# LOWFIRE GLAZE RECIPES

**Crusty Glaze - BB 1 cone 04**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>gerstley borate</td>
<td>30</td>
</tr>
<tr>
<td>kaolin</td>
<td>50</td>
</tr>
<tr>
<td>cryolite</td>
<td>20</td>
</tr>
</tbody>
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100

description: matte, brown, with big, uneven cracks

**Crusty Glaze - BB 2 cone 04**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
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<tbody>
<tr>
<td>gerstley borate</td>
<td>40</td>
</tr>
<tr>
<td>kaolin</td>
<td>10</td>
</tr>
<tr>
<td>cryolite</td>
<td>20</td>
</tr>
<tr>
<td>titanium dioxide</td>
<td>30</td>
</tr>
</tbody>
</table>

100

description: matte, yellowish, with even cracks

**Crusty Glaze - BB 3 cone 04**

<table>
<thead>
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<th>Ingredient</th>
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<tbody>
<tr>
<td>gerstley borate</td>
<td>20</td>
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<tr>
<td>kaolin</td>
<td>20</td>
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<tr>
<td>cryolite</td>
<td>40</td>
</tr>
<tr>
<td>titanium dioxide</td>
<td>20</td>
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100

description: matte, yellowish, with even cracks

**Crusty Glaze - BB 4 cone 04**

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<th>Amount</th>
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<tr>
<td>gerstley borate</td>
<td>34</td>
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<tr>
<td>cryolite</td>
<td>33</td>
</tr>
<tr>
<td>titanium dioxide</td>
<td>33</td>
</tr>
</tbody>
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100

description: matte, yellowish, cracks are even but fewer in number

**Jackie's Base Glaze cone 04**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
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<tr>
<td>gerstley borate</td>
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<tr>
<td>lithium carbonate</td>
<td>10</td>
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<tr>
<td>nepheline syenite</td>
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<tr>
<td>EPK</td>
<td>5</td>
</tr>
<tr>
<td>silica</td>
<td>42</td>
</tr>
</tbody>
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100
100
Add 5% zircopax
A versatile, strong semi-matte glaze. Takes colorants well.

**Jackie's Base Glaze Color Tests (use ONE set of these possibilities to make the base glaze a specific color)**

1. **BLACK**
   2.2% cobalt oxide
   .6% chrome oxide
   2.6% iron oxide
   .8% manganese dioxide

2. **WHITE**
   25% zircopax

3. **PURPLE**
   12.0% blackberry wine stain
   .2% cobalt carbonate

4. **CREAM YELLOW**
   12% rutile

5. **GREEN**
   2.5% chrome oxide

6. **TURQUOISE BLUE**
   3.5% copper carbonate

7. **BROWN**
   12% red iron oxide stain

8. **OTHER COLORS**
   10-20% Mason stain

**Pete's Purple Glaze cone 04**

| 40 | barium carbonate |
| 19 | EPK             |
| 19 | nepheline syenite |
| 10 | silica          |
| 5  | lithium carbonate|
| 7  | copper carbonate |

------------------------------------------------

100
add 3% bentonite
Dry matte glaze with intense barium - copper blue color. VERY TOXIC - don't use on potsl

**Bettelou's Color Variations on Pete's Purple cone 04**

Note: use the Pete's Purple recipe, but omit the 7% copper carbonate.

1. **BLUE**
   .4% cobalt carbonate
   12% zircopax

2. **ROBIN'S EGG BLUE**
   2% copper carbonate
   3% yellow stain

3. **YELLOW (toward green)**
   2.5% chrome oxide

4. **CREAM**
   12% rutile

5. **OTHER COLORS**
   15-20% Mason stain

**Transparent Glaze cone 04**

1. silica
2. EPK
3. gerstley borate


6 parts by weight
A sturdy, dependable clear glaze.

**Transparent Glaze to fill a bucket**

833 flint
1667 EPK
2500 Gerstley borate

5000 grams

**COLOR TESTS FOR TRANSPARENT GLAZE cone 04**

To 1 cup of liquid glaze, add:

1. **YELLOW-BROWN**
4 tsp. vanadium pentoxide
2 tsp. zircopax

2. YELLOW
3-4 tsp. yellow stain
2 tsp. zircopax

3. CHARTREUSE
3 tsp. chartreuse stain
2 tsp. zircopax

4. BLUE-GREEN
1 tsp. copper carbonate

5. DARK GREEN
1 tsp. copper oxide

6. SEA GREEN
1 tsp. copper carbonate
2 tsp. zircopax

7. ARMY GREEN
1 tsp. potassium dichromate

8. BLUE
1.5g cobalt carbonate

9. DARK BLUE
1 tsp. manganese dioxide
1/4 tsp. cobalt carbonate
1 tsp. zircopax

10. OTHER COLORS
3-4 tsp. Mason stain
2 tsp. zircopax

(tested by Bettelou Brown)

Super Slip cone 04
1 F-4 feldspar
1 silica
1 EPK
1/2 ball clay
1/2 nepheline syenite
1/8 gerstley borate

--------------------------------------------------
4 1/8 parts by weight

It's called "Super Slip" because it goes on clay in any state. White, dry surface. Try color variations. Use under a clear or colored transparent glaze. Mix with glazes to make them more matte.

