Roof: F-61 Lemon Yellow, F-66 Orange, F-52 Burgundy, F-30 Chocolate



FOR COLOR VARIANCE

Choose ST (Stone Texture)

12 variegated stone-like colors that flow and pool in texture and fire to a low gloss finish.

Sky: ST-23 Light Blue - Trees: ST-30 Rust - Ground: ST-40 Green



FOR THE ILLUSION OF DEPTH

Choose LT (Textured Alligator)

14 glazes in gloss and matt finishes with distinctive color accents that create an impression of depth on smooth surfaces but also flow to accentuate texture.

Fallen Leaves: LT-48 Moss Agate - Door: LT-132 Jewel Brown

Expanding the Possibilities with Low-Fire Glazes



CTL, Crystaltex (Cone 05)

Multi-colored crystals that fan out horizontally or flow down vertical surfaces. Matte and gloss finishes.



CTL, Crystaltex (fired to Cone 5)

Ceramic Artist like Fong Choo like to experiment and push the limits!

Caution: Most glazes will run when over-fired!

Layering Low-Fire Glazes

Various colors and glaze lines may be successfully layered to achieve personalized effects. Testing for compatibility and food-safety is required. More info at <http://www.amaco.com/amaco-glazes-information/05-layering/>



*Artists Choice A-32 Iron Saturate
over
Opalescent O-2 Black Tulip*



*Artists Choice A-52 Old Brick
over
Opalescent O-20 Bluebell*

Underglazes



Underglaze Pencils

- Six colors available
- Use like drawing media
- Use for marking test tiles
- Cone 05, some colors to 10

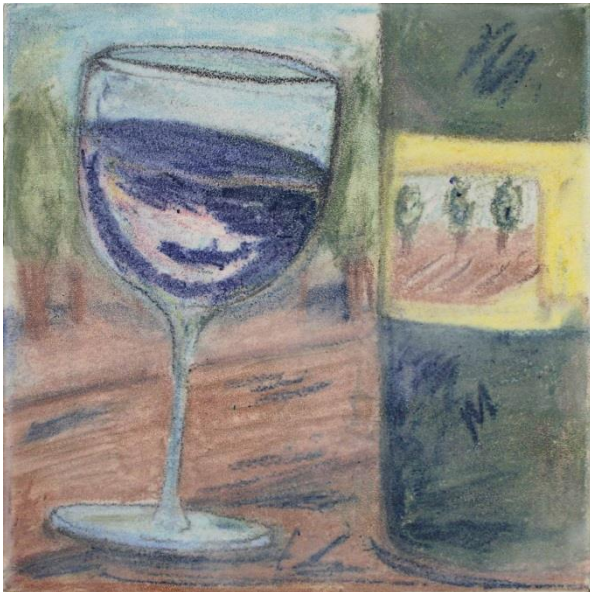


Animal Vase by Tom Meuninck

Underglaze Chalk Crayons

- Two color assortments
- Use for drawing & shading
- Cone 05, some colors to 10

UNDERGLAZE CHALK CRAYONS SET NO. 208 (41252J)



Semi-Moist Underglazes

- Four color assortments in pans
- Use like watercolor
- Cone 05, some colors to 10



Velvet - Liquid Underglazes

- 58 saturated colors!
- Sizes include 2oz, Pints, Gallons
- Use with or without glaze
- Cone 05, some colors to 10



