

By finishing a model, you are enhancing it by changing its color or texture. The most common method of finishing is to smooth the model and paint it. This is accomplished by first sanding the model with multiple grits of sandpaper to reduce the step over. After the model has been sanded, depending on the type of paint being used, it should be primed to allow for best results when painting.

Models that have been painted are more appealing than unpainted ones. For example, a company may use a painted model to provide investors with a better representation of their final product.

This guide covers Basic Finishing of Z Corp models. This includes basic sanding and painting. There are other advanced processes covered in detail in IG-7 and IG-8.

About Z Corporation

Z Corporation manufactures office-compatible 3D printers that quickly and inexpensively produce real physical models directly from digital data. The 3D Printers use ink-jet printing technology to deposit a binder onto a powder, building the parts layer by layer. The finished parts are exact representations of the design created in CAD or other digital data. These models can be handled, reviewed and exchanged to enhance communication in the product design and development process. 3D Printers are used in a broad range of industries including automotive, defense, consumer products, electronics, architecture, medical, and geographic information systems.



zcorporation

Basic Finishing

Inspect • Smooth • Paint

Legend

The colors in this legend correspond with specific processes on the inside pages.

Inspection

Inspect the model for cracks and other problems.

Sanding

Sand the model to create a smooth surface.

Painting

Prime and paint the model.

Environment

- Clean work area
- Well ventilated
- Working lab

Supplies

- Primer/Paint
- Assorted Sand Paper
- Tack Cloth

Equipment

- Spray Booth or Painting Area
- Compressed Air

Safety

- Latex/Rubber Gloves
- Safety Glasses
- Respirator/Face Mask



Supplies / Safety

Information

tip: The use of multiple fine mist coats will create a better finish than one thick coat of paint.



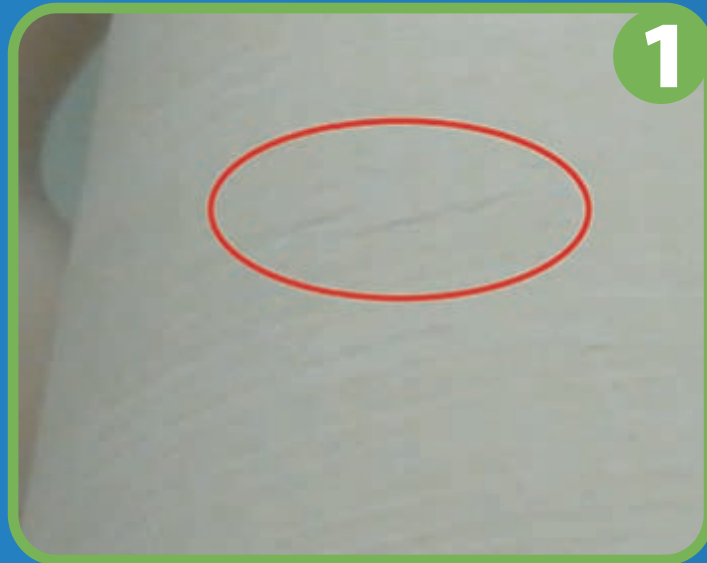
Technician Education in Rapid Prototyping and
Virtual Manufacturing Technologies

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RPT

5



1

Inspection

All models need to be inspected for surface and structural problems before finishing. The picture on the left shows a model with several surface cracks. Inspecting a model will also allow you to estimate how much sanding will be required to smooth its surface.



2

Inspection

Severe cracks in the surface of a model will often ruin a finish if they have not been fixed.

Sanding a model creates fine dust particles and primer/paint contain hazardous chemicals. Use proper safety equipment, including latex/rubber gloves, face mask and safety glasses.

