

Adding Mohair to a Model

This tutorial explains and illustrates the steps to attach a mohair mane and tail to a resin or plastic model horse.

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Note: See our other documents regarding how to attach a wire tail.

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Tools You Will Need

- 1-2 feet (hanks) of mohair of the color(s) you will be using
- Duco Cement or White Glue (Elmer's, Alene's etc.)¹
- Sharp Scissors
- Paper Towels, Cotton Pads
- Eyebrow Brush/Comb
- Spray Bottle of Water
- Oil-Impervious Paint Palette
- Toothpicks or Narrow Wooden Craft Picks
- Acetone or Nail Polish Remover, and a shallow metal or glass container²
- Small Soft Flat Paintbrush² (filbert or bright) preferably used or worn (*no need to use a good brand-new brush for this*)
- *If you are sensitive to glues such as Duco Cement, use latex or vinyl gloves and rely on wooden picks to work with the glue. This will take longer than using your fingers. •••*

¹If you are using black or dark colors, Duco cement is the best choice. If you are using white, flaxen or light grey, use a white glue. Duco will darken and yellow light colors, although it sets faster and holds better.

²You will not need these items if you are only using White Glue.

Have the Model Ready

The model should be painted and sealed with a clear coating (such as Krylon Matte Spray). Be certain that the finish is completely dry. You may find it helpful to wrap the horse's body and legs with toilet tissue in order to prevent accidentally getting glue on areas you do not wish to.

The wire tail should have been added BEFORE the horse was painted. While it is possible to retrofit a wire tail onto a painted model, it is difficult to accomplish without damaging the paint work, and thus will not be covered here.

Have All Your Supplies Ready

Get out all your supplies and have them handy to begin working.

How Much Hair Will You Need?

It always makes sense to have more hair on hand than you are likely to need or use. Small scale horses with shorter manes and/or tails may require less than a full hank. Full traditional scale models with long manes and tails may require up to 2 or 3 full hanks.

IMPORTANT:

Read through this entire tutorial before you begin.

Be certain to wipe off any excess or dried glue from your fingers and tools **VERY FREQUENTLY** to avoid accidentally getting glue where it does not belong.



Prepare Your Hair

If you will be using a mixed hair color, you will need to mix the hair colors together before you begin. (If you are just using one color, omit all the steps beyond those shown in the first two pictures.)

You may need to “fray” or spread out the ends of the original hank a bit to loosen up the hair enough to be able to pull swatches from it.



Grasp the original hank in the middle, then pinch the end hairs and pullout a swatch.



A swatch freed from the bonds of its hank! Pull several swatches and pile them up.



Pull some swatches from your second color and lay them next to your first color.



When you have all the hair you will need, bundle all the swatches together and grasp them firmly near one end with one hand.



Grasp the loose ends as shown with your other hand, then pull the ends apart. You should end up with a swatch in each hand.



Place one swatch above the other and it should look similar to this. The “streaks” are large, wide and noticeable.



Again grasp the bundle at each end and pull the swatch apart. Each time you do this, the streaks should become finer. Stop pulling the swatch when the streaks are about the size you want them.



This picture shows a fully mixed swatch, with little to no visible streaking.

If you “overmix” your hair and the remaining streaks aren’t enough to suit you, you can always pull a few tiny swatches of the desired streaking color from your original hank, and lay a few of those across your bundle. You may wish to pull this a time or two to “soften” up the mix.

When you are satisfied with the color mix, you are ready to begin applying hair.

The Forelock

The steps to add a few swatches of hair to the forelock are the same basic steps you will use to apply almost all the hair on your model.



Take out a small swatch of hair from your pulled bundle.



Cut the swatch in half. Set one half aside. (For long manes, cut the swatch near one end instead, to preserve the longer fibers.)



Hold the swatch firmly with one hand, then grasp the cut end with your other hand and pull. The shorter hairs should come out. Set these aside.



Your swatch will look something like this.



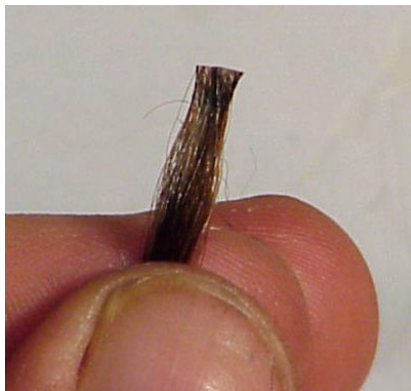
Trim the ends straight across with scissors.



