

## GOLDSTONE GLASS *by Joy Journey*

Goldstone glass mimics naturally-occurring aventurine quartz and aventurine feldspar. It is clear glass which contains tiny mineral crystals of copper, like metallic glitter.

It's easy to imagine that glass making is a bit like stirring up cookie dough: combine the ingredients in the correct proportions, pop them in the oven an appropriate length of time, and out comes the delectable product of your efforts. The author recently learned the "truth" about the rigors of making goldstone.... and it ain't as simple as making cookies. It's more like having Julia Childs create the perfect soufflé.

To make this article educational, we will learn two big words: "aventurescence" and "aventurization." These words technically describe the optical reflection created by goldstone glass. Both words are derived from the Italian "a ventura," translated "by chance," perhaps capturing the seemingly chance appearance of the copper crystals.

The creation of goldstone is credited to an accidental discovery by Italian monks in the 17<sup>th</sup> century. The Doge of Venice gave the Miotti family exclusive rights to produce goldstone.

The University of Pennsylvania has a 12<sup>th</sup> - 13<sup>th</sup> century Persian amulet of goldstone, so we know the process existed prior to the Italian records.

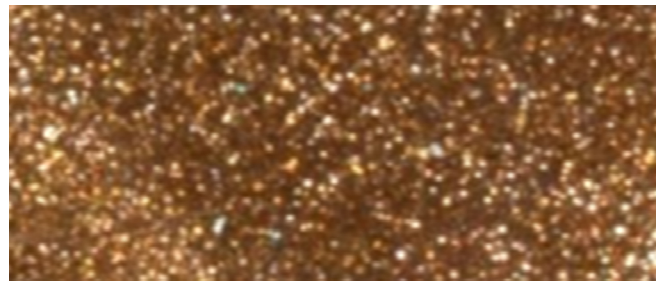
The creation of goldstone requires a carefully controlled process. The initial batch is melted together from silica, copper oxide, and other metal oxides that chemically reduce the copper ions to elemental copper. Materials are combined in a vat, sealed from the air, heated and maintained in liquid form at a precise temperature, allowing the metallic crystals to precipitate out of the solution. Once the precipitation is complete, the glass batch is allowed to cool. This solid piece of goldstone glass will have its dullest colors at the outside (smallest crystals) and the brightest (largest crystals) near the center.

Once goldstone is produced by this carefully controlled process, the solid glass can be reheated to be shaped for use in molds, lamp work and blowing.

In the NBS classification, goldstone is considered an "opaque" glass. The copper crystals in goldstone are so numerous they influence the apparent color of the glass body.

We are most familiar with goldstone appearing as a copper-colored glass. Glass is also created using this process with chromium oxide, which creates a green goldstone. The use of cobalt produces a blue goldstone. Manganese produces a purple goldstone.

When we look at our buttons, if the goldstone appears greenish we should not



**Goldstone set in sterling silver.  
NBS large. Division I.**



**Goldstone wafer button with a  
brass escutcheon depicting a  
pansy. NBS medium. Division I.**



**Two half circles of goldstone set in  
brass. Lovely intertwined border of  
brass, and a brass twisted triple rope  
detail across the button face.  
NBS medium. Division I.**

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jump to the conclusion that it is a chromium goldstone. It is most likely goldstone within a transparent green glass. Look closely at the crystals themselves. If they appear copper or gold in color, then the glass is the copper goldstone which we see most often. The crystals must be of other colors if they were created using the other minerals in the glassmaking process.

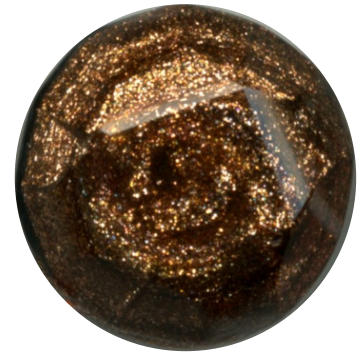
The author has buttons that have been called "green goldstone" and "red goldstone" and now knows that they are just copper goldstone under transparent green or red glass.

Goldstone appears in our buttons as the main base material, as glass buttons and also as glass set in metal.

In addition, goldstone embellishes other materials.



