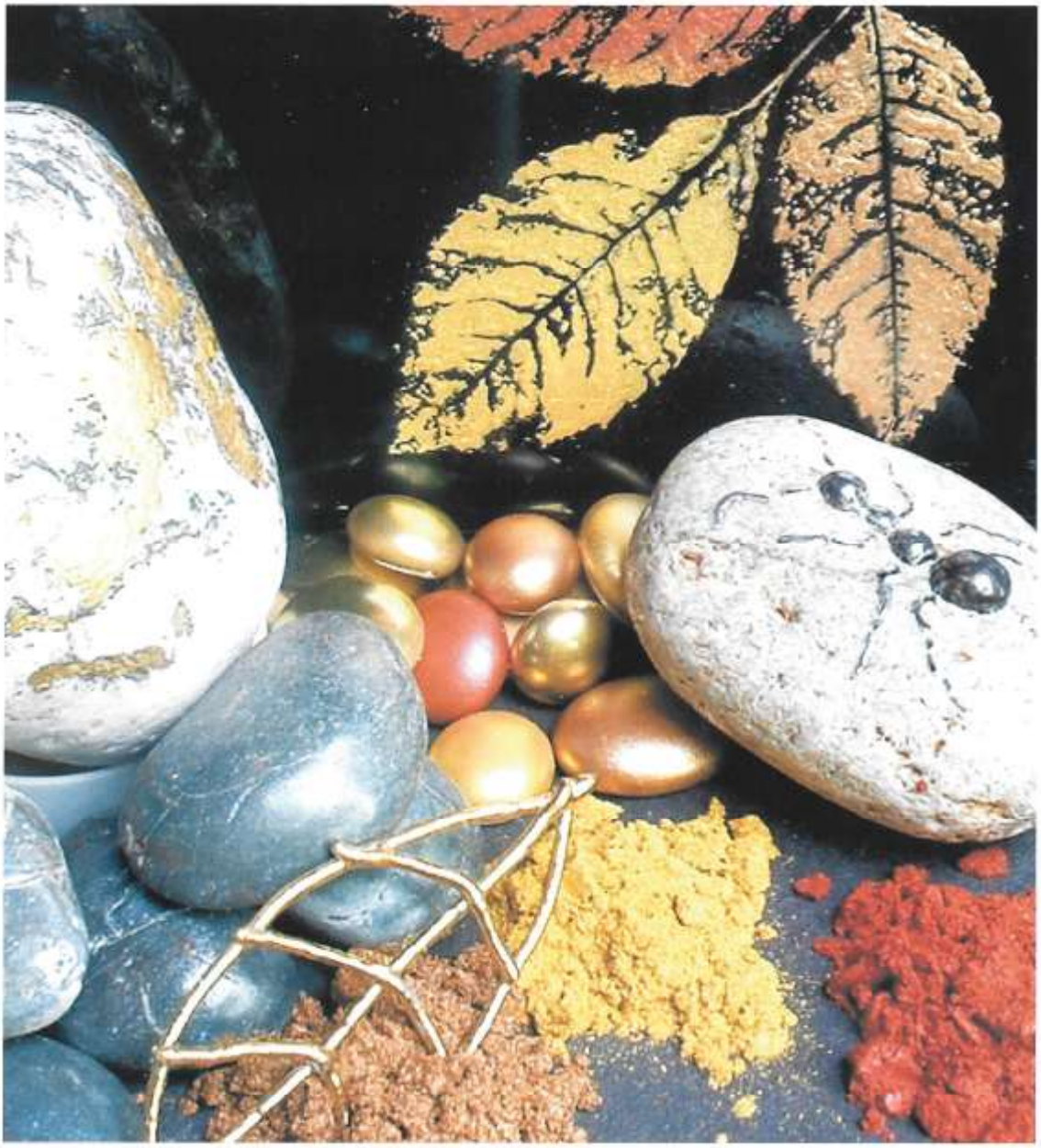
HELD HOLLAND



Ultra Metallics
and
Non Ping Off raised paste powder
information leaflet

Ultra Metallics and Non Ping Off raised paste powder

What are "Ultra Metallics"

We refer to these as "UM" pigments.

They are a vibrant version of our standard range of *satin metallic colours (02-1410 to -1480 and 02-1700 to -1760)*

The UM pigments can be fired on both china and porcelain up to 780ºC

We have 5 UM pigments in the range, Gold, Bronze, Burgundy, Silver and Silver Glitter both fluxed and unfluxed.

