

Airbrush Tips (Vol.2)

BEGINNING AIRBRUSHING TIPS - VOLUME II "SPRAYING, DRYING & MASKING"

Quality airbrushing is achieved when there is a proper balance between technique, the spray equipment and the paint used for airbrushing. This Information Sheet offers suggestions to improve the quality and productivity of airbrush applications of GOLDEN products.

APPLICATION DESCRIPTION

Modifying Acrylic Paints

Each project requires paints with specific properties. Textile work needs a paint system that will remain soft and flexible so it won't crack when worn and laundered. Harder, less pliable paints have better adhesion and resist peeling for non-porous, rigid supports such as metal. Before beginning a project understand the factors affecting the artwork upon leaving the artist's studio.

Most of the GOLDEN paint lines have very similar acrylic resins. They are flexible, but not so soft that it remains tacky when dry. This is ideal for artwork applications on canvas and some textile work, but they need to be modified for other kinds of applications.

The Difference Between Airbrush Medium and High Flow Medium

GOLDEN High Flow Medium (see [GOLDEN High Flow Medium Information Sheet](#) for mixing instructions) is essentially a "colorless" sprayable paint that can be mixed with or sprayed over acrylic paints. The hard acrylic resins in the High Flow Medium reduce pull-up when masking is removed. *GOLDEN High Flow Acrylics (HFA)* have the same hard acrylic polymer. This is why they work well with "loose" masks or low-adhesive masking films.

GOLDEN Airbrush Medium is used to blend into the acrylic paints to make them sprayable. Also having hard resins, it is designed to most effectively work with the Fluid Acrylics at a 1:1 ratio. Thicker paints will require more Airbrush Medium. Refer to the [GOLDEN Airbrush Medium Information Sheet](#) for suggested starting ratios with other paint lines.

Generally speaking, the majority of needs can be met with GOLDEN HFAs and/or the Fluid Acrylics (*modified with High Flow Medium and/or Airbrush Medium*).

Thinning Acrylics Properly for Spraying

GOLDEN Artist Colors products can be modified to make them sprayable, including *GOLDEN Heavy Body Acrylics*, *Fluids Acrylics*, *Iridescent/Interference Colors*, *High Load Acrylics*, and *Matte Fluid Acrylics*. Only *HFAs* are ready to spray. Rather than an inconvenience, mixing paints offers absolute control of the paints. The key is to know the pros and cons of each paint line and medium.

Figure 1

Typical Airbrush Applications	Suggested GOLDEN Paint Lines	Suggested GOLDEN Mediums	Suggested Air Pressure (P.S.I.)
Illustration (hot-press board)	Airbrush Colors, Fluids	High Flow Medium	20 - 40 p.s.i.
Fine Art (canvas, sign board, etc.)	Airbrush Colors, Fluids, High Loads, Heavy Bodies	Airbrush Medium or High Flow Medium	25 - 50 p.s.i.
Automotive (helmets, gas tanks)	Airbrush Colors, Fluids	High Flow Medium	25 - 50 p.s.i.
Textile (tee-shirts, leather, etc.)	Fluids	Airbrush Medium	40 - 70 p.s.i.

Utilizing Tools & Techniques

The airbrush artist typically employs several application methods to create an artwork. While some "freehand" airbrushers paint using only an airbrush (without any other tools or masking), the majority of airbrushers use masking materials to render their art. The preliminary layout is just as important in airbrushing as it is in other painting techniques.

Perhaps the most misunderstood concept about using an airbrush is when to lay the airbrush down and use the other tools and techniques to compliment the sprayed areas. Commercial illustrators will use subtractive techniques and utilize the whiteness of their illustration board. Scratching, erasing, and ammonia-based cleaning products are used to remove certain areas of paint.

The effectiveness of brush, pencil & ink painting should also not be disregarded when airbrushing. It is much easier to detail with a paint brush than with an airbrush. When used together, they will increase the overall realism.

