

# What Clear (Flux) Enamel Should I Use

Sometimes when using the clears people have questions as to which one to choose and why doesn't it totally clear on the copper? Clear enamel was previously referred to as Flux. Those of you who are jewelers know that flux in enameling has no relation to flux in jewelry making and they are not interchangeable, no matter how much you would like that to be true.

Let me address the clearing of the copper oxide first. When you fire clear enamel onto a piece of copper the oxide in the copper is dissolved into the enamel. If it is not heated long or hot enough you get little specs in the enamel. Those specs start off as black specs and progress to reddish brown and eventually they disappear. With unleaded enamels it is important to clear the specs before continuing on. If you don't, you may have a new design feature to your piece. So if you take your piece out of the kiln and see those specs, just put your piece back in the kiln and let it fire a bit longer.

As to which clear to use there are a number of choices in the unleaded Thompson colors. (The following is courtesy of Thompson Enamel)

**2007** This is a soft fusing clear that easily absorbs copper oxide. It also fuses with less time or temperature.

**2008** A low expansion clear used as a base coat for the crackle technique when Liquid Form Water Based enamels are used for the second coat. This enamel will not crackle on its own. It is also good for a cover coat when working on titanium white steel panels. It has low acid resistance so keep it only a short time in the pickle if you are using pickle.

**2009** This soft fusing clear will clear up on copper fairly fast. It may produce "break up" or "pull through" when a subsequent coat of enamel is fired high.

**2010** This soft fusing clear will clear up on copper on the first firing but requires more time and or temperature than 2009. It also may produce "break up" or "pull through" when a subsequent coat of enamel is fired high.

**2015** This is a medium fusing clear that has a gold color similar to Thompson lead bearing 1005 or 426. It works well under warm colors. On its own it imparts a soft golden color to the copper.

**2020** This clear does not "yellow" on silver. It should always be used when clear enamel is needed on silver as the first coat. It may also be used on copper and gold. It can also be used as a final cover coat in that it has a lower expansion than most of the other clears.

**2030** This is a great all-purpose clear. It works well under other enamels. You must fire this clear to get rid of all the copper oxide (the reddish brown color you may see in the enamel). Longer or hotter firings may be required.

**2040** This clear is harder than the clears above and is least likely to develop "pull through" when applying subsequent layers of enamel. You will also need to fire until all of the copper oxide has been dissolved before going onto your next coat.