

Minifig Decal Application

Article and photos by Jared Burks

**Building:
Minifig Customization 101**

Now that you know how to create waterslide decals from the last edition of *BrickJournal* the next skill to conquer is waterslide decal application. Waterslide decal application is quite easy and can be done by most anyone. There are basic application instructions, which work well for flat surfaces and advance instructions, which are needed for complex curves like helmet applications. In order to begin to apply your decals you need to start with a clean slate or brick in this case. Don't have a torso without any printing on it, no problem. A quick trip to the grocery store, or Wal-Mart, to pick up a \$3 bottle of Brasso® will solve your problem. Brasso is a micro abrasive used to polish brass that will literally sand the printing off that LEGO has applied to the element. It is also great for removing scratches on older bricks or for making cloudy transparent bricks clear again. So it is a great product for any builder to have and one bottle will last practically forever.



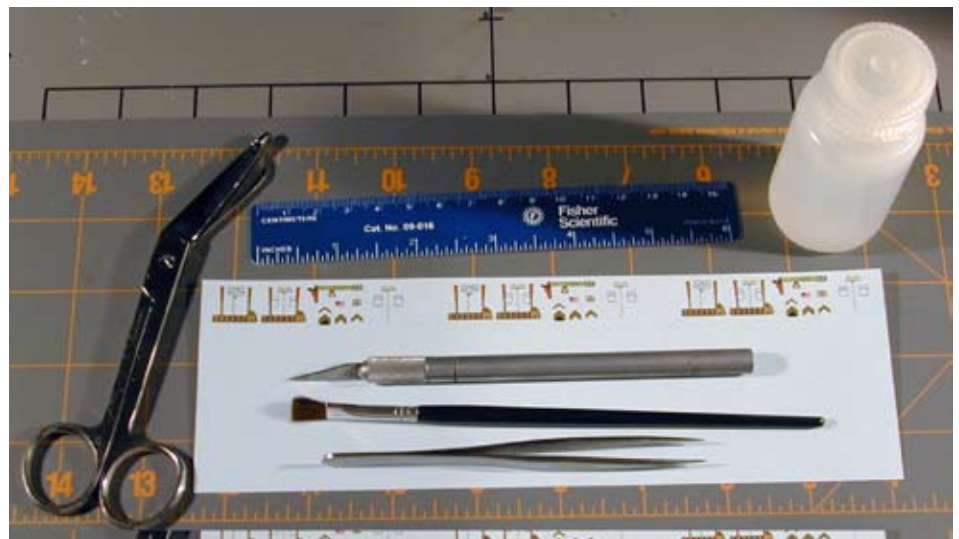
Brasso micro-abrasive cleaner

Brasso Instructions:

1. Pour a small amount of Brasso (about the size of a quarter) on paper towel or cloth.
2. Rub Lego element or minifig part vigorously against cloth containing the Brasso. Apply more Brasso if necessary. Removing the printing from a torso should take 15 seconds to 1 minute depending on how much elbow grease one uses.
3. Once the original print has been removed, wash the piece with soap and water, making sure to remove any residual Brasso, and then allow the part to dry.

Now you have a clean LEGO element and your newly designed decal created using the instructions in the last edition of *BrickJournal* so you are ready for application. This can be done by either the basic or advanced methods. The difference is the advanced method helps the decal to conform and adhere to the surface a bit better than the basic method, but it requires a few more reagents, which will be mentioned below. Before you begin, gather the few items together that you will need for application, these include:

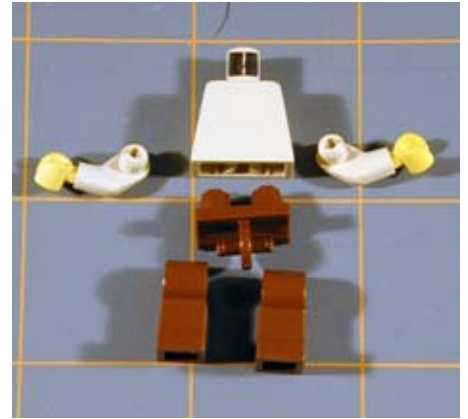
1. Pair of scissors
2. Ruler
3. X-acto Knife
4. Small Paint brush
5. Tweezers or forceps
6. Q-tip or cotton swab
7. Bottle of distilled water



Decal application supplies (Q-tip not pictured)

Basic Waterslide Decal Application Instructions:

1. Disassemble the minifig completely, especially if you are using the advanced decal application kits.

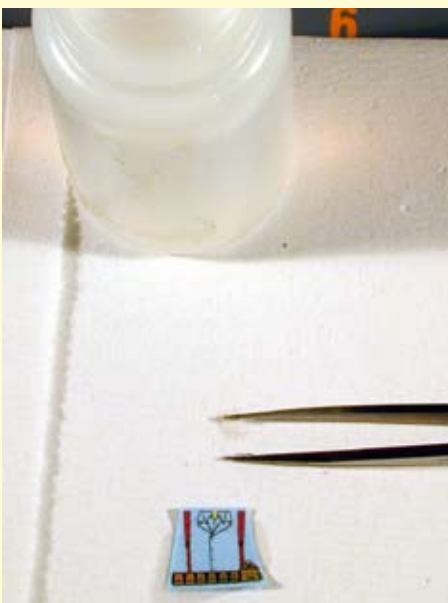


A disassembled minifig

2. If the minifig has printing that needs to be removed use Brasso or a similar micro-abrasive polish to remove the printing. Rinse and dry the minifig after using the Brasso to removing any residual abrasive.
3. Trim the decal with scissors or an X-Acto Knife or scissors preparing it for the distilled water.