Cups by Jason Burnett

Velvet - Liquid Underglazes



Pitcher by Tim Ludwig



Pots by Deb Weinstein

Velvet - Liquid Underglazes

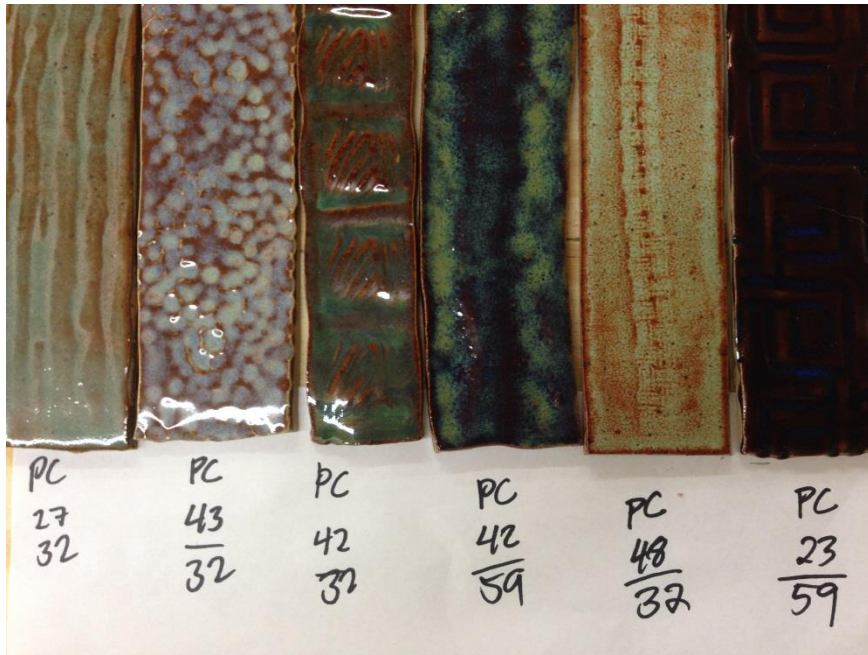
Logo by Trent Berning



*Her Skirt No Longer Protected Them
by Melisa Cadell*



Application & Trouble-shooting





Glaze Application

#1 KEY TO CONSISTENT RESULTS!

There are 4 main ways to apply glaze, each have pros and cons and all need to be practiced and tested to get the best results.



1. Brushing

2. Pouring/
Dipping



3. Sponging

4. Spraying



1. Brushing Application:

- Recommended for most classrooms
- AMACO glazes in liquid form are formulated for brush application
- Less glaze needed and less waste
- Great for precise glaze effects, layering glazes and decorative techniques

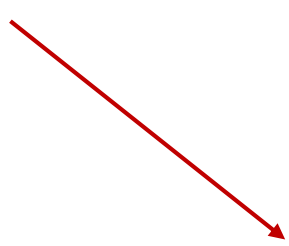


Brushing Glaze Tips:

- Use natural hair brushes
- Load brush well & avoid scraping it on the jar!
- Wait for each coat to be dry before applying 2nd and 3rd coats
- Cross hatch layers for evenness

Glaze Brushing Application Tips....

- Cross hatch layers for evenness
- If glazes are thick, don't add water without replacing the organic binder (**AMACO Gum Solution**)



*Uneven application
will cause color
variance*



- Clean jar mouths and close jars tightly between each use

2. Dipping/Pouring Application:

- Fastest glazing method.
- Even glaze coating over large areas.
- Requires large enough container & glaze quantity.
- Needs more practice to achieve successful results.



Dipping/Pouring Tips:

- Carefully control the specific gravity and viscosity, and test before each glaze session.
- Dipping glaze normally has no binder only suspending agents so the glaze will dry very quickly.
- Touch up finger or tong marks with dabs of glaze.

3. Sponging Application:

- Ideal for decorative effects.
- May be done over brushed or dipped coats to achieve surface variation.
- Not commonly used for large areas of coverage.



Sponging Tips:

- Use clean, damp sponge.
- Pour glaze in shallow bowl.
- Select & utilize specific sponge texture for desired effects.
- Sponges may be cut to create unique patterns with which to sponge/decorate the ware.

4. Spray Application:

(Using spray gun or airbrush)

Care should be taken on several counts when considering this option:

- Use spray booth with adequate ventilation, and NIOSH/MSHA approved respirator .
- The nozzles used must be large enough to handle glaze particles.



