Glazes for Wood, Salt, Soda

GLAZES FOR WOOD FIRING

Orange Shino
(Cone 8–14)

Soda Ash	4%
Kona Feldspar	10
Nepheline Syenite	40
Spodumene	16
Calcined Kaolin	10
Cedar Heights Redart	5
EPK (Edgar Plastic Kaolin)	15
	100%

This is a great Shino for gas or wood firing. It is somewhat dry at Cone 6 and gets glassier the hotter it gets. No matter how thick this glaze is applied, it will not run. Wood ash tends to accumulate on top of the glaze, rather than melting into it, preserving the dramatic glaze drips that are often desired in anagama firing. The color varies from a light beige to a bright pumpkin orange.

Olsen Shino
(Cone 10–14)

Salt	2.9%
Nepheline Syenite	77.6
EPK (Edgar Plastic Kaolin)	14.6
Native Clay (or Cedar Heights Redart)	4.9
	100%
Add: Tin Oxide	3%

Fred Olsen presented this glaze recipe during a guest artist visit to Kent State University. This glaze likes to be fired as hot as possible. It is particularly beautiful if placed in close proximity to the coal bed, having a tendency to trap carbon and turn purple, pink or gray. It should not be applied too thick if placed in the back of the kiln, as it may shiver off of underfired clay bodies.

Malcolm Davis Carbon Trap Shino
(Cone 8–14)

Soda Ash	17%
Kona F-4 Feldspar	10
Nepheline Syenite	41
EPK (Edgar Plastic Kaolin)	19
Kentucky Ball Clay (OM 4)	13
	100%

This classic glaze should be used with caution in anagamas. If too much ash covers the surface, this glaze will turn an unattractive, bubbly olive green. However, if protected by the ash and fired in heavy reduction, beautiful carbon trapping patterns can develop. The black carbon trapping can be resisted with wax that is brushed on just after glaze application. This glaze is a great candidate for saggar firing.

Helmer Shino
(Cone 8–14)

Soda Ash	10%
Nepheline Syenite	40
Spodumene	20
Helmer Kaolin	30
	100%

Depending on placement, this will be glossy or matt orange with dramatic flashing. It will trap carbon on rims or high points.

Sam's Shino
(Cone 8–14)

Salt	5%
Soda Ash	5
Nepheline Syenite	40
Soda Feldspar	10
Spodumene	10
EPK (Edgar Plastic Kaolin)	10
Kentucky Ball Clay (OM 4)	10
Native Clay (or Cedar Heights Redart)	10
	100%

This is my favorite glaze for wood firing, as a liner or for exterior surfaces. It is a combination of all of the good Shino recipes I have tested. It will yield golden oranges to buttery yellows and will often trap carbon. Like the Orange Shino, wood ash tends to sit nicely on the surface of this glaze.

Turquoise Oribe
(Cone 8–14)

Strontium Carbonate	9%
Talc	4
Whiting	19
Custer Feldspar	28
EPK (Edgar Plastic Kaolin)	3
Silica (Flint)	37
	100%
Add: Copper Carbonate	6%
Bentonite	2%

This is quite unlike a traditional Japanese Oribe, but will turn a bright turquoise when fired hot enough. It looks best in a neutral to oxidized atmosphere, but will not turn red in light reduction. If applied to the outside of a piece, this glaze will flash pink onto neighboring work.

Leach's Limestone
(Cone 8–14)

Whiting	20%
Custer Feldspar	27
EPK (Edgar Plastic Kaolin)	7
Kentucky Ball Clay (OM 4)	14
Silica (Flint)	32
	100%

This is a predictable clear glaze that is an excellent liner if fired above Cone 8. If used on the exterior of a piece, it must be fired in a saggar or it tends to shiver.