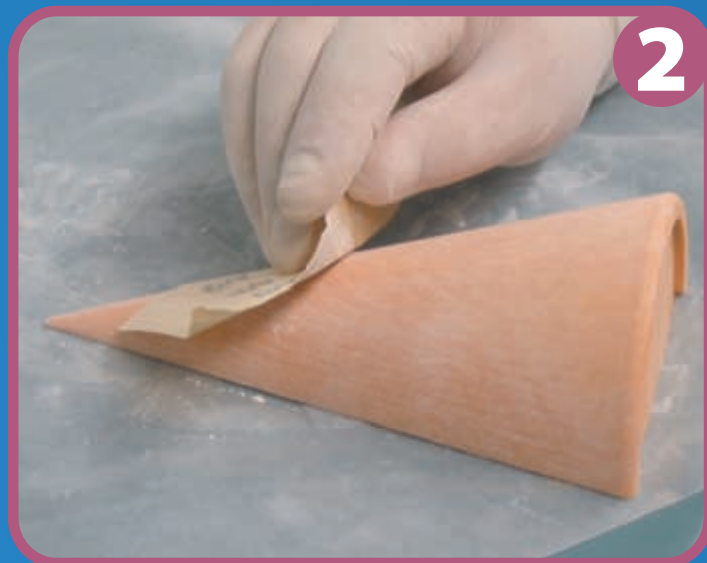


1

Sanding: Rough Grit

Sanding a model is the first step in post-processing to create a smooth surface finish. While sanding is not required for painting, it does improve the overall look of a finished model.

Use 150 grit sandpaper to sand the surface of the model. This will smooth the step-over.

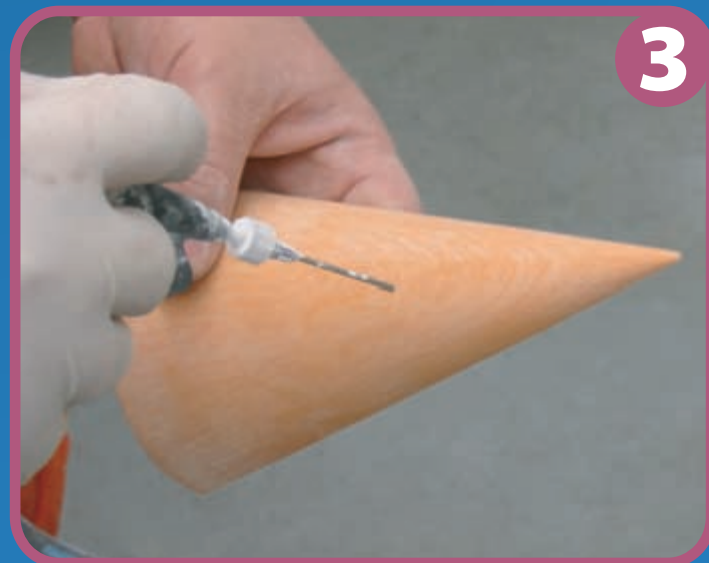


2

Sanding: Fine Grit

After the model has been sanded with 150 grit sandpaper, re-sand the model with 220 grit sandpaper for a surface suitable for most basic finishing.

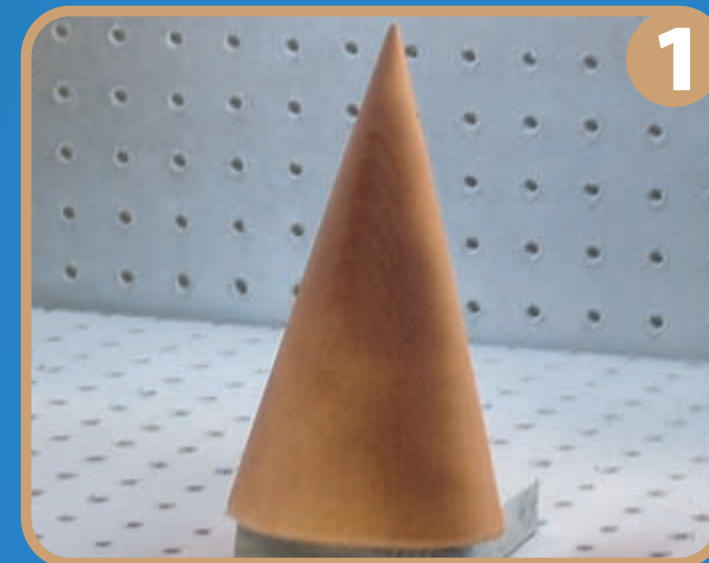
If desired, a higher grit sand paper may be used to achieve a smoother surface.



3

Dusting

After a model has been sanded, the fine powder left on the surface must be removed. Tack cloth or compressed air may be used to dust the model.