Glaze Spraying Tips:

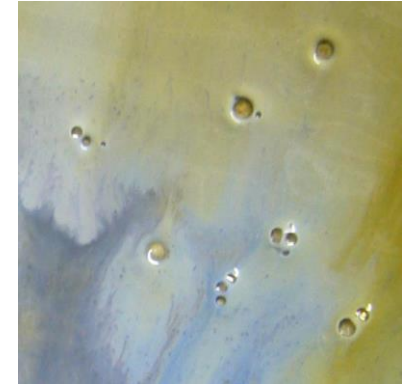
- Recommended when glazing a large number of tiles with the same color.
- Ideal for creating “shading” effects.
- Glaze must apply wet and not in many little dry beads which could cause crawling.



TROUBLE-SHOOTING RESULTS

Glaze variables:

1. Glaze thickness & application
2. Firing
3. Condition of kiln & elements
4. Condition of glaze
5. Variation in raw materials
6. Compatibility with clay = "Glaze Fit"



Underfired



Overfired

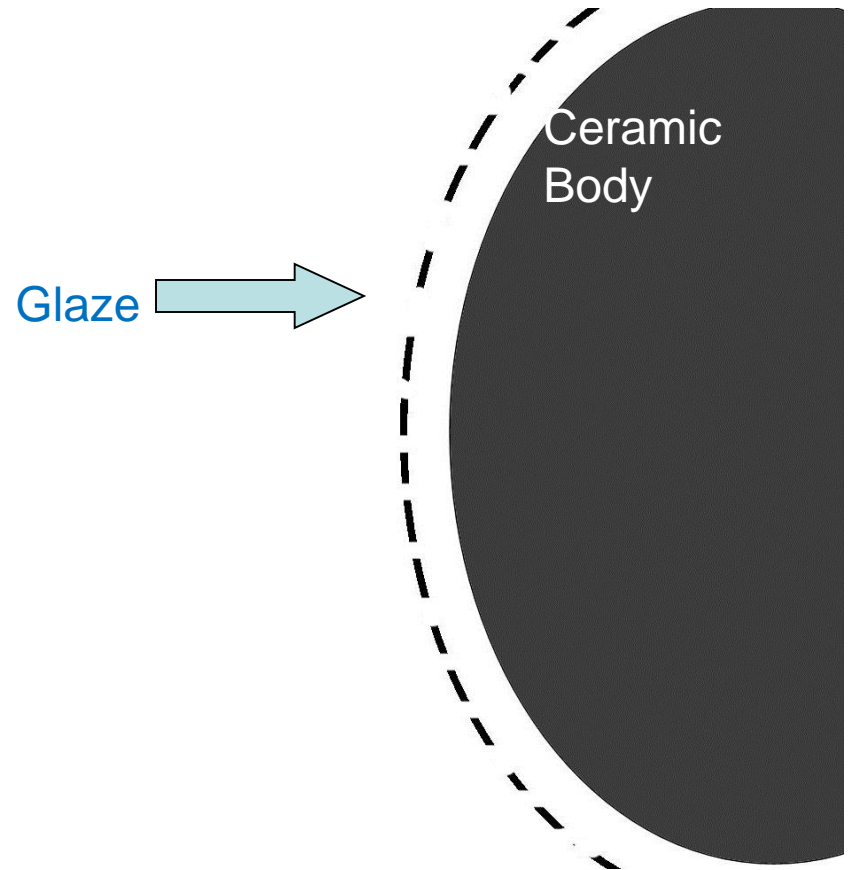
Glaze Fit - Crazeing

- Thermal expansion of the clay body and the glaze must be compatible.
- Thermal expansion has NOTHING to do with shrinkage or cooling in the kiln.

Crazing = Crackle:

Crazing occurs when the glaze contracts more than the clay body.

Stresses build up in the system and the glaze is actually split apart to relieve the stress.



