

ANDERSON RANCH

A R T S C E N T E R

P.O. BOX 5598 · SNOWMASS VILLAGE, COLORADO 81615 303/923-3181
5263 OWL CREEK ROAD

PORCELAIN ENAMEL - a fired ceramic/glass making material - 1500°F

- PROCEDURE - metal surface must be clean of dirt, oil, grease, etc.
- if possible sandblast and chemcially wash metal using a mild acid.
 - apply first ground coat and fire, then apply cover coat for color repeating cover coat application until color results. (ground coat develops oxide to oxide bonding which allows for a better fit between metal and cover coat)
 - firing time should be reasonable fast with the kiln already preheated to around 800°F. Metal should also be warmed-up after enamel coats are applied. Firing should be in a strictly oxidation atmosphere in either electric or gas kilns.

GROUND COAT FORMULA

Fritt 3110 or 3124	1,000 gm
Clay (China clay)	70 gm
Silica	100g gm
Bentonite	1.88 gm
Granular Borax	1.25 gm
Magnesium Carb.	1.25 gm
Sodium Nitrite	.63 gm
Water	600 cc

COVER COAT FORMULA

Fritt 3110 or 3124	1,000 gm
Clay (China clay)	40 gm
Bentonite	2.5 gm
Potassium Carb.	2.5 gm
Sodium Nitrite	2.5 gm
Gum	.30 gm
Color oxides	-as desired-
Water	450 cc

Milling time - 6 to 10 hours

Specific gravity - 1.12 to 1.74 (for spraying)

Color oxides - normal oxides can used to effect color such as copper and cobalt, however commerical stains seem to be more effective in producing color, suggested percentages range from 5% up to 30% or more. Achieving correct colors may take many tests.