PREPARATION DESCRIPTION

Mixing and Storing High Flow Acrylics Paint Blends

An important step in preparing for airbrushing involves making sure the paints are properly mixed. GOLDEN High Flow Acrylics are made with lightfast pigments. When these dense particles are mixed with a thin medium, they have a tendency to settle to the bottom of the container. This "soft settling" is the result of phase separation, where the materials in the paint physically separate: the densest ingredients go to the bottom, and the rest form layers above. In color blends, dense pigments like Titanium White commonly form the bottom layer.

GOLDEN Artist Colors puts a ceramic mixing ball (technically known as a "barundum") in every bottle of HFA. Paint can be mixed easily by simply shaking the container. Begin each day of painting by shaking all of the bottles of HFA intended for use that day. This vigorous mixing will make the paints quite homogeneous. Pre-mixing well in advance of spraying allows time for air bubbles to dissipate. Bubbles can affect how well the paint will spray. Sticking to this daily ritual will assure that the paints never are allowed to develop the phase separation, which means less shaking in the long run.

To mix paints that need to be thinned with medium, reuse old HFA containers or add a mixing ball to a new container. Try to do the majority of mixing before spraying. This is important when storing blends, as many pigments will "crash" harder than the pigments used in the HFA. "Crashing" refers to a hard settling of pigment that is difficult (and sometimes impossible) to re-stir into suspension. Be sure to mix even the pre-made HFA thoroughly. This leads to a more consistent color, less clogging, and better film formation. Many spraying problems can be attributed to improper mixing and thinning.

Thinning Fluid Acrylics

Ideally, the Fluids should be thinned with GOLDEN Airbrush Medium to reach the proper viscosity for spraying. Airbrush Medium is a blend of acrylic polymers, retarders, levelers, and flow enhancers. When blended with an acrylic paint, it produces paints with excellent spray characteristics (refer to the GOLDEN Information Sheet on Airbrush Medium for addition amounts and other information).

There is a limit to how much Airbrush Medium should be added to paint, mainly because the high level of retarder often results in color pull-up when masking. If additions of GOLDEN Airbrush Medium begin to exceed 2 parts medium to 1 part paint, add water until a sprayable consistency is reached.

When extending paints to create transparent layers, High Flow Medium is a better option than high levels of Airbrush Medium. Alternatively the Heavy Body Acrylics or Fluid Acrylics can be first extended with a fast drying medium such as GAC 100, 200 or 500. The paint/medium mixture can then be blended 1:1 with Airbrush Medium to make it sprayable.

Thinning Paints with Water

Water can be safely added into High Flow Acrylics for minor viscosity adjustments, as High Flow Medium doesn't reduce viscosity of these paints, only extends them. Up to 15% water can be added without affecting the paint durability. If higher levels of water are added, thin coats of High Flow Medium should be sprayed over them to improve their film strength.

GOLDEN Fluids (400-700 cPs) are typically too thick to spray, and need to be thinned to a more proper viscosity range. They could be thinned with water alone, but doing so first produces a paint that can quickly clog an airbrush and often results in a mottled paint layer. Add Airbrush Medium 1:1 to Fluid Acrylics and then adjust with water afterwards.

Thicker paints such as Heavy Body Acrylics require a high level of thinning. The best approach is to start with water additions until the paint becomes liquid, and then blend the mixture 1:1 with Airbrush Medium.

Adjusting High Flow Acrylics

HFAs are for the most part sprayable right from the container. However, when doing extended airbrush work or precision work with fine airbrushes (.25mm or smaller) these paints can be modified to improve performance. First begin with water additions. After reaching the suggested maximum 15% water addition without enough improvement it's time to try another tactic. Airbrush Medium can be introduced into these mixtures. Some artists add only Airbrush Medium into the paints, and others add water and Airbrush Medium. It's important to note that *not every paint sprays equally* due to their formula or pigment content. Refer to the High Flow Acrylics Information Sheet to assist with selecting the best spraying colors.

High Flow Acrylics include a set of transparent color mixtures. These colors are less pigmented than the standard colors. Airbrushing with these low strength paints allows for a slow development of color saturation (one of the great unique features of using an airbrush). This gradual color buildup tends to produce smoother, less grainy paint layers.