Apply glue to the cut ends. Here I have placed some glue on a palette so it can be worked into the hair ends with a pick.



The swatch should be flattened and the glue worked into the hairs on the last $\frac{1}{8}$ to $\frac{1}{4}$ inch of the swatch. This swatch is about $\frac{1}{8}$ inch wide overall. If your swatch is too large, just separate off the amount you need and set the extra aside.



Trim the swatch straight across again.



Form the glued end into a taper.



Arrange the swatch as shown with the glued end just between the ears.



Press the swatch down into place, then arrange it so it is centered. If your glue is too dry to stick, add a bit of extra glue to the underside and reset it.

When the glue “sets” enough to hold, prepare another swatch just like the first one. Place it a little farther up the forehead so the glued areas partially overlap. 2 or 3 small swatches will make a nice forelock.

****NOTE:** If you are using white glue, you will need to wait longer for the glue to set. You can help speed the drying time by using the low setting on a hair dryer and direct the air flow toward the glued area.

The Mane

Use the same steps to prepare a swatch for the mane. You can taper each swatch before it is attached, or apply it straight across. If you are applying a LONG mane, you will NOT want to cut your initial swatch in half (and use each half). INSTEAD, use the full length of hair, trimming across one end of the long swatch.



Prepare a swatch of hair, and arrange it at the withers so the glued end matches up approximately with the middle of the withers.



Press the swatch down into place. If the glue is not wet enough to adhere, add a tiny smidge of glue under the swatch and reset it.



The swatch should be centered over the midline of the withers.

Prepare a second swatch, and arrange it so it lies about $\frac{1}{16}$ inch farther up the neck than the first one, partially overlapping it. Continue to make and add swatches, attaching each so that it overlaps the last one you placed down. If you space the swatches out too far, the finished mane will have gaps. If they are too close, the mane may become too thick and heavy.

More smaller swatches will yield better results than fewer larger ones.

Continue to apply swatches up to where the bridle path will begin.



This picture illustrates quite a number of small swatches working up along the crest of the neck.

Overhead view of the partially haired mane.



All the mane swatches applied.



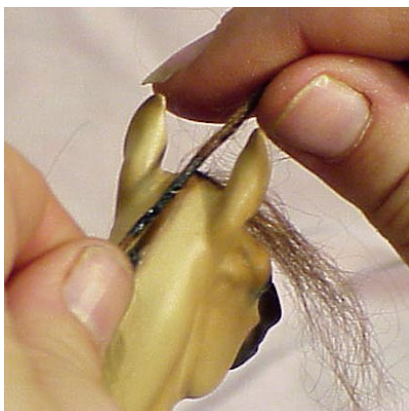
The Bridle Path

Use a narrow swatch of full-length hair for this operation.

This special swatch will form the topmost locks of your forelock, as well as the first hairs of the mane when completed and tie both ends together.



Twist the hairs together to form a little "rope". You will apply glue to this twisted section, so you need to "eyeball" to see where to put the glue.



Add the glue ONLY to the area that will be covering the bridle path itself. The hair should be loose at the poll and where the mane ends.



Press the glued area into place over the bridle path area. The ends of this swatch will be your top layer of forelock, and your first mane swatch.

Press the bridle path swatch neatly into place along the center of the crest, and neatly press it down on both ends.



Ta Da!

The Tail

The same basic steps to prepare swatches will be used for the tail. The only difference is, you will use more hair in each swatch, and each swatch will be wider (double or triple what you used for your mane swatches). Additionally, you will use the full length of hair... trimming it across at one end of the swatch, instead of cutting it in half. Again, as with the mane, more smaller swatches will produce a nicer result than just a few big fat ones.

The example horse I'm using here features a bare twisted wire tail. The wire tail you use may be wrapped with string or not. In this case, since this model is a foal (approximately classic size, instead of full traditional adult horse size) an unwrapped "tailbone" is a little skinnier and less bulky. The method for attaching the hair is the same regardless of what type of tailbone you are working with.



Pull a swatch of hair from your bundle that is about 2 or 3 times as much hair as you were using for your mane. Do not cut this swatch in half, but use the whole length.



Hold the swatch near one end and pull out the short fuzzies. Apply glue to the ends.



Trim the end across with scissors.



The swatch should be positioned so one end of the glued area is next to one side of the tail.



Press the glued area onto the tail bone on one side...



Wrap the glued area around over the top of the bone so it covers from one side to the other. Press the hair into place.



