

Thermal or Light-Cured Color Fills

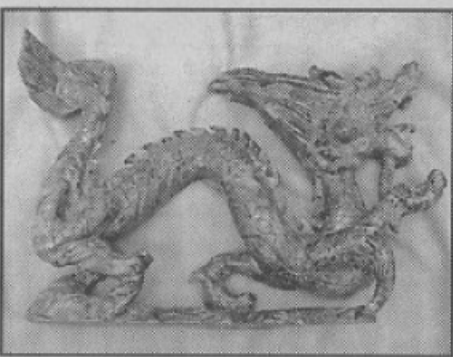
by DiAnna Tindell

What is a thermal or light-cured color fill, and why is it preferable to most other restoration techniques? Damaged collectibles can include porcelain, pottery, ceramics, crystal, glass, marble, certain frame types and a few others. For that reason, different color fill techniques will apply depending upon the material being restored. This article will endeavor to give a general understanding of the various thermal and light-cured color fill techniques available.

A thermal or light-cured color fill can be considered a major breakthrough for its durability, permanence, compatibility and excellence for many situations that would otherwise be limited to less desirable methods. For example, the marble dragon (see photos) had several missing parts: spiny horns along the back, fangs, points along the tail and claws, and a major section of the center body.

With varied techniques available to choose from, flexible dental molds were used to copy some parts. Then matching thermal multi-color fill was created to for the back of the dragon. The thermal materials were first mixed in separate containers as clear, white,

or other thermal powder base with a premium dry pigment color added. The next step was to test the color mixes by applying a small portion of each on a tile or plate with the matching product activator to create a ther-



Restored marble dragon. Many new parts were added in the thermal color fill process.

mally hard test sample for comparison. With a good selection of matched color, the powder base colors could be use be used in poured molds or built up as a solid part with a special brush applicator.

For this example of the dragon, the

parts were very opaque, solid, and hard in body type, and therefore not very demanding in layering effects. The areas were easily made as the heat-generated activation process only took a few minutes. Once the areas were all shaped nicely and some fine sanding done to smooth out any rough areas, a nice shine was added with the addition of a wax sealant. This dragon will be very durable and wear resistant for many years to come.

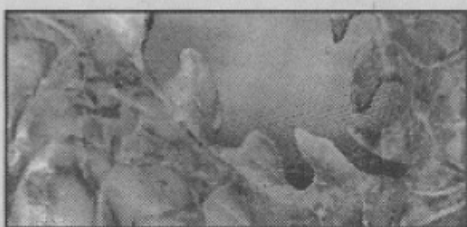
If the dragon had been restored with epoxy, paint, and glazes instead of the thermal powder/liquid activator product, then eventually the newly created areas would break down, peel off, crumble, or pop off as it is handled and cleaned over time. The thermal process is much stronger and longer lasting.

Other thermal product lines also come in a totally liquid two-part component for more opaque or glass-like body types. In addition, thermal product lines come in a soft, two-part, almost putty composition that can be sculpted and modeled somewhat like clay as its cure time progresses.

Another way to use a thermal color fill would be to apply it as an outer layer or top color coat. For example, a European tri-cylin-

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Color Fills...continued



Missing section of dragon replaced and perfectly matched with thermal color filling.

der pottery stand, possibly Majolica or Metlox, needed reconstruction of many sectional and complicated parts. Not only did this piece have chips, cracks, breaks and missing parts, but it also had structural damage that required strength to support inner iron bolts, iron rods, and a lot of weight with odd balance that demanded flexibility.

With all this to consider, it was necessary to apply many strong methods of inner structure support that did not require any consideration of color. Therefore, the piece was completely reconstructed and filled in with a strong base of gray-white supportive material before considering any thermal color fills.

With the piece already having an overall base pottery coloration of gray-white, an outer layering of thermal color worked perfectly. Again, thermal base powders were mixed with premium dry pigment colors for test colors of blues, browns, and other earthy variations. With a special applicator

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Brushing on thermal curing color fill.

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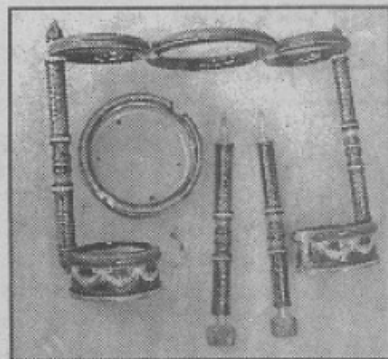
brush and the various thermal color powders, the liquid activator was hand painted with the color powder base on the areas needed for a thermal cure. Some fine sanding was needed after the thermal curing, and finally a shiny wax seal was added over these color topcoats for added protection.

In most cases, a light cure process is best served for an object that requires more translucent, glass-like qualities rather than opaque. This is not to say that a light cure process can't be used in all instances. There are many different types of lights. Some are more powerful and/or mobile than others.

The light curing products also come in a wide range from a low-cost glass filler that can be purchased in hardware stores to a more expensive grade dental product used in the formulation of teeth. These products vary in strength, reliability, and long-term wear. The dental systems are most desirable due to the record of testing and the exact science in usage, strength and reliability.

The beauty of dental light cured restores is the instant hard fill, high gloss finish, strong adhesion and durable surface. One thing to keep in mind is that dental products are expensive, so plan to pay more for a dental restoration technique. Once again, this process is so much better than a restore that may be a fill of epoxy (or some other substance), hand painted over or airbrushed, and finally glazed with some top clear coating that will eventually be scratched or washed or worn off over time.

Finally, a thermal or light cured color fill is great, but it isn't always the perfect solution to every restore. Some restorations require more than just a few fills of color to create an invisible restore. For those damaged objects that need a gradual blending, layering, feathering, texturing, or other surface technique requiring more creative work, a simple color fill is usually not enough. An expert professional restoration specialist can assist in this determination prior to having any processing done.



Before shot of old European mystery object, before restoration.



Restored & assembled planter or pottery stand.

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