LOWFIRE

**Crusty Glaze - BB 1 cone 04**
30 gerstley borate  
50 kaolin  
20 cryolite  

100  
description: matte, brown, with big, uneven cracks

**Crusty Glaze - BB 2 cone 04**
40 gerstley borate  
10 kaolin  
20 cryolite  
30 titanium dioxide  

100  
description: matte, yellowish, with even cracks

**Crusty Glaze - BB 3 cone 04**
20 gerstley borate  
20 kaolin  
40 cryolite  
20 titanium dioxide  

100  
description: matte, yellowish, with even cracks

**Crusty Glaze - BB 4 cone 04**
34 gerstley borate  
33 cryolite  
33 titanium dioxide  

100  
description: matte, yellowish, cracks are even but fewer in number

**Jackie's Base Glaze cone 04**
38 gerstley borate  
10 lithium carbonate  
5 nepheline syenite  
5 EPK  
42 silica  

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. ROBIN’S EGG (Jackie’s Base)
2% copper carbonate
3% yellow stain

8. BROWN
12% red iron oxide stain

9. 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 pots!

**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 (Pete’s Purple Robin’s Egg)**
   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**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>silica</td>
</tr>
<tr>
<td>2</td>
<td>EPK</td>
</tr>
<tr>
<td>3</td>
<td>gerstley borate</td>
</tr>
</tbody>
</table>

6 parts by weight
A sturdy, dependable clear glaze.

**Transparent Glaze to fill a bucket**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>833</td>
<td>flint</td>
</tr>
<tr>
<td>1667</td>
<td>EPK</td>
</tr>
<tr>
<td>2500</td>
<td>Gerstley borate</td>
</tr>
</tbody>
</table>

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
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**

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<tbody>
<tr>
<td>70</td>
<td>frit 3110</td>
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<tr>
<td>10</td>
<td>wollastonite</td>
</tr>
<tr>
<td>20</td>
<td>bone ash</td>
</tr>
<tr>
<td>5</td>
<td>frit 3124</td>
</tr>
<tr>
<td>5</td>
<td>EPK</td>
</tr>
</tbody>
</table>

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**

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>100</td>
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</tr>
<tr>
<td>4</td>
<td>barium carbonate</td>
</tr>
<tr>
<td>15</td>
<td>EPK</td>
</tr>
<tr>
<td>20</td>
<td>zircopax</td>
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</table>

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**

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>50</td>
<td>wollastonite</td>
</tr>
<tr>
<td>50</td>
<td>gerstley borate</td>
</tr>
</tbody>
</table>

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

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>3</td>
<td>gerstley borate</td>
</tr>
<tr>
<td>1.5</td>
<td>zircopax</td>
</tr>
<tr>
<td>2</td>
<td>rutile</td>
</tr>
</tbody>
</table>

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

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

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

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

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

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

**Wash of Pink cone 04**

90 frit 3134  
20 ball clay  
20 zircopax

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

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

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**
76.3  
  frit  3110  
  5.7  
  gerstley borate  
  7.1  
  EPK  
10  
  flint  
2  
  bentonite  
------------------------------------------------  
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**
80  
  GB  
20  
  bone ash  
------------------------------------------------  
100  

**Terra sigillata cone 04**
1170  
  EPK  
230  
  ball clay  
  7  
  calgon  
  14  
  cups of water  
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 nepheline 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

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

117

**Michelle's Bubble Glaze cone 04**

30 frit 3195  
30 EPK  
40 cryolite

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

100
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**

<p>| | |</p>
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</thead>
<tbody>
<tr>
<td>34</td>
<td>frit 3124</td>
</tr>
<tr>
<td>22</td>
<td>talc</td>
</tr>
<tr>
<td>22</td>
<td>ball clay</td>
</tr>
<tr>
<td>22</td>
<td>kaolin</td>
</tr>
</tbody>
</table>

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

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

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

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

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

**BB's Green Wash**
1 frit 3134
<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>zircopax</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>chrome oxide</td>
<td>3</td>
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</tr>
<tr>
<td>Jackie's Base Glaze with no gerstley borate (BB) cone 04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>frit 3134</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>magnesium carbonate</td>
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<td></td>
</tr>
<tr>
<td>borax</td>
<td>8</td>
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</tr>
<tr>
<td>lithium carbonate</td>
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<td></td>
</tr>
<tr>
<td>nepheline syenite</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>EPK</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>silica</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Add: 5% zircopax.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add: 3% bentonite + flocs to prevent bad settling in the bucket.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This variation preserves the waxy matt surface and the good color response of the original glaze.</td>
<td></td>
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</tr>
<tr>
<td>BB's Crusty Cracks I - cone 04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>magnesium carbonate</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>frit 3134</td>
<td>43</td>
<td></td>
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<tr>
<td>nepheline syenite</td>
<td>19</td>
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</tr>
<tr>
<td>kaolin</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB's Crusty Cracks II - cone 04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>magnesium carbonate</td>
<td>34</td>
<td></td>
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<tr>
<td>frit 3134</td>
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<td>nepheline syenite</td>
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<tr>
<td>kaolin</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beaded Glaze - cone 04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>magnesium carbonate</td>
<td>66.66</td>
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</tr>
<tr>
<td>borax</td>
<td>53.34</td>
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</tbody>
</table>
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>
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<tbody>
<tr>
<td>30</td>
<td>Frit 3124</td>
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<tr>
<td>30</td>
<td>EPK</td>
</tr>
<tr>
<td>40</td>
<td>Whiting</td>
</tr>
</tbody>
</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.