Any full-strength HFA can be modified with the High Flow Medium to create similar transparent paints as well. Adding High Flow Medium into paints doesn't always have to be to the point of making the paint transparent, but some colors are so intensely pigmented that reducing the pigment load brings out the brilliancy of the color. Additions of High Flow Medium also make the paint physically stronger and more resistant to color pull-up when masking.

SPRAYING PREPARATION

Adjusting Air Pressure for Each Application

Many airbrushers get comfortable with an air pressure and don't adjust for each application, especially if using the same paints for each project. When different paint mixtures are used, increasing or decreasing the air pressure can help to complete the application without having to stop and remix the paint. Beginning airbrushers should probably start somewhere in the between of the suggested air pressure settings of either the airbrush manufacturer or paint maker's recommendations. For most paint mixtures, around 30p.s.i. (for thinner paints) and 50 p.s.i. (for Fluid Acrylics with Airbrush Medium) are good starting points.

"Atomization" can be adjusted from a spatterly stipple pattern to an extremely fine mist. GOLDEN HFA can be sprayed as low as 10 p.s.i. for a stipple pattern, and up to 60 p.s.i. for fine atomization. Of course, adjusting the air pressure also affects other attributes. Low pressures produce thicker paint films that take longer to dry beforemasking over, and can increase the chance of paint drying in the nozzle and on the needle. High pressures can inadvertently lift masks, cause overspray, and can result in an uneven film that may feel "powdery" or rough, which may lessen masking adhesion.

Paint Properties in Relation to Spray Equipment

Paint viscosity needs to be in line with the spray equipment set at the appropriate air pressure or smooth operation isn't possible. Illustration paint made specifically for airbrushing usually have a low viscosity (relative thickness) of 35-60 Centipoise. This viscosity range is ideal for spraying in an airbrush with a .2mm or .18mm nozzle size. When thin paints are used in larger spray guns it produces a great deal of overspray, and lowering air pressure only results in poor atomization.

Similarly, thicker paints, such as pre-made fabric paints, or GOLDEN Fluid Acrylics would have to be sprayed at a much higher pressure and can clog up a fine airbrush. Therefore when thicker paints need to be sprayed, they should be used in larger airbrushes at increased air pressure so it flows smoothly through the gun.

GENERAL AIRBRUSHING NOTES

Filling the Color Cup

As basic as this may seem, many artists have had spills ruin their artwork simply because the color cup was too full, so start by adding small amounts of paint instead of filling it right up. If spilling is a recurring problem because of the spraying angles (spraying down onto a horizontal painting), consider an airbrush with a covered cup, or a larger capacity airbrush and/or cup.

Proper Spraying Techniques

The following suggestions are generally meant for even gradations of color. These application techniques can take many hours of practice to achieve satisfactory results. Learning the right way to spray does not come from reading, but experience. However, these main points should minimize the learning curve:

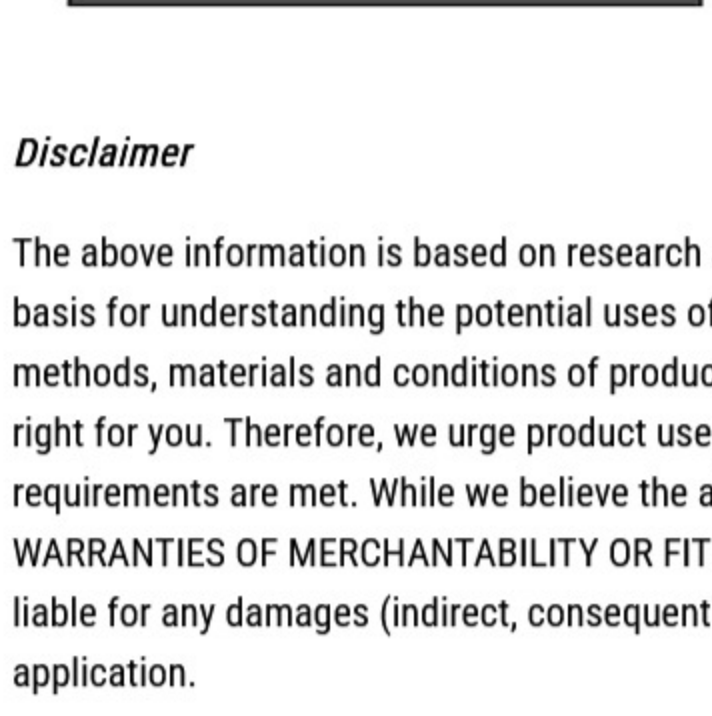
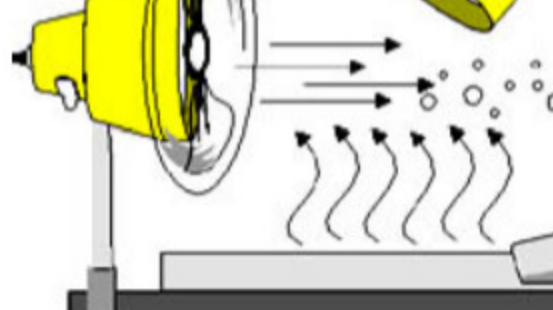
- Build up paint films very slowly.
 - Avoid heavy "wet" films which take long periods of time to dry.
 - If a film is wet, use the airbrush (air only) to speed drying.
 - Add High Flow Medium if the paint seems to always be too strong, especially colors like Carbon Black.
 - Always spray with the airbrush as perpendicular to the surface as possible. Spraying at an angle will result in uneven applications.
 - Move the elbow, not the wrist, to keep the spray consistent.
 - Start spraying before a masked area, and continue past it to avoid paint buildup at either end.
- Masking/Friskit Tips**
- Masking off areas can produce clean edges when done properly. Learn the general rules of masking techniques on test pieces before using them on an actual artwork.
- Before laying Friskit down, wipe the surface with a soft cotton cloth. This will remove eraser dirt, excess graphite, and body oils (fingerprints).
 - Proper drying is essential to avoid color pull-up (see next section).
 - Select the proper masking for each substrate. Masking tape can damage illustration board.
 - Don't excessively rub the masking in order to get good adhesion. If they aren't sticking to the paint surface, lightly spray a coat of High Flow Medium over the film, allow it to dry and then re-mask.
 - Weaker airbrush films may lift when water-based masking fluids are applied over them. Spray a light layer of High Flow Medium over very thin films and let cure before using such masks.
 - If a paint film is grainy, masking may not adhere well. Apply a thin coating of High Flow Medium over it, or mix some High Flow Medium into the paint to even the film.

ACCELERATED DRYING TECHNIQUES

Proper control of a film is critical when employing Friskit techniques to an illustration. If the film is not fully dry, paint can lift off of the board as the mask is pulled up. Use tools like hair dryers, fans and heat lamps to speed drying, all of which should be used with caution. Airflow can lift pieces of Friskit. Heat sources can warp illustration board and wrinkle the Friskit. Additionally, the heat can increase the adhesion of the mask to the board. In extreme cases, this can cause paint pull-up, even if completely dry.

For more information about the drying process of acrylic paints, (refer to the GOLDEN Information Sheet ["Technical Notes on Drying"](#)).

- Create a drying area in the studio for speeding the curing time of paint films. Adjustable desk lamps with heat bulbs or high wattage bulbs can create a higher temperature/lower humidity environment, that will allow the paints to be nearly cured in the time it takes to flush out an airbrush (see figure 2).
- Speed drying of paint films with hair dryers & heat lamps.
- Be wary of excessive heat. Friskit can soften and cause pull-up, or be wrinkled. Illustration board can be warped.
- Place a small fan alongside a wall to improve circulation. It is not necessary to point a fan directly towards the drying area, especially using a hair dryer (See figure 3).
- Bubbles forming in the Friskit are an indication too much heat is being applied. Allow it to cool off before continuing.
- After using heat to cure an artwork, allow it to cool before applying masking over it to avoid inadvertent adhesion from the heat.
- Airflow is essential for faster drying.



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