K.C. IRON YELLOW

Flint	33
Ball Clay	7
Whiting	7
Dolomite	12
Custer Feldspar	41
Red Iron Ox	10

CANNONBALL BLUE GLAZE

Custer	50
C-1 Wollastonite	10
Colemanite	5
Flint	20
Tennessee Ball	5
Red Iron Ox	4
Cobalt Oxide	1

GREENISH-YELLOW SLIP GLAZE

Albany Slip	100
C-1 Wol.	40
E.P.K. Kaolin	10
Colemanite	10

WHITE GLAZE

Kaolin	10
Oxford Spar	40
Whiting	20
Flint	30
Bentonite	2
Zircopax	10

CANNONBALL BLUE-GREEN

C-1 Wollastonite	10
Custar Feldspar	59
Whiting	3
Zinc Ox	4
Kaolin	25
Tenn. Ball	5
Flint	5
Red Iron Ox	18
Cobalt	1
Colemanite	5

CANNONBALL IRON GREEN

Whiting	12.0
Buck. Feldspar	53.0
Barium Carbonate	2.5
Zinc	2.5
Flint	24.0
Georgia Kaolin	6.0
Red Iron Ox	5.0

CANNONBALL IRON YELLOW

Feldspar	164
Whiting	62
Zinc Ox	8
Kaolin	48
Flint	82
Red Iron Ox	25

INTERIOR GLAZE

Talc	23 parts
Feldspar	26
China clay	22
Whiting	13
Flint	22

BODY COLOURS

1. Mid-Brown: Red iron oxide 3%
2. Black:

Chrome	50 gms
Cobalt	20
Alumina hydrate	50
Iron oxide	60
Manganese	30

3. Soft Green:

China clay	40 gms
Flint	35
Feldspar	25

Iron oxide	8
Chrome	16
Cobalt	2
Copper carbonate	2

4. Speckled grey: Rutile 3%
5. Heavy speckle: Ilmenite 3%

BARIUM SEMI

F-4 Spar	40 parts
Barium carbonate	31
Dolomite	12
Kaolin	9
Flint	9
add:	
Copper carbonate	4% (nice blue)
Spanish Iron	6% (rich iron yellow/brown)

IRON YELLOW GLAZE

Custer Spar	45 parts
Flint	23
Whiting	17
Kaolin	13
Zinc	2
Red iron	7

Chris Staley: red-to-green glaze (soda firing, Cones 9–10)

Custer feldspar	50
Whiting	15
EPK China Clay	13
Dolomite	2
Flint	20
Copper carbonate	8
Iron oxide	1
Add bentonite	2

CUSHING BLACK
Cone 10

Barium Carbonate	9.9%
Talc	15.8
Nepheline Syenite	9.9
Albany Slip	64.4
	100.0%
Add: Chrome	3.9%
Manganese Dioxide	1.7%
Cobalt Oxide	1.7%
Bentonite	1.5%

HILLIX GREEN GLAZE
Cone 10

Whiting	19.1%
Nepheline Syenite	39.7
EPK Kaolin	11.1
Silica (Flint)	30.1
	100.0%
Add: Copper Carbonate	0.8%
Copper Oxide	3.9%
Bentonite	2.2%

TEMMOKU
Cone 10

Barium Carbonate	2.9%
Whiting	15.0
Custer Feldspar	49.1
EPK Kaolin	6.9
Silica (Flint)	26.1
	100.0%
Add: Red Iron Oxide	9.8%
Zinc Oxide	2.9%
Bentonite	2.5%

RUTILE B-1
Cone 10

Dolomite	15.1%
Whiting	11.3
G-200 Feldspar	30.7
EPK Kaolin	16.0
Silica (Flint)	26.9
	100.0%
Add: Bentonite	2.0%
Yellow Iron Oxide	2.0%
Zircopax	1.0%

1% COPPER GLAZE
Cone 10

Talc	7.0%
Whiting	23.3
F-4 Feldspar	7.9
G-200 Feldspar	15.4
Ball Clay	23.3
Silica (Flint)	23.3
	100.0%
Add: Copper Carbonate	1.0%
Bentonite	2.0%

YELLOW SALT
Cone 10

Dolomite	23.6%
Nepheline Syenite	71.6
OM-4 Ball Clay	4.8
	100.0%
Add: Zircopax	17.9%
Red Iron Oxide	11.1%
Bentonite	4.7%

To 10,000 grams, add half cup muriatic acid

SYNTHETIC ASH GLAZE

Cornish stone	35
Whiting	45
Dolomite	5
China clay	15
+ Iron oxide	2%

RANDY JOHNSTON

TRAILING WHITE GLAZE Δ9

7 lbs. 8 oz.	Custer spar
1 lb.	Talc
1 lb.	EPK
8 oz.	Tin oxide

TRAILING BLACK GLAZE Δ9

7 lbs. 8 oz.	Custer spar
1 lb.	Talc
1 lb.	EPK
8 oz.	Mason black #6609

Smooth Satin Glaze

Talc	23
Feldspar	26
China Clay	22
Whiting	13
Flint	22

Matt Talc Glaze

Cornish Stone	30
China Clay	20
Whiting	20
Talc	10

Will Marshall High Calcium cone 9/10 red/ox.