**Solid goldstone glass as a molded cross. Two-hole sew through. NBS small.**



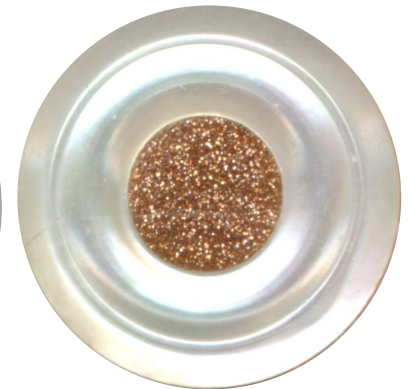
**Solid goldstone glass as a molded, faceted half dome. NBS small. Division I.**



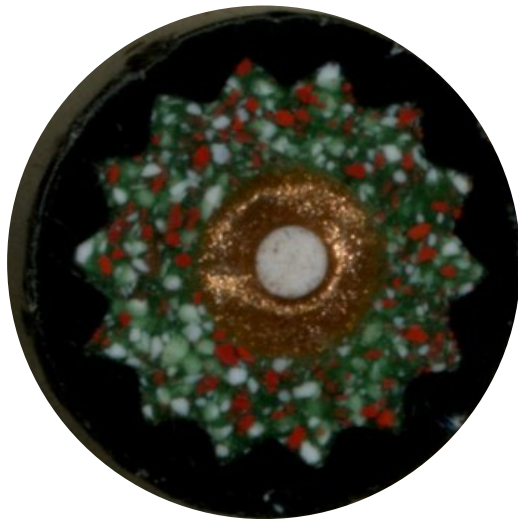
**Goldstone precision inlay within a black glass button. NBS small. Division I.**



**Goldstone disk inset in white glass. NBS medium.**



**Goldstone disk set in a carved iridescent pearl button. NBS medium.**



**This is a small black glass tile button. The star shaped tile is filled with small pieces of red, dark green, light green and white glass. The goldstone ring is a precision inlay into the center of the button. NBS small. Division I.**



**Goldstone set in a white metal collet enhances a carved and molded polymer button. NBS large (over two inches).**

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Goldstone overlays on glass take many forms. From ribbons to spatters, feathered and swirled, impressed cords, bands, and random shimmering enhancement.



Goldstone spatter overlay on a small black glass button with stamped white metal and cut steel OME. Division I.



Spatter goldstone overlay on a sea foam green glass cabochon set in sheet celluloid which imitates tortoiseshell. Openwork brass and cut steel further embellish this extra large button. NBS large.



Cords of goldstone impressed into a white glass ball when it was still hot and soft. NBS small.

Goldstone and mustard yellow overlaid on black glass. NBS small.



Goldstone and blue glass ribbons, feathered on white glass set in brass. NBS large.



Swirls of goldstone overlay on a black glass ball, with embedded foil bits. NBS small.



Goldstone swirled overlay on a black glass cabochon set in tinted and engraved brass. NBS medium.



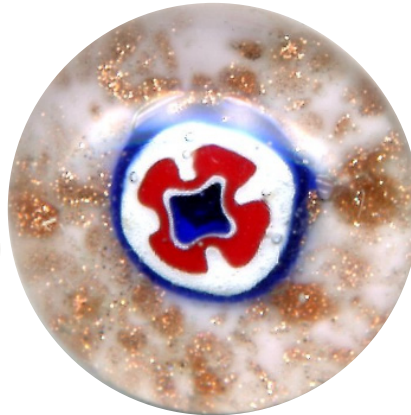
Pin shanked black glass ball, with a thin band of goldstone overlay, plus an overlay of two twisted canes of white and lavender glass. NBS small.

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Goldstone is also embedded in glass buttons, creating paperweights and other delectable specimens.



Goldstone encased in transparent glass with a black glass swirl overlay. NBS small.



White glass paperweight with a set up of spattered goldstone and a three-color glass cane. NBS medium. Weinman studio.



Overlay of two roses enhanced by goldstone on clambroth glass, set in a gilt collet, textured white metal inner border, and then a wound ribbon brass border. NBS medium.



Amethyst glass paperweight with a set up of spattered goldstone and a three-color glass cane. NBS medium. Weinman studio.

Buttons illustrating this article are from the author's collection, and are appreciated often for their delicate beauty.