Add another swatch, a little farther up the tail bone, overlapping the first.



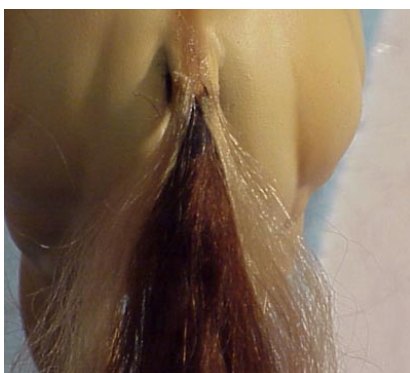
Press the glued area down into place to secure it.



Continue to add swatches until you get to the area where the tail starts to curve toward the body.

The Tailhead

As you work up to the tailhead, you will need to change your methods just a bit. In this example, I'm working with a two-colored tail, in which there are light "frosted" hairs to either side at the tail head. The overall method to apply hair in this area is the same whether you are using one or two colors.



Make narrower/thinner swatches at this point, using about half the amount of hair you had been. Lay down a swatch of hair angled to each side. (Use your alternate color if doing a bi-color tail)



Make a tapered swatch (as you did for the forelock) and place it over the top in the center, so the hairs "fan out" to either side a bit. Add another set of angled swatches to each side, then a tapered center swatch. Continue with this method to just below where the tail joins the body.



Carefully place the last swatches. An angled swatch to either side . . .



Note the tapered side swatch at the top



Carefully place the last angled swatch on top in the center and make sure it is neatly arranged.

A Very Hairy Guy . . .

Now that all of the hair has been applied, your horse may look something like this . . . which of course demands a bit of trimming and styling.



Trimming the Forelock



Using an eyebrow brush/comb, carefully comb out the forelock. Expect quite a few unattached hairs to be combed out. Comb the hair gently until no loose hairs remain.



Trim the hair across about 1/4" or so longer than you want the finished forelock to be. Then fan the hair out across the forehead, and trim the hairs so the sides are slightly shorter than the center.



Shape this haircut by snipping your scissors upwards into the ends of the hair. It can take quite a few tiny snips. Press the hair down with your fingers from time to time to check for the overall length and "look".

Trim the Mane

Carefully comb/brush out all the loose hairs from the mane, and gently undo any tangles.



With one hand, pull the mane hairs up away from the crest. Determine how long you will want the mane when it is completed.



Cut the mane hairs across, more or less following the curve of the crest. Be careful, it is better to leave the hairs a little long than to cut them too short.



With one hand, press the hairs down along the side of the neck to check for length. Begin to trim by snipping upwards into the ends. This can take quite a little while.



Continue to trim the ends this way, checking for overall length as well as shape of the mane as you go.

Comb Out and Trim the Tail

Carefully comb/brush out all the loose hairs from the tail, and gently undo any tangles.



Gather the tail hairs and gently pull them down straight. Determine the approximate length you want and allow for a little extra length for trimming.
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Cut the tail hairs off at a slight angle as shown.



Comb the tail hairs out again.



Fan the tail hairs out, and start trimming by snipping up into the ends, to get a more “natural uneven” look.



Press the hairs of the tail together, and snip upwards to reduce length and some bulk from the underside.

Wet and Style

be sure the glue is all COMPLETELY dried before wetting the hair. Starting with the forelock and mane, liberally spritz water onto the hair. You will want to really soak the hair, however the hair will tend to shed water until you begin to brush it. If you are using white glue, blot off any excess water from the glued area with a tissue before you begin combing. Water will soften/loosen white glue, so it is important that it is not allowed to “sit” on the glue itself for any longer than necessary.



Spray the Mane and Forelock Liberally with water.



Using the brush, smooth down the forelock until all the hairs are wet and it “sticks” to the forehead.



Gently “style” and arrange the hairs.



Brush the mane, until all the hairs are wet and the mane sticks to the neck.



Using the brush, style the mane as desired. Spritz with a little more water as needed. Blot excess water from the glued area along the crest. Let the hair dry.



The mane can be held down in place with vetwrap, or even a folded paper towel as it dries. If using vetwrap, do not leave it on the model for more than 24 hours.

Wipe excess water off of the horse gently with tissues as soon as you are done.



Liberally spray the tail with water, making sure to spray up underneath and getting water all the way down to the tailbone.



Finger-shape the tail to pull all the hairs together and better distribute the water.