Unfluxed	Fluxed	
03-1800	03-1801	-Gold
03-1810	03-1811	-Bronze
03-1820	03-1821	-Burgundy
03-1830	03-1831	-Silver
03-2300	03-2301	-Silver Glitter

Fired at 760ºC
- at higher temperature the pigments can sink into the black and lose their intensity just like when using bright gold-

How are **Ultra Metallics** used?

When mixed ***into*** a medium the shiny metallic flakes are encapsulated, in the layer you are applying, take on a satin sheen and are quite durable.
When dusted ***over*** an area they bond *"onto"* the surface, reflect more light, and really shine.

-Two ways of covering an area with fluxed UM-

1) painting on - mix with M16 (60-016) water based medium and add water to achieve a "thin-cream" consistency. Use a soft leafer like 2702-3A to lay on the mix using single wet parallel strokes moving across the area to be covered. If you then leave to dry on a radiator, designs can be scratched out as explained later on in this leaflet. This is especially effective if you are working over a dark background *-fig.1.*

The same thin mix can be delicately applied over **unfired** lustre with a feather tip or a fine brush allowing the individual particles to glitter *- fig.2.*

It can also be used instead of burnishing gold to create "fairy lustre" designs over **fired lustre** work *-fig.3.*

A wet mix of UM self marbles by introducing a spot of washing up liquid. *-fig.4.* The same mix can be pulled into wet colours as shown using UM Gold pulled into black *-fig.5.*

2) Dry grounding - almost any viscous medium or oil can be used to prepare an area for dry grounding. UM pigments are extremely fine and only a thin layer is required.
The M2 Copaiba balsam (art.nr. 60-002) is suited to the purpose, producing a uniform cover comparable to the quality of the solid colour decal sheets we screen print. M14 thin open medium (art.nr. 60-014) also works well.

Load a soft clean brush with a small amount of M2 and pull out **thinly** over the area to be dusted. Check that all the covered area has a wet 'shine' with no gaps.
With a thin medium any brush strokes soon spread and disappear so there is no need for sponging, which inevitably introduces small dust particles.

Tip a little pile of UM pigment onto the coated area *-fig.6-* and use a synthetic brush such as the F36 to spread the pile, taking care not to let the hairs of the brush touch and disturb the oily surface.
When the pile has generously covered the area you can then use the tip of the brush to gently pad down any little clusters *-fig.7.*


fig.6

Tap off any excess, catching it on a sheet of creased white paper so you can easily funnel it back into the pot.


fig.7

Finally, gently waft off all loose pigment with the F26 synthetic fan brush *-fig.8.* The fine UM pigments tend to get embedded in natural hair brushes and are difficult to clean so synthetic brushes with their smooth hair are ideal.


fig.8

Just rinse out in a little meths and all the UM particles will drop out to the bottom of the pot. Dry the now clean brush with a hair dryer and you can move onto the next colour in seconds.

Instead of the M2 you can also use M16 (art.nr. 60-016), but this must be sponged all over after brushing on and then padded with a clean dry sponge to produce a velvet-like surface suitable for dusting.
M16 dries and is more suitable for scratching out as the dry surface can be marked out with your design using a pencil.
For the Olympic torch swirls *-fig 1*, we found the red carbon paper (art.nr. 77-0011) better than the black graphite paper for transferring the design.


fig.9

-To dust over raised work-

a) Apply the 05-3700 Non Ping Off raised paste powder ***-3700-***, mixed with M16 using a brush or a mini piper and dust over with UM pigment *-fig.9.*


fig.10


fig.11

b) Paint a thin mix of #1 flux (05-0010) and M16 over a leaf *- fig.10.* Position the "wet side" of the leaf on your china and gently press down with a pad of tissue before carefully removing with tweezers, making sure the leaf stays in one position to preserve the definition *-fig.11.*
Dust with the UM as before.
A surprisingly small amount of the mix is required and the second "print" without re-coating often gives better results. *-3700-* works well but the #1 flux is crisper. *Fig.12* shows a leaf print dusted with Ultra Gold. Once you get the idea, try dusting just parts of the wet leaf area with one colour and then carefully introducing a second colour over the remaining wet area.
You can partially blend the colours where they meet *-fig.13.*


fig.12

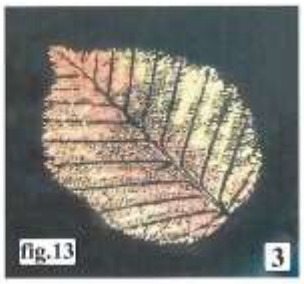


fig.13

3) Using UM pigments as a base "canvas" to paint over

A fired solid area or blended combination of fluxed UM pigments can be used as a background canvas for over-painting or penning with onglaze colours.

