



A Guide to Building Metal Model Kits

Thank you for purchasing this metal kit. This guide will assist you in preparing and assembling your metal models. Should you need any further advice, assistance, etc., regarding this model kit then you can contact our Customer Service Team as follows:

LOCATION	CALL	EMAIL
UK	0115 91 40000	uk.custserv@gwplc.com
USA or Canada	800 394 4263	custserv@gwplc.com
Australia or New Zealand	0115 91 40000	uk.custserv@gwplc.com
France	04 88 80 71 99	gwdirect@gwplc.com
Germany	0211 38769276	mailorder@gwplc.com
Italy	069 931 3110	customerservices.ita@gwplc.com
Spain	93 524 07 62	hobby@gwplc.com
Rest of World or EU	+44 115 91 4000	uk.custserv@gwplc.com

Please Note

To get the best results from your Citadel miniatures, some more advanced modelling skills and tools may be required. Certain products may be dangerous if used incorrectly and **Games Workshop does not recommend them for use by anyone under the age of 12 without adult supervision**. Whatever your age, be careful when using the methods described in this guide. When using glues, bladed equipment, sprays and other tools, always make sure you read the manufacturer's guidelines and follow the instructions on the packaging.

Tools & Glues

When it comes to building a metal model, a selection of tools will be required. Games Workshop produces a range of high quality, specially designed tools that are ideal for working with metal models. A selection of tools are available from warhammer.com as part of the Citadel Tools range.

Tools

Clippers

These are useful for removing pieces of flash or metal vents from the model, and for cutting any plastic parts off their sprues if your model contains both metal and plastic parts.

Modelling Knife

A good quality modelling knife is very important – it will be necessary for cleaning up parts prior to assembly and is a very useful tool for removing mould lines and metal vents (see the Preparation section of this guide). It is important to be careful and steady-handed when using a modelling knife to ensure you don't cut yourself.

Sanding Pads, Sandpaper and Files

Sandpaper or sanding pads are useful for sanding larger areas, smoothing trimmed or sown areas after larger gates or vents have been removed, and removing mould lines. For smaller areas, a file set is also useful. Sanding metal can produce a very fine dust, so wearing a dust mask is advised.

Saw

The most useful type of saw when modelling will be a piercing saw or a razor saw. A piercing saw gives very fine cuts, but the blades are quite fragile. A razor saw is more substantial, but won't give as fine a cut. Sawing metal can produce a very fine dust, so wearing a dust mask is advised.

Tweezers

Tweezers are very useful for adding small and fine detail parts or for adding parts in hard to reach places.

Drill and Drill Bits

Drills can be used to drill out the likes of gun barrels, as well as for drilling a hole in a part in order to pin two pieces together using a metal rod, for greater strength.

Sculpting Tools

These are available in a variety of different forms and can be used to smooth modelling putties into place.

Glues & Modelling Putties

Super Glue

For metal models, a good super glue is required to stick the parts together. Glues intended for plastic kits will not work.

Epoxy Glue

For larger and heavier parts, a two-part epoxy glue can be used to provide a very strong bond. As epoxy can take a long time to dry, you can put some super glue on part of the area to hold it in place whilst the epoxy is drying.

Model Filler and Modelling Putty

These can be used to fill in any gaps between components.



Super Glue



Painting Handle



Assembly Stand



Razor Saw



Piercing Saw



Tweezers



Sculpting Tools



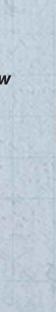
Knife



Drill



Clippers



Modelling Files



Mouldline Remover

Preparation

1. Checking & Cleaning

Check your purchase to ensure you are happy with all the components and if you have any concerns contact the Customer Service Team. In the unlikely event you have any issues, it will be helpful if you can provide us with the batch code found on the packaging and a photo of the problem.

Next, clean each part in warm water with a good degreasing agent, such as dish washing liquid, and an old toothbrush. This is to remove any excess mould release agent which may still be on the surface of the parts. Any release agent left on the model may prevent the primer adhering to it.

