

# Fulbore Painting Tools for 3D Printed Resin Models



## Primer

Primer is a special type of paint that adheres strongly to the part and provides a uniform surface for paint to bond with. Different primers have different uses. A spray-on primer is the best way to paint your printed parts because it quickly covers a surface with an even coating. Brush-on primers are available, but they are tricky to work with and better for fine touch ups. For best results, choose a primer and paint that are plastic compatible and from the same brand. We like Tamiya and SMS, but nothing really compares to Outlaw Paints primers - they go on extremely thinly and evenly, preserving delicate surface details, whilst having enough filling capability to help reduce those layer lines.

## Rotary Tool

Because sometimes you want to sand fast. With interchangeable bits, rotary tools offer a variety of options for sanding and polishing parts. Drum sanding bits quickly sand down supports, while steel wire brushes smooth surface marks. Rotary tools are rough, so you will still need sandpaper for a smooth finish. To avoid scorching your part, turn down the RPMs to the minimum (usually 500-1000) and use a light touch.

## **Hand Files**

A more elegant tool...for a more civilized age.

One of the most simple yet effective tools, a hand file removes supports and sands down surfaces. Using a firm grip, you can remove marks with more control than with a rotary tool. Keep a wire brush on hand and clean the file's teeth often (otherwise plastic and resin will gum up teeth). Like a rotary tool, a hand file will leave a rough surface, so it's best for removing the larger support marks.

## **Sand Paper (Wet and Dry)**

The most unglamorous tool in the shop, wet and dry has come light years in the last decade with the release of flexible sanding sheets. Available at Fulbore Models and Ickysticky, flexible sanding sheets last 15 times longer than paper ones. They don't curl, puncture or crease..., and they can be used wet, which reduces dust and prevents buildup in the sanding tooth. Because they flex, they can easily reach small interior spaces and rounded surfaces, and can be folded to create a sharp edge for cervices.

## **Dust Removal**

Even after wet sanding, some dust will remain. Remove buildup with water and a soft scrub brush (an old toothbrush works). For serious clean-up, an inexpensive sonicator can quickly remove fine particles caught in corners and cracks of a surface. If you work in an area with hard water, using deionized or distilled water will prevent spotting between painting.

## **Tack Cloth**

Tack cloth is a soft, slightly sticky cotton cloth designed to remove remaining dust and leave a clean surface for painting. Let your model dry before using the tack cloth — the waxy surface does not work well with water.

## **Painting Block, Dowels & Drill**

This simple trick will save you grief in the spray booth (we were excited when we saw this technique in a modelmaking how-to video by Adam Savage). By mounting your 3D print on a dowel (often you can use a preexisting hole in the part), you can quickly maneuver while spraying, allowing you to get to all sides and into the nooks and crannies of the part without creating any fingerprints. When you want to add an even coat to all sides of your model, this is pretty essential. We recommend ordering a variety of size of dowels. To minimize the hole size on a part, start with a small size and work your way up until the model feels firmly seated. Drill a corresponding hole in a block of wood or MDF and insert the part with the dowel - now you can keep the model hands free while spraying.

## **Safety Equipment**

Spray-painting means working with airborne particulates and solvents, both of which pose health hazards. Remember to use a NIOSH approved respirator and work in a well-ventilated workspace. While painting, wear nitrile gloves to avoid spraying paint on your hands and also protect your model from fingerprints.

## **Paint**

Choose thin paint that's easy to control like Outlaw Paints. Hardware store paint (or even fine art paints designed for rough surfaces) are the opposite of what you want. They tend to clump and form thick, rough layers. This is because they're designed for quick, single use application. For the best detail, we recommend Outlaw Paints. They offer a wide range of colours, including opalescent and glitter effects. The paints go on thin and provide great coverage.

### **Buffing Sticks**

Nail buffing sticks apply a polished finish on a primed and sanded part. Look for them in any chemist. Make sure you get the kind that come in a 3-stage system—skip the heaviest grit and move straight to the buffing and polishing sticks.

### **Fiber Backed Polishing Paper**

A recent innovation, polishing paper comes in grits much like sandpaper, but it's much finer. The fibre backing lets you bend and flex the surface, while the fine grit is perfect for polishing topcoats and clearcoats.

### **Masking Tape**

For most single-session paint jobs, Tamiya or automotive masking tape works best. Make sure to secure the edges by running a plastic part like a credit card over them to keep any paint from seeping underneath.

### **Clearcoat**

While clearcoat won't fix a poorly primed surface, it will help even out some surface imperfections and give you a choice of gloss or matte finishes. Using a Outlaw Paints clearcoat will guarantee compatibility with your paint layers. If you're working with another spray paint, check with the manufacturer for clearcoat recommendations.

## **Safety Equipment**

Spray painting means working with airborne particulates and solvents that pose health hazards. Remember to use a NIOSH approved respirator and work in a well-ventilated workspace. While painting, wear nitrile gloves to prevent spray paint on your hands (and model).

## **Tool Checklist**

- [Outlaw Primer](#)
- [Rotary tool](#)
- [Hand files](#)
- [Sandpaper](#)
- [Soft brush with fine bristles](#)
- Tack cloth
- Masking tape
- Wood painting block (sized slightly larger than model)
- Drill and drill bit
- Dowels to hold model
- Safety Equipment: gloves and mask