**Super Slip in a standard bucket gram weight batch – cone 04**

- 1260 F-4 Feldspar
- 1260 Flint
- 1260 EPK
- 630 Ball clay (OM4)
- 630 Nepheline syenite
- 158 Gerstley borate

5198 grams

**Blue Super Slip Batch – cone 04**

- 1260 F-4 Feldspar
- 1260 Flint
- 1260 EPK
- 630 Ball clay (OM4)
- 630 Nepheline syenite
- 158 Gerstley borate
- 126 Cobalt carbonate

5234 grams

**Green Super Slip Batch – cone 04**

- 1260 F-4 Feldspar
- 1260 Flint
- 1260 EPK
- 630 Ball clay (OM4)
- 630 Nepheline syenite
- 158 Gerstley borate
- 167 Chrome oxide
- 250 Rutile

5615 grams

**Creamy Yellow Super Slip Batch – cone 04**

- 1260 F-4 Feldspar
- 1260 Flint
- 1260 EPK
630  Ball clay (OM4)
630  Nepheline syenite
158  Gerstley borate
250  Rutile

----------------------------------------------
5448

**Fat Yellow Glaze cone 04**
85   frit 3124
10   EPK
5    flint

100
Add 8% yellow stain
Add 3% bentonite
A shiny, uniform glaze. Be sure to sieve twice through a fine screen.
Substitute other colors of stain (pink and purple are interesting)

**Smooth Icing Glaze cone 04**
50   frit 3124
40   F-4 feldspar
10   whiting

100
Add bentonite 3%
Add stains for color.
This is a thick, semi-matte glaze with the uniform consistency of a confectioner's sugar icing.

**Amber Yellow Glaze cone 04**
34   gerstley borate
37   custer feldspar
14   barium carbonate
15   flint

100
Add 4% black iron oxide
A transparent, shiny glaze to use on red clay - mimics old lead glazes.
Not tested for barium release - be careful.
**MJ's foam glaze cone 04**

70  frit 3110  
10  wollastonite  
20  bone ash  
 5  frit 3124  
 5  EPK  

100  
A bizarre specialty glaze. Mix in small amounts only - this recipe settles like a rock. Add colorants. 
For purple: add 5% manganese dioxide.

**Batz Majolica Glaze cone 04**

100  frit 3124  
 4  barium carbonate  
 15  EPK  
 20  zircopax  

139  
Add 3% bentonite  
Add .25% tan stain to modify whiteness. This is a thick, white, shiny base glaze. It is meant to be used with overglaze colorants. To mix the overglaze colors, add 1 tsp. stain or oxide and 1 tsp. frit 3124 to a cup of water.

**Weird Glaze cone 04**

50  wollastonite  
50  gerstley borate  

100  
For a yellowish green, add 6% copper carbonate.  
For a jade green, add 4% chrome oxide.  
Also try other colorants.  
A semi-matte glaze with surface variations

**Yellow-Tan Wash cone 04**

Note: parts by VOLUME  
3  gerstley borate  
1.5  zircopax  
2  rutile  

6.5 parts by volume  
Add ingredients to a large amount of water - this mixture should be thin. A dependable dry surface with yellow-to-tan color variations.

**Red Wash cone 04**

Note: parts by VOLUME
1 EPK
2 red iron oxide
3 gerstley borate
1.5 zircopax

7.5 parts by volume

Crusty Glaze Surface cone 07-cone 04
70 gerstley borate
30 titanium dioxide

Crusty Glaze Surface cone 07-cone 04

100
For green, add 6% chrome oxide.
For blue, add 5% cobalt carbonate.
For tan, add 7% rutile.
For yellower mix, add 5% yellow stain.
For gold, add 10% old gold stain.
A very dry, crusty yellow surface with cracks. Apply very thickly.

