

A

RECOMMENDED MATERIALS

The following materials are those we have found to be readily available in North America. They also are relatively stable in composition from batch to batch. Although most of these materials contain several oxides, we have chosen to list them by their primary use.

Caution: Many of these material are hazardous either because they contain free silica or because they are toxic in their own right. Learn about them and take appropriate safety precautions before using them. Always ask your supplier for a Material Safety Data Sheet (MSDS) when you buy a new material and keep those MSDS sheets near at hand.

There are two materials in the following lists whose potential hazard goes beyond the warnings in the above paragraph. Nickel oxide is on the National Institute of Health (NIH) list as “reasonably anticipated to be a human carcinogen”. For more information visit the NIH site at www.nih.gov/ Extended inhalation of manganese-containing dust and/or fumes is known to result in chronic manganese poisoning. Symptoms can resemble those of Parkinson’s Disease. For more information see Sax Dangerous Properties of Industrial Materials. Both materials can be handled safely, but know what you are doing.

Primary Sources of Fluxes

G-200 Feldspar

Custer Feldspar

Nepheline Syenite

F-4 Soda Feldspar

Cornwall Stone

Whiting

Dolomite

Talc

Bone Ash or tricalcium phosphate

Wollastonite

Spodumene

Petalite

Strontium Carbonate

Magnesium Carbonate

Zinc Oxide

Ferro Frit 3110

Primary Sources of Boron

Cadycal

Ferro Frit 3124

Ferro Frit 3134

Ferro Frit 3195

Ferro Frit 3269

Ferro Frit 3278

Fusion Frit F12

Primary Sources of Alumina

EPK

Bell Dark

Kentucky OM-4

Ferro Frit 3292

Primary Sources of Silica

Silica (or Flint or Quartz)

Colorants, Opacifiers and Processing Additives

Bentonite

Zircopax

Superpax

Rutile

Titanium Dioxide

Tin Oxide

Red Iron Oxide

Cobalt Carbonate

Copper Carbonate

Chromium Oxide

Nickel Oxide (see cautionary note at beginning of this Appendix)

Manganese Dioxide (see cautionary note at beginning of this Appendix)

Materials that are Specifically NOT Recommended

Lithium Carbonate—Too soluble and difficult to control. Can lead to very serious shivering and, in some cases, crazing on the same pot. Levels under 2% are usually OK.

Barium Carbonate—Toxicity concerns

All Lead and Cadmium containing materials—Toxicity concerns

Gerstley Borate—Very nonuniform and questionable future availability

Colemanite—Very nonuniform and expensive when available.

Cryolite—Used for making blisters and craters in a glaze—not a desirable characteristics in functional glazes.