Custer	14
Dolomite	9
Barium carb	9
Whiting	29
Ball Clay	17
Flint	18
Add: for Blue// Cobalt carb	0.25%
for Green// Chrome ox	0.5-2%
RIO	2%

or

Cobalt carb	1%
RIO	2%

Fake Ash effect.

Matt Slip Glaze
(Cone 10)

Soda ash	2.0 %
Talc	4.0
Whiting	7.0
Nepheline Syenite	20.0
EPK (Edgar Plastic Kaolin)	30.0
Kentucky Ball Clay (OM 4)	25.0
Silica (Flint)	12.0
	100.0 %

Matt Slip Glaze Unity Formula

*CaO	.42
*MgO	.21
*K_2O	.08
*Na_2O	.29
Al_2O_3	1.30
SiO_2	5.21

The dry surface of this glaze relies on ash and flashing from the kiln to impart an interesting surface. It is dry and boring when fired by itself in a gas or electric kiln.

Ben's Amber Base and Variations cone 9/11

Custer	30
Whiting	25
Flint	25
Bandy Black	10
Gerstly Borate	3
Add: for Amber//Yellow Ochre	7%
for celery green// MS 6481	2%
MS 6225	4%
for Slate blue//Cobalt carb	0.5%
RIO	2%
for lt.green//MS 6481	2%
MS 6225	1%
for Dk grn.-blu.//Cobalt carb	1%
RIO	4%
for blue w/ crystals//Cobalt car.	0.5%
RIO	1%
Mag.carb	3%

Martin Soda cone 3/10 ox.

Frit 3110	43.4
Barium carb	6.5
Lithium carb	4.4
Tile #6	13
Bentonite	3
Flint	29.6
for Turq//copper carb	3-5%
for Chartruese//Chrome	0.5%
for dk Purple//Manganese	4%
Cobalt carb	0.8%
for lt Purple//Manganese	2%

Tenmoku Glaze
Cone 10 Reduction/Salt

G-200 Potash Feldspar	2633
Flint	1317
Whiting	999
Kaolin	590
Zinc	136
Iron Oxide	454

Blue Ice
(Cone 10)

Talc	6.50 %
Whiting	13.54
Minspar 200 Feldspar	43.88
EPK (Edgar Plastic Kaolin)	11.70
Kentucky Ball Clay (OM 4)	10.84
Silica (Flint)	13.54
	100.00 %
Add: Titanium Dioxide	8.34 %

Titanium Slip Glaze
(Cone 10)

Soda Ash	4.12 %
Talc	6.18
Wollastonite	18.02
Custer Feldspar	20.60
Kentucky Ball Clay (OM 4)	42.23
Silica (Flint)	8.85
	100.00 %
Add: Bentonite	3.09 %
Titanium Dioxide	8.24 %

Rusty Iron Glaze
(subtle surface; decoration)

Pot felspar	30%
Whiting	20%
Kaolin	15%
Silica	35%
Fe203	14%

SALT

Rutile Orange Glaze
As above but replace Fe203 with Ti02 8%

Oatmeal Glaze
(contrast - no salt build-up)

Pot felspar	50%
Whiting	20%
Talc	4%
Kaolin	24%
Bone ash	2%
Fe203	2.5%
Ti02	2.5%

Stefanny's Base cone 9 ox/soda.

Nephy Sy	35
Frit 3110	15
Frit 3124	15
EPK	15
Flint	15
Soda Ash	5

Colorants:

Opaque Yellow//Vanadium.....12%

Nick's Misfire cone 9/10 soda

Nephy Sy	40
Whiting	15
Talc	10
Grolleg	15
Flint	10
Tin ox	10
Copper carb	1

Pale blue-grey. Breaks shiny blue when h

Soda Matte, Opaque.