Carefully brush and comb the water into the hairs thoroughly, and straighten out the hairs as you go. Arrange hairs so they evenly flow down and to either side of the tail bone.



Mohair has a natural “wave” or “crimp” to it, and this will become more apparent as the tail dries.

When you have all the hair arranged as desired, wipe any excess water from the horse, blot the water from the glued areas then set the model aside to dry thoroughly.



When the hair has dried, it will probably look “fuzzy” again. Lightly spritz the mane from underneath and press the hair back into place and continue to style.

You can use regular hair-styling products to help form and better “lock in” a particular look at this point, but try to use any such products very sparingly. You may need to style the hair partially, allow it to dry, then style some more a little later until you get just the look you want.



Final Touchups and Important Tips

Be sure to wipe any extra and any dried glue from your fingertips and tools as you go.

If you are using Duco Cement, wipe your fingers/tools off with Nail Polish Remover frequently as you work. If you are using white glue, use water. If necessary, stop during the hairing process to thoroughly clean your fingers and tools, because they will get gummed up quickly ... and that goo will end up on your horse as you handle it through the hairing process!

Once the hair has dried the first time, you can go in and perform a few little "touch up" tasks if things don't look just so.

If you have used Duco Cement, you can take a small soft brush, dip it in a little Nail Polish Remover (acetone-based), and lightly stroke over the tops of haired areas where the glue may be showing. Little bits of Duco Cement will "crack off" of the hairs as you've been working and styling, and this can look like a white "chaff" or "haze" around the glued areas. Lightly stroking these areas with nail polish remover will re-dissolve these small specks, and make them invisible once more.

The tailhead may not have the best "trim" to it, right where it goes into the body. The hairs may be uneven there, or even a little "lumpy" or stick up due to the glue. To fix this, take a hobby knife and gently "shave" away errant hairs and "even out" the texture right at the tailhead.

You may need to reapply a tiny amount of glue carefully at the tailhead if some of the hairs have lifted or need to be tacked down after trimming. Do so carefully, and allow the glue to dry. If you have used Duco Cement, you can lightly stroke this area with a brush dampened in nail polish remover to better smooth the area.

The tailhead in particular may require some touching up with paint. You can paint right over the glue and hair to "blend" it in fairly nicely. Use dry brushing techniques to dab in some paint and gently blend it. You can also lightly use some thinned paint (oils are especially effective here) to lightly color or "stain" the top hairs of the tail to blend some body color in.

What if I got glue on the horse as I was working?

If you do get glue where it should not be:

White Glue:

If possible, wipe off the glue right away with a dampened tissue before the glue dries.

If the glue has dried, dab some water onto it with a cotton swab, and let it sit a few moments. The glue should start to soften a little and become rubbery. You can dab it again and let it sit to further soften it until you can gently peel it off.

Duco Cement:

Duco cement can be very tricky if it gets where it should not be on the surface of the horse. If you cannot gently wipe it off with a finger swipe right away, simply ignore it and let it dry completely.

Once dried, later you can go in with some VERY FINE GRIT SANDPAPER-- such as 400 grit or so. Very lightly sand just the glued spot with the very corner of a little piece of sandpaper. If you had properly applied your clear coat finish, you should be able to lightly sand off the glue, without penetrating clear through the finish into the paint. If you can wet the spot with a dab of water and see no evidence that the glue was ever there, all you need to do is spritz that area lightly with more clearcoat to re-seal it.

If you CAN see an obvious mark there, you may need to get out some paint and touch it up carefully that way, then clear coat over the area.

The best caveat here, is to wrap as much of the horse as practical before you start hairing, to prevent as much of this as possible. Also, be certain to clean excess and dried glue from your fingers and tools as you go.

Care and Handling of the Haired Horse

Haired horses should be treated as quality taxidermy. That is to say, they should not be regularly "brushed and groomed" because that will ultimately loosen the glue and hair, causing the model to shed and eventually go bald! The basic rule is "set it and forget it". Once it is styled nicely as you wish, leave it alone. This may present some problems regarding shipping and showing. If the horse is to be shipped, the mane can be lightly wrapped around with tissue to hold it more or less in place. The tail can be spiral-wrapped lightly with tissue to hold it together.

When the horse is unwrapped, generally a little finger-styling with a dampened finger is all it will take to restore the styling close to how it was originally. The trick is to avoid totally re-soaking the hair, or reworking it all the way through. Try to limit any styling adjustments just to the lower ends of the hair, rather than totally reworking it.