

PROCOLOUR GUTTAS: PROBLEMS AND SOLUTIONS

| Problem | | Solution | |
|--------------------------------------|---|---|--|
| ALL GUTTAS | <p>A. <i>Thickening the guttas</i></p> | <p>RESISTAD guttas: Thicken by the addition of MEDIUM or THICK RESISTAD concentrate.</p> <p>Textile paint and metallic guttas:</p> <ul style="list-style-type: none"> • To thicken these textile paint based guttas add PAINT THICKENER slowly to the gutta and stir in thoroughly. Thorough mixing can best be achieved by using an electric mixer or drill with a paint stirrer attachment, e.g., to thicken 500g of gutta I would make additions of thickener teaspoonful by teaspoonful. If the thickener is not having any effect, add CLOUDY AMMONIA to the gutta to increase the alkalinity. PH 8-9 is correct for thickening. PAINT THINNER lowers the pH, so this must be raised again with ammonia before thickening can take place. (CLOUDY AMMONIA is available from the supermarket.) | |
| | <p>B. <i>Thinning the guttas</i></p> | <p>All guttas:</p> <ul style="list-style-type: none"> • Thin by thoroughly mixing in up to 10% water. <p>Textile paint and metallic guttas:</p> <ul style="list-style-type: none"> • Thin by the addition of small amounts of PAINT THINNER mixed into the gutta thoroughly using an electric drill with a paint stirrer attachment. | |
| | <p>C. <i>Gutta has not penetrated through to the back of the fabric. Obviously, this will lead to the fill dye breaking through the gutta boundaries and spoiling the work during colouring in.</i></p> | <ul style="list-style-type: none"> • Size in the fabric: so simmer in water plus 0.2% DIFFUSANT for 45 min. This will remove most sizes but not chemical finishes. Fabric that doesn't allow penetration is not useful for gutta work. • Gutta is too thick: so thin (part B.). • Blowheater is too hot: so turn it down. • If screenprinting the gutta, then make more passes with the squeegee. | |
| ALL, ESP. DYE-COLOURED GUTTAS | <p>D. <i>After application during drying the gutta lines spread, bleed and lose definition. This excessive spreading leads to:</i></p> <ul style="list-style-type: none"> - <i>loss of gutta colour intensity, e.g., black degenerates to grey gutta</i> - <i>loss of the gutta lines' resistance to erosion or breaks during colouring in</i> - <i>metallic gutta bleeding to form a clear peripheral halo</i> <p><i>DON'T TOLERATE SPREADING GUTTA LINES because <u>if the gutta lines spread to twice the applied width, the colour intensity and resistance to breakouts during colouring in will be halved!</u> Dye-coloured guttas will lose definition while the colouring -in dye is drying, i.e., the line will be prone to erosion by the fill dye.</i></p> | <ul style="list-style-type: none"> • Gutta is too thin: so thicken (see part A above.). • Hasten the gutta's drying speed, i.e., increase the heat setting on the blowheater beneath your stretched fabric during gutta application (see INFO SHEET 3: THE BLOWHEATER TABLE). | |

| Problem | | Solution |
|----------------------------|--|---|
| DYE-COLOURED GUTTAS | <p>E. Full strength dark dye-coloured guttas lose their sharpness when the gutta design is coloured in. The 'fill dye' erodes the gutta's sharp definition</p> <p><i>NB: As mentioned in (D.), this problem can occur as a result of the gutta line spreading during application and drying. However, if this is not the cause of the loss of sharpness, then the adjoining solutions may be appropriate.</i></p> | <ul style="list-style-type: none"> • The gutta has been insufficiently heatset. Prior to colouring in all Procolour guttas require heatsetting to activate their resist nature. Guttas coloured with full strength dyes must be especially well heatset to avoid loss of sharp definition or 'erosion'. • Avoid slow fill dye drying conditions, i.e., cold or humid weather or thick fabric. If this is not possible, then speed up the fill dye drying time. Do not use direct heat from the blow heater, because this will cause the fill dye to dry unevenly. However, indirect heat will raise the room temperature inducing the fill dye to dry more rapidly. • Certain dye colours and dye brands are very erosive, e.g., <ul style="list-style-type: none"> - some yellows - 'H. Dupont' French dyes Avoid these when using dye-coloured guttas or use textile paint and metallic guttas. • Some shapes are more erosion prone, e.g., <ul style="list-style-type: none"> - spiky designs - narrow bottleneck channels joining two large enclosures - designs shaded by fine lines or dots If the gutta design must contain erosion prone elements, then the following 3 steps can be taken to alleviate the problem: <ol style="list-style-type: none"> i. Shading dots and detail not required to act in a resist capacity can be added on top of the fill dye after it is bone dry, with dye-coloured gutta. ii. If it is necessary that both design elements be completed before colouring in with the fill dye (i.e., the shading detail and the main gutta resist lines, as would be necessary if the design were screenprinted), then it is best to choose one of the textile paint based guttas, because they are not at all erosion prone like dye-coloured guttas. iii. Alternatively, <u>chronic erosion problems with dye-coloured guttas can be totally overcome by steamfixing the gutta line design prior to colouring it in.</u> However, after colouring it must again be steamfixed to fix the fill dye. |
| | <p>F. Dye-coloured guttas backstain adjoining fabric during rinsing.</p> | <ul style="list-style-type: none"> • Use STAINGUARD in the rinse water. • Make sure that there is sufficient water in the rinse tub to ensure that the fabric is not congested. • Move the fabric around regularly in the rinse water. |