Robbie Copper Blue cone 9/10 red/ox/soda

Kent. Ball	6
Nephy Sy	56
Strontium	23
Flint	11
Lithium carb	4
Bentonite	2
Add: Copper carb	4%

Blue, tinges of red in reduction.

Matte Opaque.

Carmel Yellow cone 10 ox/soda

Petalite	46
Nephy Sy	36
Dolomite	9
EPK	9
Titainium	12

SODIUM RESISTANT CASTABLE

CALCIUM CEMENT	1 PART
FIRECLAY	2
30-40 MESH GROG	1
VERMICULITE	2

INSULATING CASTABLE

FIRE CLAY	1 PART
PORTLAND CEM.	1
SAND	.5
COARSE SAWDUST	2
VERMICULITE	2

COPPER SATIN GLAZE

Nepheline syenite	50 parts
Silica	28
Whiting	24
EP kaolin	14
Bentonite	3
Copper carbonate	1
Black copper oxide	5

Oribe Glaze
(Cone 10, reduction)

Bone Ash	1.1%
Talc	7.8
Whiting	22.4
Custer Potash Feldspar	30.9
Edgar Plastic Kaolin	12.5
Flint	25.3
	100.0%
Add: Copper Carbonate	5.5%
Bentonite	1.0%

Yields bright translucent green in soda.

Hayne's Satin White Glaze
(Cone 10, reduction)

Dolomite	10%
Talc	7
Whiting	8
Nepheline Syenite	45
Flint	30
	100%
Add: Ultrox	10%

Yields opaque satin surface with soda, but can show clay body on texture.

Val's Satin Black Glaze (Variation)
(Cone 10, reduction)

Dolomite	15%
Talc	13
Whiting	2
Custer Feldspar	20
Soda Feldspar	20
Kentucky Ball Clay (OM 4)	10
Flint	20
	100%
Add: Cobalt Carbonate	3%
Red Iron Oxide	9%

Breaks black/brown metallic with soda.

PER FECT BLACK

Wood - salt - reducti

=

Custer	4200
Whiting	1300
Zinc ox.	1200
Soda ash	300
E. P. K.	800
FLINT	2200
Cobalt CARB	400
CHROME	100
RED IRON OX.	300

YELLOW/AMBER (shiny, opaque)

Custer Feldspar	29 parts
Whiting	20.5
EPK	19
Flint	31.5
add Rutile	7%

PINK SHINO (shiny, opaque)

Nepheline syenite	48 parts
Spodumene	25
EPK	5
Ball clay	8
Soda feldspar	7
Soda ash	4
add Pink Mason Stain No. 6020	3–8%

ANDY MARTIN SHOWSAVER CHARTR

Barium carbonate	22.89 parts
Gerstley borate	3.84
Strontium carbonate	12.98
Wollastonite	3.37
Nepheline syenite	26.92
Ball clay	9.52
Flint	20.48
add Chrome	0.5%

WOO BASE: Satin matt

Kona F-4 Feldspar	33 parts
Dolomite	12
Barium carbonate	25
EPK (Kaolin)	7
Flint	7
Zircopax (Ultrox)	15

WOO BLUE (periwinkle)

add cobalt carbonate	1%
rutile	4%

WOO WHITE (warm white)

add rutile	4%

WOO PURPLE (maroon, speckled)

add manganese	4%

BRUILLARDS CHARCOAL BLACK

G200 Feldspar	34 parts
Ball clay	11
Custer Feldspar	24
Dolomite	8
Flint	8
Whiting	4
Zircopax (Ultrox)	2
add Black Mason Stain	4%
Red iron oxide	4%

RANDY'S GREEN

Flint	19.2 parts
Ball clay	12
Whiting	10.5
Zircopax (Ultrox)	9
Dolomite	7.3
Barium carbonate	15
Custer Feldspar	25
Kona F-4 Feldspar	21
add Copper carbonate	6%
Tin oxide	4%

MATT LIGHT BLUE/LAVENDER (shiny blue when hit with soda)

