recipes

Simple Cordierite Flameware Body (Courtesy of Dave Pier)

Cone 11

Pioneer Texas Gray Talc	33.33	%
Coarse Fireclay Grog	33.33	
OM4 Ball Clay	32.33	
Bentonite	1.01	
	100.00 %	

Low expansion glaze for flameware bodies (Courtesy of Dave Pier)

Cone 10–11

White Talc	14.2	%
Whiting	3.4	
Spodumene	47.0	
Kaolin	5.5	
Silica (200 mesh)	28.9	
Bentonite	1.0	
	100.0 %	

Flameware Clay Body (From Robbie Lobell)

Cone 10

G-200 Feldspar	10	%
Spodumene	30	
Pyrax (HS)	10	
Fire Clay (Hawthorne)	25	
OM4 Ball Clay	25	
	100 %	
Add: Red Iron Oxide	1.75–2	%
Grog (48 mesh)	5	%

Interior Glaze Ann's Kaki (Ann Stannard)

Cone 10

Bone Ash	9.2	%
Talc	5.6	
Whiting	6.6	
Custer Feldspar	43.9	
Red Iron Oxide	9.7	
EPK Kaolin	5.6	
Silica	19.4	
	100.0 %	
Bentonite	2.0	%

Exterior Glaze—Robbie's Y Glaze

Cone 10

Whiting	28.00	%
Custer Feldspar	48.37	
EPK Kaolin	10.74	
Silica	12.89	
	100.00 %	
Add: Titanium Dioxide	8.60	%
Bentonite	2.15	%

This has been altered from Karen's Y Glaze, which uses G-200 feldspar instead of Custer feldspar and rutile instead of titanium dioxide. All percentage weight amounts are the same.

Gold: Titanium Dioxide . . . . . 5–8 %

Robbie Lobell's ovenware set with casserole/covered pot, made with Flameware Clay Body, glazed with recipes listed above. Lobell's article and recipes on flameware originally appeared in Ceramics Monthly, December 2008.

Flameware Clay

Editor's Note: The clay used to make flameware is specifically formulated to withstand the high thermal shock of placing a pot over an open flame. Clay recipes designed for ovenware are not the same as for flameware, as the former does not experience the same stresses. Normal clay bodies are not suitable for making flameware. To learn more about the requirements of a flameware body and the testing that needs to be done by each potter interested in developing a line of flameware to ensure its safety in use, visit the webpage for the January/February issue of PMI (http://bit.ly/pmiJanFeb2012) and click on the PDF versions of the Summer 1999 PMI article "Testing Ovenware" by Dick Lehman below the "Food Friendly Flameware" article description.

There's no reason to be afraid of making flameware, but you will need to be diligent and careful as you are ultimately responsible for the performance of the product you make and sell. Your research needs to include a lot of time to conduct thorough testing. The testing that needs to be done before a potter markets flameware includes physical thermal shock testing and dilatometry testing of the clay's and glaze's coefficient of thermal expansion. Both can be done for you at a testing lab.

Testing Labs

1. There is a directory of labs on the ASTM (formerly known as the American Society for Testing and Materials) website: www.astm.org/LABS/search.html

2. Orton Ceramics: www.ortonceramic.com/testing/tests/whitewares.shtml

ASTM Testing Standards

To learn more about the standards for ceramics and glass developed by ASTM visit: www.astm.org/Standards/glass-and-ceramic-standards.html