

BRITISH BUTTERSCOTCH BAKELITE

I can't believe it's really bakelite!

Jocelyn Howells



Yes, these buttons really are phenolic resin, a type of thermoset plastic, which we commonly call Bakelite. However, these are cast directly into individual button molds -- as opposed to being cast into sheets or rods and machined into shape, as are the Catalin and Bakelite types we typically think of when we think "Bakelite". This direct casting process produces buttons quite different in appearance from those Bakelites that are machined from cast stock.

Great Britain seems to be the primary source of these buttons, so logically we can assume that they were made there. I believe they were made in small workshops, but some might also be of cottage industry origin. I was originally able to confirm their material identification thanks to George Gauthier of Connecticut, the gentleman who helped me with other plastic identification by non-destructive infrared spectroscopy.

Thanks to a dear English friend who gave me an old book about plastics that she thought I might find interesting, I am thrilled to learn more about these buttons, and so happy to be able to share the new information with you here. The book is "Plastics in the School and Home Workshop" by A. J. Lockrey. Curiously enough, although the book was found in Great Britain, it was published in New York. A note of interest, the cover illustration was courtesy of the Bakelite Corporation.



PAINTED; BUTTERSCOTCH

My book is the second edition, which was warranted by sufficient changes in hobby work in plastics brought about during the war years. In one of the new chapters, I made some exciting discoveries that pertain directly to what I've named the British Butterscotch Bakelites. For the first time, in 1946, new products were available for both professional and amateur craftsmen that enabled them to make their own molds by the rubber technique

from any object, to pour liquid plastic material into this mold, and cure it themselves (without formaldehyde hardening). I had surmised that this was the way our BBB buttons were made, but had no proof or confirmation until now. How exciting is this!



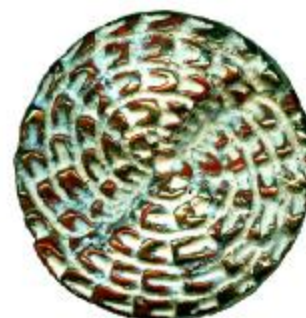
The vast majority of these appear to have been finished with a glaze, paint or metallization. Many of them show enough wear through the surface finish so that you can see the butterscotch color underneath. The shades of butterscotch range from light to dark. I've found just a few examples that have no finish of any kind on them.

It should be noted that I have found just a very few examples that are not one shade or another of butterscotch, but a sort of clambroth color. These hot-needle test exactly the same way as the butterscotch colored ones: impenetrable, needle tip leaves just a tiny burn mark, no odor. The reason for the absence of the typical Bakelite odor is that these buttons are not hardened in formaldehyde, and therefore cannot produce that particular odor.



Further study of this book reveals the reason for this coloration change. In order to harden the liquid phenolic resin, an accelerator (e.g. hydrochloric acid) was mixed in. The more accelerator used, the faster the cure and lighter the color of the finished product. Also, there were specific types of liquid (Catalin #700 Resin, for instance) that would produce a slightly bluish tinge water color (which I called "clambroth" color). Possibly that is what produced the few examples I've found that are not a butterscotch shade.

Because many of these buttons are metallized, I suspect that these were an attempt to furnish the clothing trade with buttons which looked like metal, but weren't, at a time when metals were scarce and expensive just after the war. In some cases the metallization is quite heavy -- like they are clad with a layer of actual metal, as opposed to being dipped in liquid metal or otherwise electroplated. You'll see one of the "clad" types illustrated here -- the sun face.



You'll notice on some of the examples that there appear to be bubbles, usually burst, on the surface. I've not no-



ticed this bubbly look on other kinds of buttons, so this could serve as a clue that you have a Bakelite button under the metallization. My new documentation points out this bubble formation as one of the concerns that had to be dealt with. If the resin and the accelerator were mixed too briskly, air bubbles had a tendency to form. As the material could set so quickly, the bubbles could be held in the liquid and any close to the surface could burst, creating a pitted surface. In commercial operations, a vacuum was applied to the mixed liquid just before pouring, which pulled the air bubbles out. So this explains and backs up my observation of surface bubbles (often broken) as one of the visual identification clues for British Butterscotch Bakelite.



If you find a button that appears to be metal-clad, as opposed to solid metal, as evidenced by slight wrinkling in places, or where the metal doesn't quite come right up to the shank, then you can assume the button has another material underneath. I like to peel back just a bit of the metal layer at the shank and test what's underneath. Afterwards, if you want, you can smooth the metal back in place, but I leave it open to show what's there.

When you discover Bakelite underneath, it is always exciting. Occasionally you'll find celluloid under the metal. Much rarer, though, would be a ceramic button so metallized. These buttons are classified according to the material they are, and not their finish, no matter how thick it might be, so it behooves us to learn how to determine their base material.

Most of these buttons have an inserted metal loop shank. A few have applied plastic shanks, which are original applications. I accidentally have knocked off a couple of the applied shanks, and underneath you can see the butterscotch colored Bakelite with none of the finish that's on the rest of the button.

To be continued in the next issue.

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