Loose Skin Crawl Glaze cone 04
20 frit 3195
30 kaolin
50 cryolite

Loose Skin Crawl Glaze cone 04

100
For gray/silver, add 5% copper carbonate and 2% cobalt oxide
(A specialty glaze - like it sounds.)

Gooky Crinkly Glaze cone 04
30 frit 3195
50 kaolin
20 cryolite

Gooky Crinkly Glaze cone 04

100
For blue, add 8% copen blue stain. (If copen blue is not available, try 1.5% cobalt carbonate.)
For chartreuse, add 3% copper carbonate and 4% yellow stain.
(A specialty glaze - like it sounds.)

White Shiny Glaze cone 04
60 frit 3124
15 ball clay
15 flint
10 zircopax

White Shiny Glaze cone 04

100
Add 3% bentonite. Can be used as a majolica-style glaze.

**Watershed Stone cone 04**

25 ball clay  
25 EPK  
25 gerstley borate  
25 flint  
15 lithium carbonate

115
Add 5% granular ilmenite after sieving. A dry, stony surface.

**Wash of Pink cone 04**

90 frit 3134  
20 ball clay  
20 zircopax

130
Add 3% bentonite.  
Add 7% rutile.  
Add 2% ilmenite  
This is a near-glossy glaze with a delicate pink cast and ilmenite specks.

**Bates Blue cone 04**

25 borax  
25 spodumene  
50 EPK

100
2% cobalt carb. = deep blue  
5% copper carb. = mottled green  
5% iron = rusty brown  
3% chrome = rich green  
1% cobalt carb. + 3% chrome = teal

**SBSU White Crawl cone 04**

3.88 borax  
46.51 gertsley borate  
31.01 magnesium carbonate  
18.60 EPK

100.00
Add 5.43% zircopax

**Jernegan Crusty Matte cone 05- (04)**
40 EPK
40 borax
20 flint
  4 copper carbonate
  1 cobalt carbonate

------------------------------------------------
105

**Water Blue cone 04**

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>76.3</td>
<td>frit 3110</td>
</tr>
<tr>
<td>5.7</td>
<td>gerstley borate</td>
</tr>
<tr>
<td>7.1</td>
<td>EPK</td>
</tr>
<tr>
<td>10</td>
<td>flint</td>
</tr>
<tr>
<td>2</td>
<td>bentonite</td>
</tr>
</tbody>
</table>

101.1

Use over white slip unless you want a very dark color

**COLOR VARIATIONS for Water Blue (use only ONE per batch of plain glaze)**

4.5% copper carbonate=turquoise
5% copper carbonate + 3% cobalt carbonate=deep blue
5% vanadium=yellow (or try yellow stain)
4% manganese dioxide + 1/2% cobalt carbonate=purple
5% manganese=burgundy purple
6% rutile=yellow
6% red iron oxide=deeper yellow

**Suede cone 06-04**

<p>| | |</p>
<table>
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<tbody>
<tr>
<td>80</td>
<td>GB</td>
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<tr>
<td>20</td>
<td>bone ash</td>
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100

**Terra sigillata cone 04**

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1170</td>
<td>EPK</td>
</tr>
<tr>
<td>230</td>
<td>ball clay</td>
</tr>
<tr>
<td>7</td>
<td>calgon</td>
</tr>
<tr>
<td>14</td>
<td>cups of water</td>
</tr>
</tbody>
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Mix all the ingredients and let sit overnight. The next day decant the middle layer and throw the rest away (or put it into the recycling bin.)

Terra sigillata means "earthseal" in Latin. It is a very thin slip made of fine particles of clay. Apply it to bone dry clay that you have dampened a little (a spray-bottle works well). As the terra sigillata dries on your piece burnish it with a piece of an old t-shirt.

You can make various colors by adding oxides and stains to the base recipe.
Adam's Dense Black cone 06-04
24.6 nephelene syenite
15.2 gerstley borate
17.8 barium carbonate
 9.7 lithium
24.6 flint
 8.1 EPK
 10 black stain
  2 black copper oxide
  4 black iron oxide
  1 cobalt oxide

------------------------------------------------

Michelle's Bubble Glaze cone 04
30 frit 3195
30 EPK
40 cryolite

------------------------------------------------

Add 5% manganese dioxide.