4. Using the tweezers, dip the decal into the distilled water. Dip the decal; do NOT hold the decal under the distilled water for any extended period.



5. Allow the decal to sit for 1 minute to allow the distilled water to solublize the decal glue.



6. While the decal glue is being solubilized by the distilled water, apply some distilled water to the application surface with either the Q-tip or paint brush.



7. Gently slide the decal from the paper backing onto the wet application surface.



8. Position the decal into its final place with a wet cotton swab. Gently roll the cotton swab over the surface of the decal to remove any trapped air bubbles as these can detract from your finished figure. If the decal shifts slightly during this stage reposition and allow the decal and torso to sit and dry untouched.

9. Once your decal has completely dried protect it by applying a clear coat of clear spray paint or hobby paint such as Krylon Crystal Clear or Model Master's Clear Acryl. The model masters will have to be applied with a brush or airbrush. More on this in the advance method instructions on the next page.

10. Reassemble your custom minifig.



Advanced decal application varies slightly by using a chemical kit that improve the adhesion and contouring of these types of decals. These kits help make the decal disappear when applied properly, thus making the design appear painted on rather than applied. The kits can be found at many hobby stores, or online (Micromark www.micromark.com). The kit components can be found order individually as well (Internet Trains www.internettrains.com/bamopa.html). If you are from a foreign country you will have to find these application kits in your country as they contain a mild acid solution that can not be shipped internationally. As for chemical kits the information on Micromark's Website is accurate: <http://www.ares-server.com/Ares/Ares.asp?MerchantID=RET01229&Action=Catalog&Type=Product&ID=82400>, which displays the same application with and without the use of the kit for comparison purposes. The two kits I recommend are from Badger and Microscale, both of which contain the two key solutions: decal setting solution and decal softening solution.

Advanced Waterslide Decal Application Instructions:

Step One: Apply the decal

Apply the decal as described in the basic instructions in the previous pages. In brief: cut the decal out of the sheet as close to the printing as possible so as to reduce the size of the film on which it is printed. Dip the decal (do not soak it) into a cup of distilled water and place it on your worktable (printed side up) for one minute. This should be sufficient time for the decal to loosen from the backing paper without dissolving too much of the adhesive on the back of the decal film. Using a soft brush, apply distilled water to the surface of the model where the decal will be applied. Next, gently slide the decal off the backing paper and into position on the model. Use a wet cotton swab (wet with distilled water) to gently move the decal into exact position, working out any large air bubbles that may have been trapped. Do not exert much force or the decal may wrinkle or tear. Apply decal setting solution with a paint brush to the decal surface and let dry, application of the decal setting solution strengths the bond between the decal and the surface.

Step Two: Soften the decal

To make it look like it has been printed directly on the surface of the model, a decal must be softened so it will conform to surface of the brick. Using a soft brush, gently apply Decal Softening (Solvent) Solution to the surface of the decal. Do not touch the decal until the solution has completely dried. The decal is VERY FRAGILE at this step and care must be used. Repeat the application of the Decal Softening Solution until the decal has fully conformed to the surface, but be sure to allow the solution to completely dry between applications; otherwise, you may damage the decal while it is still soft.

Step Three: Protecting Your New Figure – Application of a clear top coat

Depending on the desired finish, apply a clear top coat to the decaled area...select either Clear Gloss, Clear Satin (Semi-Gloss) or Clear Flat. Clear gloss hobby paint works well. As for overcoats there that people use including nail polish (yellows in sunlight, don't recommend), Future's floor wax (sworn by many model makers for protecting decals <http://www.swannysmodels.com/TheCompleteFuture.html>), spray paint, airbrush paint, then liquid overcoats. I like Badger brand of overcoats and apply it with a slightly damp (with distilled water) paint brush. I find a using a hair drier helps to dry the overcoat quickly and gives a smooth finish, removing any air bubbles that occur. The only critical point is that you have to remove any overcoat excess before using the hair drier. Apply a second coat after the first coat has dried. I **strongly** recommend the use of a clear sealant over the top of the decal to protect your new figure.



Advanced Application: Helmets, shoulders, and domes are examples of surfaces that are aided by the use of the application kits. These complex curves make application difficult.

You can get a nice application to many of the Lego elements without these kits (the Q-tip really helps), and if you are only making one or two customs, I would skip them. If you are planning on making this a hobby, I would get the decal setting, decal softening, and satin overcoat from Micromark's kit. They can all be ordered independently to save a few dollars and a kit will last a very long time. I have yet to use up my first kit and I have made many figures so it is a good investment.

Well now you know how to design, print, and apply decals, get to creating! **b**

Next Time:

Minifig Customization 101 – Digital Photography

Jared Burks is a regular contributor to BrickJournal and can be contacted at: fineclonier@gmail.com