Nepheline syenite	34 parts
Dolomite	14
Whiting	7
Zinc oxide	6
Grolleg	23
Flint	17
add Cobalt carbonate	2%

RED CASCADE

F4	29.-
DOLOMITE	21.50
EPK	21.50
SPODUMENE	20.-
TIN	6.-
WHITING	2.-
BENT.	1.20

FEIBIG'S SHINO

NEPH. SY	43.00
EPK	19.00
SODA ASH	18.00
OM 4	14.00
TIN	6.00
YELLOW OCHRE	6.00

FROG POND GREEN

NEPH SY.	60.00
STRONTIUM	20.00
OM 4	10.00
SILICA 325	9.00
LITHIUM CARB.	1.00
TITANIUM DIOX.	5.00
COPPER CARB.	5.00

FEIBIG'S FAKE NUKA

CUSTER	74.00
NEPH SY.	8.00
EPK	6.00
WOODASH	6.00
SILICA 325	6.00
LITHIUM CARB	1.00
TIN	2.00
BENT.	1.30

↑ WOODFIRE

Honoree Carmel Matte cone 6-10 ox/soda/wood

		(cone6)
Petalite	46	40
Nephy Sy	36	43
Dolomite	9	8.5
EPK	9	8.5
Titanium diox	12	10

Yellow/Orange in wood. Pinholes if underfired. Work w

Rock Creek Liner
(cone 10 salt)

Whiting	22.7%
Silica (325 mesh)	22.7
OM-4 Ball Clay	22.7
G-200 Feldspar	16.5
Talc	9.1
F-4 Kona Feldspar	6.3
TOTAL	100.0%
add Bentonite	2.3%
For Green, *add* Copper Carb	2.0%

This glaze will not run, but goes from glossy to satin depending on location in the salt kiln.

Stoneware Liner Glaze
(Cone 8–10)

Dolomite	13.95%
Gerstley Borate	2.33
Custer Feldspar	9.30
Cedar Heights Redart	55.82
Silica (Flint)	18.60
	100.00%
Add: Black Iron Oxide	2.33%

Porcelain Glaze
(Cone 9–10)

Magnesium Carbonate	2.92%
Talc	10.94
Whiting	10.94
Custer Feldspar	29.17
Edgar Plastic Kaolin	25.98
Flint	20.05
	100.00%

ABT Glaze
(Cone 9–10)

Whiting	22.73%
Custer Feldspar	45.45
Edgar Plastic Kaolin	27.27
Flint	4.55
	100.00%

ABT is a stony glaze that is typically applied as a base coating for Mashiko Kaki (a natural volcanic ash glaze mined in Japan—similar to some tested samples of Mount Saint Helens ash) to produce persimmon red-orange.

Nuka Glaze
(Cone 9–10)

Wood Ash	7.84%
Custer Feldspar	73.53
Nepheline Syenite	9.81
Edgar Plastic Kaolin	4.90
Flint	3.92
	100.00%
Add: Tin Oxide	0.98%

A fat, white-to-gray, feldspathic glaze.

White Trailing Glaze
(Cone 9–10)

Talc	10.53%
Custer Feldspar	78.94
Edgar Plastic Kaolin	10.53
	100.00%
Add: Tin Oxide	0.53%

For a black trailing glaze, replace the tin oxide with 0.53% Mason stain 6609.

Warren MacKenzie Shino Glaze
(Cone 10, reduction)

Soda Ash	9.09%
Spodumene (with iron)	36.36
Custer Feldspar	42.43
Edgar Plastic Kaolin	12.12
	100.00%
Add: Bentonite	2.02%

Andrew Wong Luster
(Cone 10, reduction)

Lithium Carbonate	5.26%
Whiting	2.11
Nepheline Syenite	55.79
Kaolin	26.32
Flint	10.52
	100.00%

Optional: add 5.26% soda ash.

Shino

Soda Ash	3.40%
F-4 Feldspar	14.69
Nepheline Syenite	50.24
Spodumene	12.59
OM-4 Ball Clay	16.18
EPK	2.90
TOTAL:	100.00%

Johnston 446

Talc	8.15%
Custer Spar	54.35
Ball Clay	22.83
EPK	6.52
Whiting	8.15
TOTAL:	100.00%