4) "Swirled effects" using methylated spirits and UM pigments

To produce interesting swirled effects, wash methylated spirits over a flat item like a black tile. Introduce a small amount of UM powder from the tip of your palette knife and then either dab with your finger *-fig.14-* swirl with your knife or streak with a brush *-fig.15.*

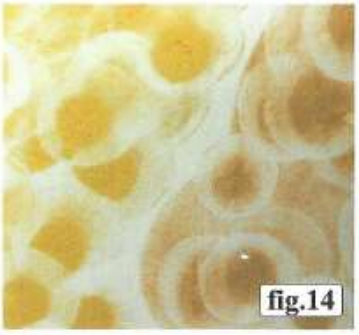


fig.14


fig.15

5) UM Decals

UM pigments lend themselves to decal printing and are fired at about 780ºC on both china and porcelain.
So far we have printed solid colour sheets, skeleton leaves and a leopard print using Ultra Gold and Matt Black as shown below.

6) UM pigments can also be used over bisque or unglazed surfaces

To enable the pigments to adhere they must be used along with -3700- "Non Ping Off" so you should paint a thin mix of M16 and -3700- powder over the areas to be dusted. Alternatively you could add UM pigment to the above mix and paint directly onto the bisque. The roses on the porcelain vase are unglazed. Dusting produces a rich satin finish. Painting results in a paler, more shiny texture as used to highlight the rose petals *-fig.16.*

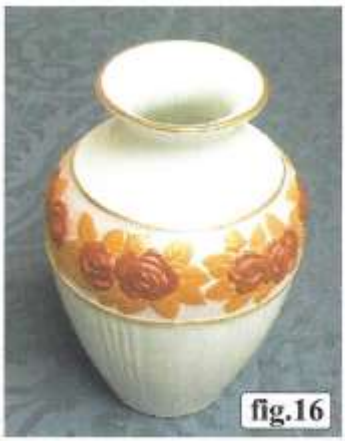


fig.16

-3700-
Non Ping Off raised paste powder

As its name suggests adheres extremelly well to porcelain and china. When applied sparingly it has a fine texture which creates a sparkly effect when overpainted with precious metal lustres L10, L11, L15, L16, L17. It can be stained with other colours to produce a thick shiny paste which can be used liberally on porcelain.

Best mixed with M16 water based medium. It works well for all applications, has a pleasant sweet smell and brushes are simply cleaned by washing out in warm soapy water.

So, in the following text, when we refer to -3700- mixes, we mean it has been mixed with M16 and perhaps a little water for an extra thin application. Originally it was developed by Held ***as a raised paste to adhere to porcelain*** without springing off.
A thick mix can be laid on either with a brush or with the mini piper.
In order to adhere, the piped "worm" should be soft enough to flatten where it is in contact with the china but not spread and lose its hemispherical domed cross-section.
It can be applied white or tinted using a ***very small*** amount of onglaze colour. Too much additional colour causes it to lose its elastic property and become brittle. Whilst still wet, the raised design can be dusted with metallic and other colours. After firing to 800ºC, undusted white -3700- can then be gilded with precious metals and fired at 760ºC

Other interesting uses of the -3700- powder

1) The -3700- can also be fired onto ***unglazed*** ware without springing off. Which resulted in trying it as ***an effective "glue" for repairing china and porcelain*** when fired to 780ºC. Using this technique we "glued" bits from a broken bauble onto a saucer to make a quirky conversation piece. The "creation" was fired to 800ºC over 6 hours and slowly cooled. After dusting with metallics and gilding, the piece was carefully fired to 770ºC.

