Gold Paste Aura 22

Characteristics of Gold Paste Aura 22

Aura 22 is a gold paste especially designed for making gold decorations on the surface of PMC silver. Aura is derived from the Latin word Aurum meaning gold and 22 indicates that its assay value is 22 (Au 91.7%). Apply Aura 22 on the fired PMC and fire it again under the specified condition. You will obtain a thin layer of gold on the surface of silver. Polishing it with an agate spatula produces a beautiful gold colour. Aura 22 may be applied not only to PMC but to the surface of sterling silver, and it is possible to make a gold decoration on a ready-made silver accessory. It is quite easy to apply it to a glass surface or the glazed surface of china or porcelain. Although Aura 22 is a paste, it cannot be used for gluing unlike the PMC paste-type. * 22-karat gold of Aura 22 is an alloy of gold and silver.

Mechanism of Aura22

Aura 22 is bonded on the silver surface by a phenomenon called diffusion bonding. The mechanism of diffusion bonding is explained below:

- **Gold paste applied on Metal Clay**
- **Beginning of sinter**
  - Au starts to diffuse into Ag and v.v. (interdiffusion)
  - Particles of Au paste start to bond with each other by necking
- **Middle of sintering**
  - An Ag-Au diffused layer is formed
- **Completion of sintering**

Aura 22 and silver bond with each other using the diffused layer as an intermediary. In other words, the two do not bond without the formation of the layer. The layer is not formed unless the two stick to each other. If there is any foreign matter (abrasive, oil, etc.) or gap (air) between them, the layer is not formed, causing imperfect bonding. **A clean surface is essential.**
Metal Clay Methods for firing Aura22

Basically, all firing tools used for Metal Clay can be used. If firing is insufficient, the diffused layer cannot be well formed and causes imperfect bonding. If firing is excessive, diffusion develops excessively and gold does not appear on the surface. The best known method used are listed below:

**Electric Kiln**  
Appropriate firing temperature and time are shown in the chart below.

**Hand-held gas torch**  
Apply the diffusion flame (flame inside) to the piece and wait for five to ten minutes after the applied area turns red.

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**Metal Clay - Most often recommended Method for applying Aura 22**

**Hand-held gas torch**  
Apply the diffusion flame (flame inside) to the piece and wait for five to ten minutes after the applied area turns red. Refer to the preparation below.

**Preparation**: Do not tumble, brush or hand burnish your project after it has been fired. Try not to touch or handle it because the natural grease/oils on your fingers will inhibit the Aura 22 from fusing to the metal clay surface. Paint metal clay paste on to the area you want to apply Aura 22. The paste is used like a "primer". Dry the paste completely. Use a Soft Ivory tipped Clay Shaper to apply a layer of Aura 22 over the dried paste – allow to dry. Apply another coat of Aura 22 and dry completely. Torch fire the piece with a hand held torch for approximately 5 minutes – timed from when the piece has turned salmon pink/red.

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![Sintering range of Aura22](image-url)
When applying Aura 22 to sterling silver, you need to use a gas torch for firing. Other firing tools may fail to create the bond or the sterling silver may discolor or become brittle. The processes are explained in the flow diagram below.

For Sterling Silver
Note 1: If the base material discolors (oxidized) after firing, acid cleaning or mechanical cleaning using a file is possible.
Note 2: If the base material is brazed, the wax may melt when firing.
Note 3: Do not apply Aura 22 to plated items. Completely remove the plating, before applying Aura 22.