Glaze Fit - Shivering

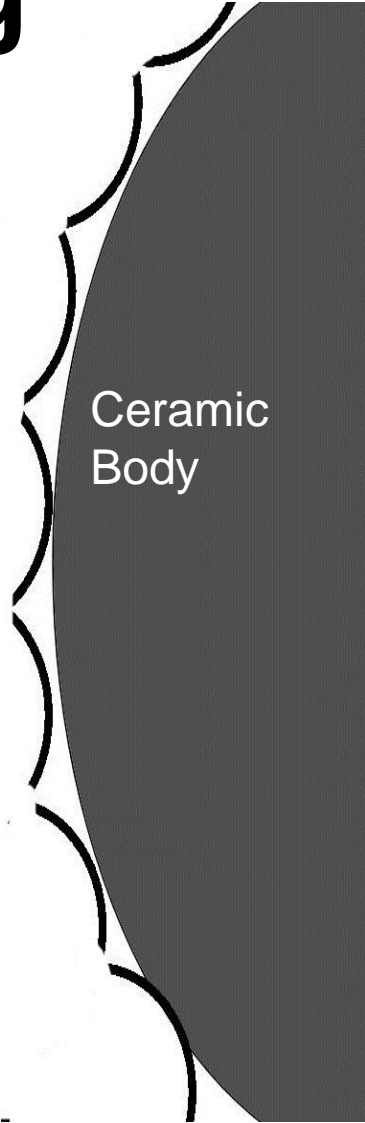
Shivering:

It is the exact opposite of crazing.

The glaze contracts less than the clay and is actually put into compression, popping off the clay!

Glaze →

Ceramic
Body

A diagram showing a cross-section of a ceramic body. The ceramic body is a dark grey, semi-circular shape on the right. The glaze is a white, irregularly shaped layer on the left side of the ceramic body. The glaze is labeled 'Glaze' with a blue arrow pointing to it. The ceramic body is labeled 'Ceramic Body' in white text. The interface between the glaze and the ceramic body is jagged and irregular, indicating shivering.

Avoiding glaze fit problems:

- Use clay that is compatible with the glazes.
- Try a different clay body.
- Talk to your supplier about options/solutions.



Resources & Support

- Website: www.amaco.com
- Tech Support: (800)374-1600
- Amaco You Tube Channel
- Facebook groups:
 - AMACO Cone 5/6 Exchange
 - Low Fire Glaze Exchange
 - K-12 Clay Community



www.facebook.com/DianaFarisWorkshops

EXPLORE.
EXPERIMENT.
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Start a Project

How Tos



Salt & Pepper Birds



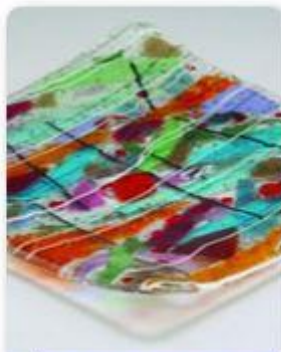
Block Printing with Underglazes on Bisque Tile



Printing Texture onto Moist Clay



Fused Glass Jewelry



Warm Glass Renaissance



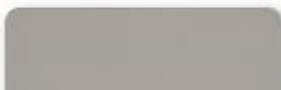
Creative Glass Casting



Glass Mosaic Frit Jewelry Casting Kit



The Rose Project



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



Banding Wheel



Bat and Bat Board



Bisqueware



Bone Dry Clay



Calipers



Centering - Coning up



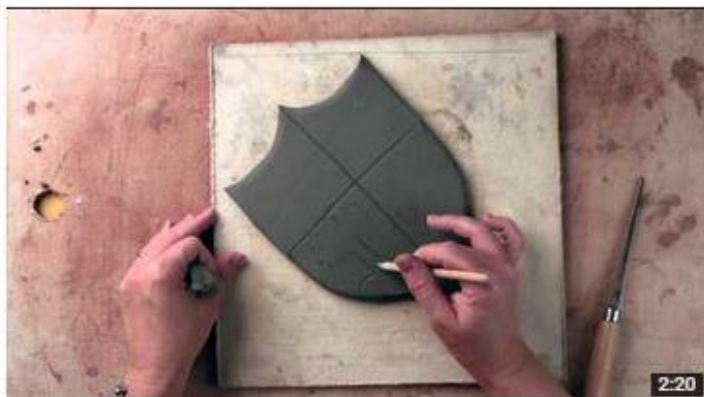
www.amaco.com



American Art Clay Company

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by American Art Clay Company
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by American Art Clay Company
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Amphibians Lesson Plan
by American Art Clay Company
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Andrew Perry Davis
by American Art Clay Company
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How To Make A Ceramic Rose (The Rose Project)
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Tracy - Layering Potter's Choice by Brushing
13,086 views · 1 year ago