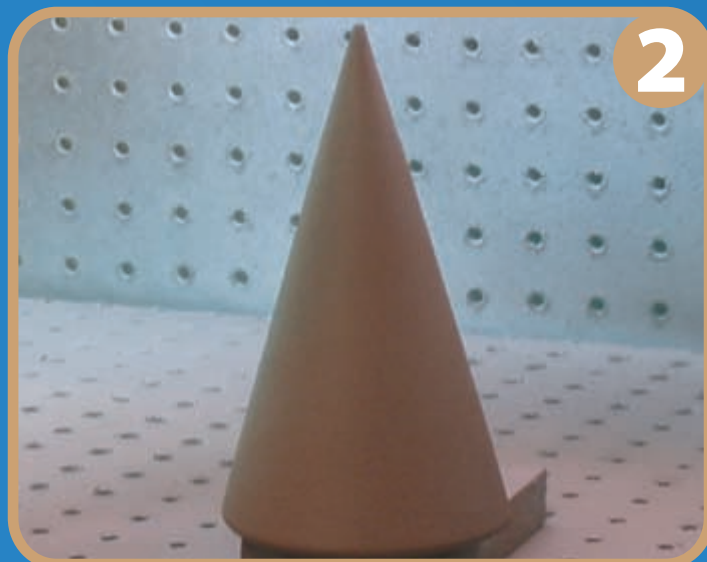


1

Priming

Primer is used to prepare the model for painting. Primer and paint are applied the same way. Spray the model with several mist coats of primer until it's completely covered.

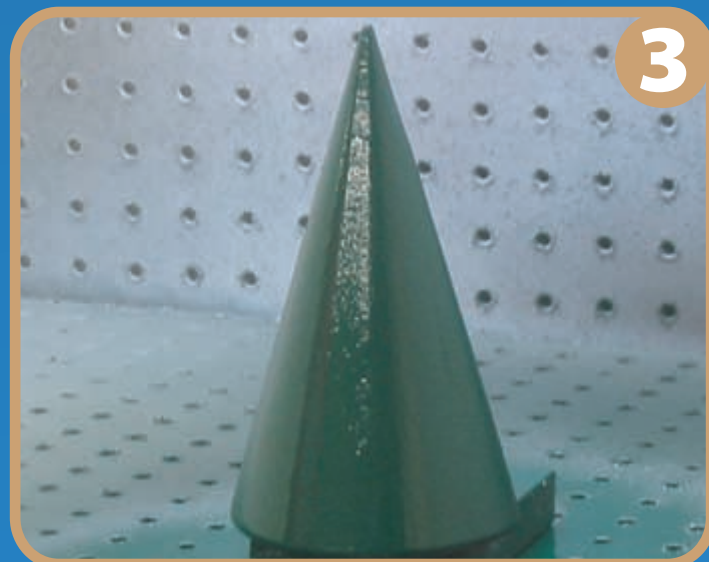
*** READ AND FOLLOW ALL DIRECTIONS ON PAINT CAN ***



2

Priming: Drying

Allow primer to dry before painting. Model should be placed in a location where it will be protected from airborne particles while drying.

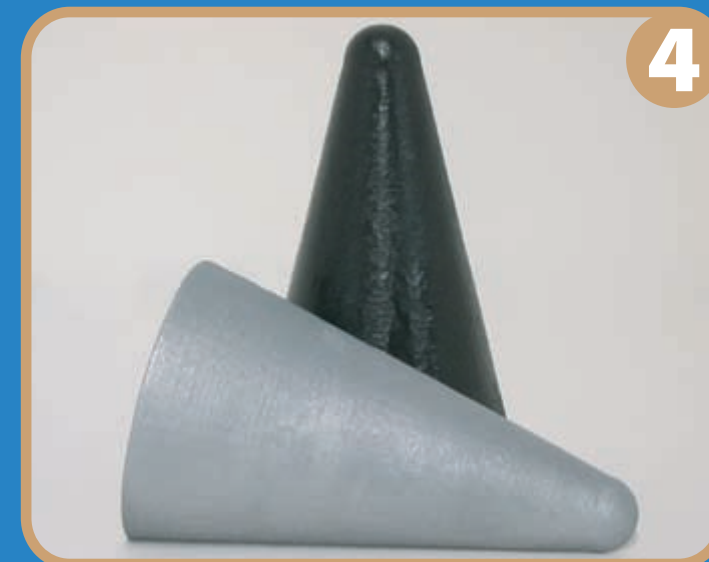


3

Painting

Painting follows the same methods as priming. Spray multiple mist coats of paint to completely cover the model. Multiple coats may be necessary to achieve the desired finish.

*** READ AND FOLLOW ALL DIRECTIONS ON PAINT CAN ***



4

Specialty Paints

Specialty paints may be used to provide a wide variety of finishes. For example, galvanizing paint creates a model with a cast metal appearance. Hammered enamel paint will create a model that looks like hammered anodized metal.