

# Uranium Glass

By Samantha Neal

When the general public hears the word 'uranium,' they tend to think "nuclear warhead!" and then run in circles screaming. So, when one combines the word 'uranium' with the word 'glass,' they either become very scared or very intrigued. The intrigued people often become collectors of uranium glass after they find out about its radioactivity and its rarity as an antique glass.

The first things a person should find out about any interesting oddity are any risks. Collectors of uranium glass are usually overjoyed to find out that uranium glass is perfectly safe to be handled. While it is ill advised to ingest it, and advisable to use a modicum of common sense, there is no danger from the radiation of uranium glass. In fact, the danger from the small amount of radiation a human is exposed to while holding this unusual glass is less than the amount one would be exposed to while walking in direct sunlight. Also, the alpha radiation given off by the glass is almost completely blocked by a human's epidermal layer, so the type of radiation is safe as well as the amount.

Uranium glass has a rich history. The earliest use of it appears to date back to Ancient Egypt, since it was reportedly found in a pharaoh's tomb. It was beginning to be widely used in the early 1800's, although its formal discovery is usually credited to Josef Riedel in 1834. The next major part of the history of uranium glass occurs in the United States.



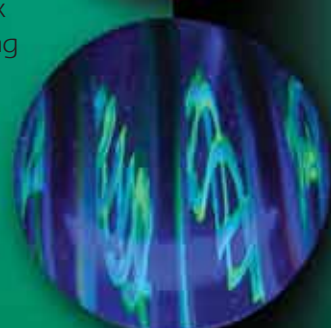
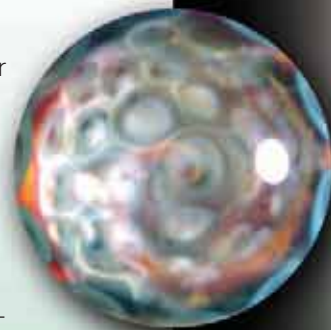
The most prominent US producer in the late 1800's and 1900's was the Corning Company based in New York. Then, in the late 1930's, production was ceased on some types of uranium glass and severely limited on others, due to the government research on nuclear fission. While the ban on production was lifted eventually, the manufacturers of uranium glass had lost their niche in the market, and, as a result, production is now almost nonexistent, leading to the rarity that has attracted collectors.

For the average person, a formal definition of uranium glass is usually desired at this point. Some glass experts would define uranium glass by its recipe: two or more pounds of uranium oxide for every 100 pounds of glass. Some art collectors would say that uranium glass is a greenish to yellow glass that was very popular in the early 1900's. Some uranium glass experts would say that it is impossible to define uranium glass since the general public uses it to refer to several types of glass. Technically, uranium

glass refers to borosilicate or Pyrex glass containing uranium oxide.

Borosilicate and Pyrex

glasses are hard glasses, meaning they become fluid at extremely high temperatures. Soft glass containing uranium oxide, which gains fluidity at a much lower temperature, is more acceptably referred to as Vaseline glass.



Other people would say that uranium glass's most defining feature is its unique property of glowing under an ultraviolet, or black, light. This property is a result of the ultraviolet radiation exciting the outer electrons of the uranium oxide contained in the glass to a point where they begin to release energy in a way that our eyes perceive as a ghostly green glow.

Uranium glass has a variety of uses. In the past, uranium glass was used primarily to seal electrodes into vacuum tubes, and in decorative pieces and dinnerware. Now, new technology has made vacuum tubes obsolete and new glasses have been developed that duplicate the color of uranium glass without keeping the fear associated with uranium. So, in the present day world, uranium glass is used mostly by artists whose pieces benefit from uranium glass's glow in a black light.