Archie Bray Black Slip cone 04
500 Redart clay
250 ball clay
150 manganese dioxide
120 black stain
 50 black iron oxide

------------------------------------------------

1070

BB's Amazing Slip III
34 Frit 3124
33 EPK
33 Silica

------------------------------------------------

100
A white slip that goes on bisque or greenware. Goes over glazes for interesting effects. Highfires well (but expect some colors such as pink to burn out in highfire).
To get colors of BB's Slip III, add one of the following variations to the basic recipe:

1. Very Earthy Green
Add 14% rutile, 4% copper carbonate.

2. Earthy Chrome Green
Add 15% rutile, 2.5% chrome oxide.
3. Still Earthy Green
   Add 3% copper carbonate.

4. Bright Chrome Green
   Add 2.5% chrome oxide.

5. Nice Pink
   Add 10% Deep Crimson Mason Stain #6006.

6. Great Purple
   Add 10% Pansy Purple Mason Stain #6385.

7. Grey Blue
   Add 1% cobalt carbonate.

**BB's Amazing Slip IV**
34 frit 3124  
22 talc  
22 ball clay  
22 kaolin
------------------------------------------
100
Like BB's Amazing Slip III, this slip goes on bisque or greenware. For strange effects, you can put it over glazes. It can be highfired (but be aware that some delicate stains, especially pink, will burn out at high temperature). In general, BB's IV makes more neutral colors than BB's III.

To get colors of BB's Slip IV, add **one** of the following variations to the basic recipe:

1. Dull Pink
   Add 10% zircopax and 10% Deep Crimson Mason Stain #6006.

2. Grey Purple
   Add 10% zircopax and 10% Pansy Purple Mason Stain #6385.

3. Very Pale Yellow
   Add 10% zircopax and 3% praseodymium Yellow Mason Stain #6433.

4. Nice Grey Blue
   Add 10% zircopax and 1% cobalt carbonate.

Following is a series of washes that can be fired to cone 04. A wash should be made extremely thin, like water. Used alone, it will reveal all the texture of your clay surface. Used underneath a glaze, it may affect the color of the glaze.
All of the BB Washes are made by volume rather than by weighing, so making them is quick and easy.

**BB's Tan Wash**
1 frit 3134  
1 zircopax  
3 rutile

---
5

**BB's Orange Red Wash**
1 frit 3134  
1 zircopax  
3 yellow iron oxide

---
5

**BB's Rust Brown Wash**
1 frit 3134  
1 zircopax  
3 red iron oxide

---
5

**BB's Black Wash**
1 frit 3134  
1 zircopax  
1 red iron oxide  
1 black iron oxide  
1 manganese dioxide

---
5

**BB's Grey Wash**
1 frit 3134  
1 zircopax  
3 copper carbonate

---
5

**BB's Green Wash**
1 frit 3134  
1 zircopax  
3 chrome oxide

---
5
**Jackie's Base Glaze with no gerstley borate (BB) cone 04**

20  frit 3134  
10  magnesium carbonate  
 8   borax  
10  lithium carbonate  
 5   nepheline syenite  
 5   EPK  
42  silica  

100  
Add: 5% zircopax.  
Add: 3% bentonite + flocs to prevent bad settling in the bucket.  
This is Bettelou Brown's reformulation of the classic Jackie Rice base glaze, but without any gerstley borate in it. As of June, 2000, gerstley borate is no longer being mined. This variation preserves the waxy matt surface and the good color response of the original glaze.

**BB's Crusty Cracks I - cone 04**

34  magnesium carbonate  
43  frit 3134  
19  nepheline syenite  
14  kaolin  

110  
Brushed on thick, it gives big cracks. A thin application gives a matt surface with cracks in some areas. Color: white. Try adding 15% of a mason stain for good color.

**BB's Crusty Cracks II - cone 04**

34  magnesium carbonate  
33  frit 3134  
19  nepheline syenite  
24  kaolin  

110  
Brush on thin, one coat only!! Makes a matt surface with small cracks. If you put it on too thick, it will peel off after firing. Color: white. Try adding 15% of a mason stain for good color.

**Beaded Glaze - cone 04**

66.66  magnesium carbonate  
53.34  borax  
66.66  gerstley borate  
13.35  flint  

200.01
This is a wild glaze. Applied thickly in just the right way, it crawls and beads for an interesting effect. The plain recipe is tan.

For the following color variations, add the specified ingredient to the base recipe:

1. Blue Bead
Add 2% cobalt carbonate.

2. Kelly Green Bead
Add 2% chrome oxide.

3. Teal Bead
Add 1% cobalt oxide + 1% chrome oxide.

4. Cracked Lime
Add 2% nickel oxide. The surface of the glaze will be a little drier - more cracked than beaded.

5. Dark Cracked Tan
Add 2% yellow iron oxide. The surface of the glaze will be a little drier - more cracked than beaded.

**Icy Opaque Matte - cone 04**

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>30</td>
<td>Frit 3124</td>
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<tr>
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<td>EPK</td>
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<tr>
<td>40</td>
<td>Whiting</td>
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<td>100</td>
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</table>

Add: 3% bentonite

Flocs (this glaze really sinks to the bottom of the bucket if you don’t use bentonite and flocs).

For colors, try adding:

- 4% stain
- or 3% raw oxides

For specks: *After* sieving, add 4% granular manganese.