2) The realisation it could be used as a ***low fire glaze on unglazed surfaces*** such as a terracotta plant pot or any bisque surfaces. Simply wash a thin creamy mix of -3700- over all, or parts of, the unglazed surface and fire to 800ºC. If applied too thickly on a dark coloured clay it will look slightly milky.
The "glazed" surface can then be used in much the same way you would decorate china, with the advantage of creating contrasting matt and shiny areas.
It is receptive to most of the techniques used to decorate china and porcelain including lustres and precious metals.
You can apply water-slide transfers and texture decals, paint or pen on designs using onglaze colours and pipe on raised -3700- or "I"relief.
In short, the -3700- fired at only 800ºC produces a comparable glaze to one which is fired at over 1000ºC.

Transfers with plenty of colour such as solid colour sheets will actually work straight onto the bisque. To apply a backstamp to the base of an unglazed item, first wash on a thin coating of -3700-, allow to dry, then apply the transfer over the washed area and fire at 800ºC.

Simple designs from nature can also be applied onto a bisque surface by pressing a leaf into a thin mix of -3700- as shown in *figs. 10 and 11* and abstract designs can be applied in the same way using a sea sponge or even bubble wrap.

3) To form globules, a very thick mix of -3700- is required. Transfer the thick, almost crumbly, mix onto a sheet of white, non glossy paper and continue to cream with a small palette knife.
The paper will absorb more moisture from the mix. It has to be dry enough not to stick to your hand but moist enough not to behave like plasticine.
Once you have the right consistency roll the dough into little balls about the size of a pea or smaller and store them in a sealed jar for future use.


fig.17


fig.18

Use a small dab of -3700- mix to stick the beads onto your glazed or unglazed surface. When fired to 780ºC, the -3700- beads vitrify and pull into perfect spheres ready for gilding.
Warning! If the beads are more then 5mm across they will droop due to gravity on a vertical surface ***-fig.17-*** but do produce interesting tear-drop shapes. -3700- balls were also used for the "ant on the rock" shown prior to firing ***-fig.18***.

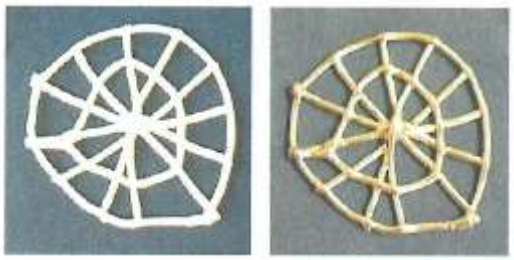
Fig.19 shows the globules on a porcelain blank after being picked out with shiny platinum.

4) Having now established -3700- can be used to make beads to fuse onto china we wondered how a larger lump of -3700- dough would behave when fired to 780ºC.
To stop it sticking, sprinkle some alumina powder onto the batt. We really expected it to shrivel like a prune but to our delight it pulled into a beautiful **pebble shape**. These can be decorated with UM pigments or with precious metals and used as eye catching raised features fired on a bisque vase.

Above- Close up of -3700- "pebbles"fired onto a brisque vase. Mini piper filed with -3700- gilded surround, UM backgrounds with Silk Matt Gold, Shiny Platinum and Copper Lustre coated pebbles.

5) Following on we tried to pipe **lattice-work** shapes. The piping was achieved using the mini piper(76-0050) filled with -3700-. We had to cut back the nozzle to make a 2mm extrusion hole. The resulting test pieces are remarkably strong and we feel sure this technique will prove to have lots of artistic applications in the future.

*Pipe -3700- onto a bed of alumina (picture above left)
*Trim off overhanging stands with a scalpel (above right)



*Fire to 800ºC(above left)
* Gild with Bright Gold and fire to760ºC (above right)

6) -3700- can even be used **to glaze rocks** from the beach. First find some suitable candidates -not sandstone, porous rock or black slate but a hard marble-type stone. Coat with a wet mix of -3700- and place on a batt washed shelf at the bottom of your kiln.

To be safe, position another shelf over the rocks in case they split open during a slow firing to 780ºC. We understand they had a pretty hot time in their distant past and so far have encountered no real problems firing rocks. However, we have to add that any such experimentation is at your own risk. As shown on the front cover you can now add gold veins using precious metals, lustres or the Ultra Gold pigment.

Coat stone with -3700- mix, stick on glass fragments using a spot of -3700-mix - fire to 800ºC **NOTE: When firing both glass and -3700- beads 800ºC is about the right temperature but always do a test firing first with new materials as each kiln fires differently**

Text and photographs by Chris Balmforth
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