| Problem | | Solutions |
|---------------------------------------|---|---|
| STEAMFIXED DYE-COLOURED GUTTAS | G. <i>Dye-coloured guttas lose sharpness during steamfixation.</i> | <ul style="list-style-type: none"> • Thick blobs of coloured gutta are prone to detail loss during steaming. Try to avoid thick deposits of dye-coloured guttas. • Excessive moisture during steaming caused by any of the following: <ul style="list-style-type: none"> - steaming paper damp (i.e., if used in previous steaming it wasn't fully dried). - inadequate paper covering the work during steaming. Dark coloured guttas are best steamfixed deep in the heart of the paper roll. - the steam has found a shortcut route into the fabric. Old creased or puckered paper often leads to this problem. Steam sometimes finds shortcut entrances at either end of the roll, so it is good practice to seal these by taping them over. - The fabric was slightly damp prior to steaming, often due to residue from salt or urea techniques. Dry the silk with a blowheater or iron before steaming. |
| TEXTILE PAINT-BASED GUTTAS | H. <i>Metallic gutta lines are pocked with air bubbles. Happens only when metallic guttas are pipette- or brush applied, not when screenprinted.</i> | <ul style="list-style-type: none"> • The bubbles have not had a chance to dissipate after the preapplication shake. • The blowheater is too intense: so reduce the heat setting. |
| | I. <i>Metallic gutta lines come off in the wash. Happens only when metallic guttas are pipette- or brush applied, not when screenprinted.</i> | <ul style="list-style-type: none"> • During hot washing the gutta will be at its softest and most vulnerable. After cooling and drying it will return to its former resilience. • Avoid applying thick buildups of metallic gutta. When applying the gutta by pipette, hold it upright (at right angles to the fabric) so that the gutta is forced downward into the fabric and the trailing edge of the pipette nib skims off any excess gutta. This ensures that the gutta deposit does not stick up excessively above the surface of the fabric. Mounds of paint-based gutta are always vulnerable to flaking off during wear and therefore should be avoided. |
| | J. <i>A buildup of dried-on gutta is blocking the open mesh on the image parts of the screenprinting screen.</i> | <ul style="list-style-type: none"> • Don't leave the screen charged with gutta and unused for any longer than you can help, especially during hot weather. • Sometimes partial blockages due to this problem are difficult to detect visually. The only indication is that more than the usual number of squeegee passes are required to get the gutta to penetrate through the fabric. • This problem can be solved by clearing the blockage with a special screen cleanser for removing dried textile paint buildup without harming the stencil. This is available from a screenprinting supplies outlet. • Mix 'retarder' with these textile paint-based guttas to slow their drying. Available from screenprinting supplies outlet. |

GENERAL RULES FOR ALL PROCOLOUR GUTTAS:

- All are water based.
- All are washfast and drycleanfast.
- All require heatsetting to activate their resist nature.
- All must penetrate right through to the back side of the fabric to function properly as resists.
- All should be dried ASAP after application to maximise sharp detail and their resist performance.
- All guttas except Black will become overdyed when overpainted with dye or immersed in a dye bath, so Procolour guttas are no substitute for wax in immersion style Batik.

CHOOSING THE RIGHT PROCOLOUR GUTTA FOR YOUR NEEDS

- Regarding fibre type:

| PROTEIN FIBRES | | | CELLULOSE FIBRES |
|----------------|--|--|---|
| Silk | Wool | Nylon | Cotton, Rayon, Linen, Hemp |
| All guttas | All guttas. Full penetration can be a problem. | All guttas. Full penetration can be a problem. | All guttas except medium and thick resistad + dye + cottonfix. For dye-coloured guttas on cellulose use thin resistad + dye + dye thickener + cottonfix. Full penetration can be a problem. |

- Regarding performance:
 - For the least impairment to the fabric (retention of soft handle and lustre).
 The best clear gutta choices are: MEDIUM or THICK RESISTAD + WATER
 The best coloured gutta choices are: MEDIUM or THICK RESISTAD + DYE
 i.e., USE MEDIUM OR THICK RESISTAD GUTTAS AND AVOID TEXTILE PAINT AND METALLIC GUTTAS, if least impairment is a priority.
 - For the least problematic coloured gutta (i.e., to avoid problems D, E, F, G dealt with in the 'Problems and Solutions' table above).
 The best coloured gutta choices are: PAINT BLACK or PAINT CLEAR + COLOURED PIGMENT CONCENTRATE or METALLIC, PEARL + COLOURED PIGMENT
 i.e., USE TEXTILE PAINT-BASED GUTTAS AND AVOID DYE-COLOURED GUTTAS, if simplicity of usage is a priority.