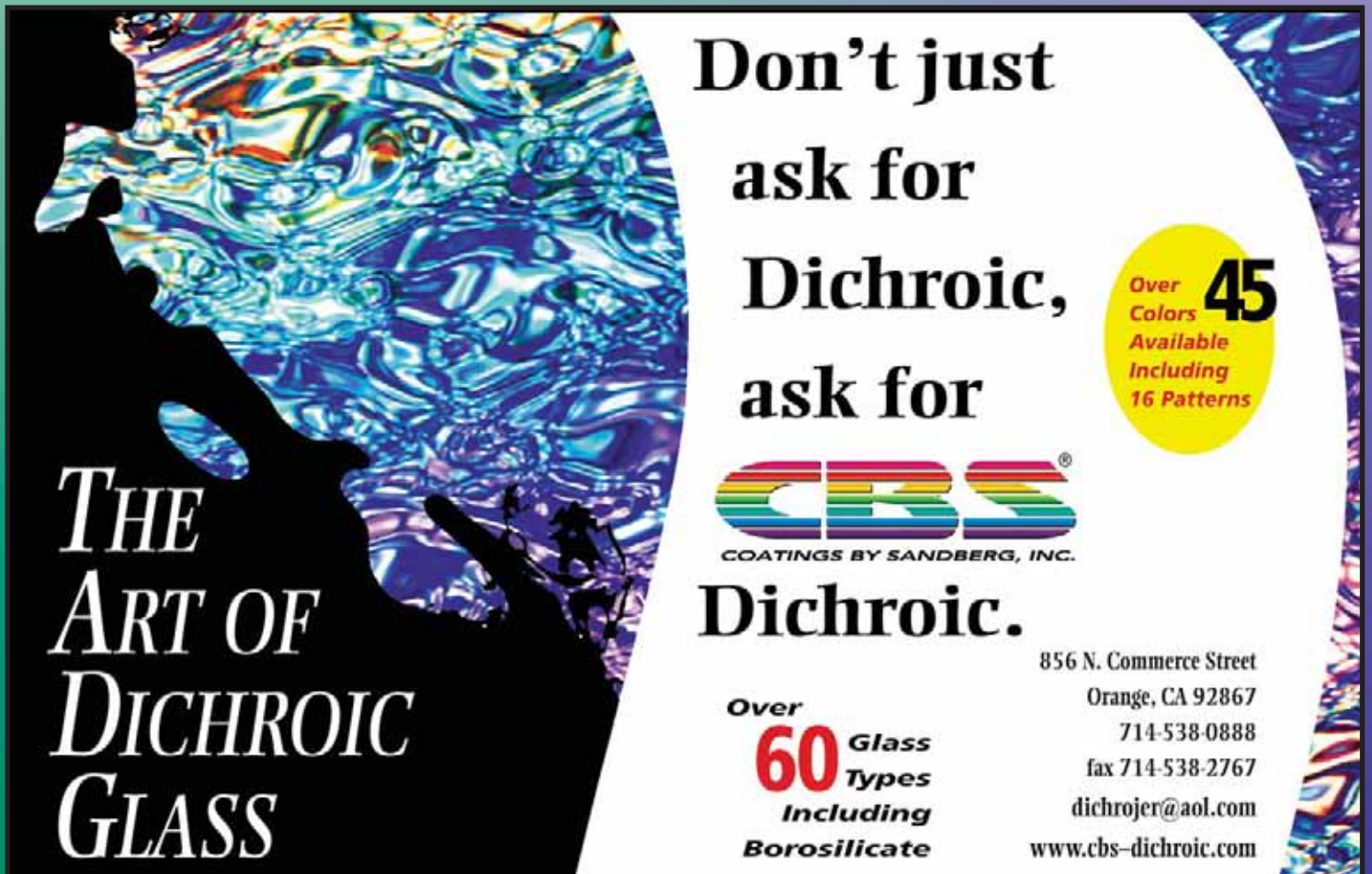
Scientists and some contemporary artists use it in glass-to-metal seals, since uranium glass is better than the clear glass available for the tricky procedure. While it can be difficult to find uranium glass today, it is not impossible. Ebay has the most readily available inventory of uranium glass, but there are still a few companies in the Czech Republic that are still manufacturing.

To sum up, while uranium glass is not for the average person, the people that are intrigued by it would find uranium glass an excellent collectable.

#### Guide to photos:


Makers of the antique uranium glass pieces are unknown. Contemporary marbles were made by Matt Carrigan of Namaste Glass.





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