Potter's Choice Glazes -- Layering With Dipping Glaze
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Cubist Perspective Portrait
6,301 views · 2 years ago



Potter's Choice Glazes -- Waxing Your Pots and Dippi...
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- Clay Art Teachers 4
- Saved 1

GROUP S

- UFARTED
- Glaze Craze (clay b... 10
- Clay buddies 20+
- UF Ceramics 5
- Ceramics Worldwide 20+
- Indiana Ceramics 15
- New Groups 3
- Create Group

APP S

- Games 15
- On This Day
- Pokes 2
- Games Feed 20+

FRIEND S

Pewabic

INTEREST S

Pages and Public Fl...

EVENT S

- Amaco Workshop!
- Create Event



America's Most Trusted Glazes™

Reduction Looks
Low Fire Glaze Exchange
Public Group



Joined

Share

Notifications



- Discussion
- Members
- Events
- Photos
- Files

Search this group

- Write Post
- Add Photo / Video
- Ask Question
- Add File

Write something...

RECENT ACTIVITY



Sarah Hollander Clark

19 hrs

Mug shot Monday in Amaco low fire world.
Pink one is (top to bottom) F 53 pink, F 71 Amethyst, F 50 Rose two coats over O 11 White Clover.
The other one is F 27 Nairobi blue inside & rim and F42 Celadon.
I like how the white clover made speckles in the pinks.
I will be experimenting more with layers of F, A and O glazes.



MEMBERS 343 members (2 new)

Add People to Group



Invite by Email

DESCRIPTION Edit

This is a group for fans of the Amaco low fire glazes to share and exchange successful glaze com... See More

TAG S: Edit

Ceramics - Ceramic glaze

CREATE NEW GROUP S

Groups make it easier than ever to share with friends, family and teammates.

Create Group

RECENT GROUP PHOTO S SEE ALL



SUGGESTED GROUP S

Diana-AmacoWorkshops Paris

Edit Profile

FAVORITES

- News Feed
- Messages 20+
- Events 6
- Photos
- K-12 Clay Commu...
- AMACO Cone 5/8 ... 2
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GROUPS

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FRIENDS

Pewabic

INTERESTS

Pages and Public ...

EVENTS

- Amaco Workshop!
- Create Event

PAGES



- Discussion
- Members
- Events
- Photos
- Files

Search this group

- Write Post
- Add Photo / Video
- Ask Question
- Add File

Write something...

RECENT ACTIVITY

Donald Peters 4 hrs · Mount Holly, NC

Alright, need 'hive mind help' -
Looking for a couple things for my HS (10-12) classroom (so ages 15-18):
1) A non-manganese black wash recipe... See More

- Like
- Comment
- Share

Shari Chaess-Washington likes this.

Write a comment...

Leana Stone July 23 at 2:48pm

Secondary advice needed! I am only in my third year of teaching (I teach mostly middle school and a little high school). I struggle with balancing structure so that students are accountable for their work while still allowing free project choice. I don't like having project criteria but I know middle schoolers need some structure. What advice do you have?

- Like
- Comment
- Share

MEMBERS 419 members (4 new)



Invite by Email

DESCRIPTION Edit

This is a group for sharing ideas and successful ceramics teaching tips in the classroom, provid... See More

TAGS: Edit

Ceramics · Teaching · Art

CREATE NEW GROUPS

Groups make it easier than ever to share with friends, family and teammates.

Create Group

RECENT GROUP PHOTOS SEE ALL



SUGGESTED GROUPS



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