2. Remove any flash or metal vents

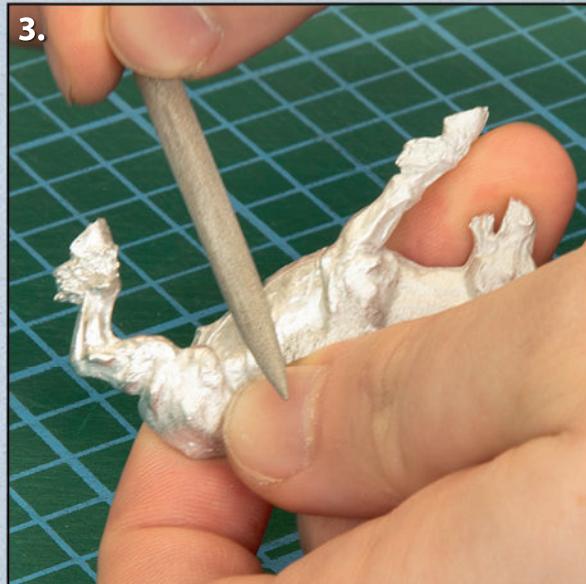
Vents are cut into a mould to allow the hot air to escape during the casting process. As a result, a thin spur of metal is often left in these places on the model, which will usually fall away when the model is removed from the mould. If not, these are easily removed with a modelling knife or clippers, before sanding any excess down with a modelling file.



Clippers being used to remove stray metal vents.

3. Remove Mould Lines

As a result of the casting process, metal models may have a slight mould line on them where the mould joined together. These are usually very fine, but nevertheless they will need removing so that they don't show up after painting. Mould lines can be removed with a file by carefully filing away the line.



This component has a mould line and some excess metal that needs to be removed with a modelling file.

4. Pinning Parts Together

In the case of multi-part metal models, pinning the larger parts together is often a good idea as it gives a stronger fit. This will also mean the model is less likely to break and come apart due to handling during the course of a game. To pin a model, follow the steps below:



4-1.



4-2.

Using a Citadel Drill, drill a number of holes approximately 5mm deep into one part of the model where the parts will join. For parts with a larger connection, two holes may be required, though for smaller connections only a single hole will be needed.

Next, place a small amount of wire or brass rod into the hole(s) so that they extend out beyond the hole. Then, apply a small blob of paint to the end of the wire or brass rod.



4-3.



4-4.

Whilst the paint is still wet, carefully align the two parts being pinned and press them together. This will leave a mark on the other part of the model, and will show where you need to drill holes.

Once these holes are drilled, glue the two parts together ensuring that the pieces of wire or brass rod are placed within the holes for a sturdy join.

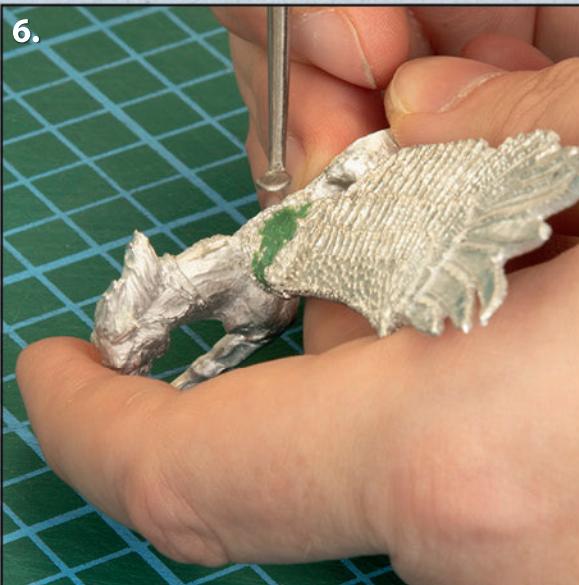
5. Assembly

Once the components have been washed and all excess metal has been removed, the model is ready for assembly.

Before glueing the components together, it is a good idea to dry fit them. This allows you to check if there are any potential problems such as uneven joins or gaps. If there is an uneven join, the connecting parts can be filed to fit with a file or sandpaper before glueing. If there is a gap, this will need filling with modelling putty. Glue the components together using super glue so they are straight but don't worry if it leaves a gap – this can be filled in the next step.

6. Gap-filling with Modelling Putty

Once the glue has set, if there are any gaps in the model you can use a small amount of modelling putty or model filler to fill them in. Sculpting tools can be very useful for applying and smoothing the putty into a gap. Once the putty has set, it can be sanded flat to create a smooth surface that matches the level of the components on either side.



Modelling putty has been applied to the gap on this model and sculpting tools have been used to smooth it into place.

7. Priming & Painting

Citadel Colour Chaos Black or White Scar sprays are great primers for metal models. After the primer has dried, check that it has covered and adhered to the model. If the primer has peeled away from some areas then contact the Customer Service Team for advice on how to resolve this. Once primed, it's then simply a case of choosing your colour scheme from Citadel's huge range of paints and painting your model.

When painting larger models, you might find an airbrush an invaluable aid for obtaining a smooth coverage, particularly on large, flat surfaces.

Games Workshop sells a variety of airbrush paints, which are specially formulated acrylic paints designed to give great results with an airbrush, whilst retaining the perfect consistency for applying with a paintbrush.



Games Workshop produces a huge range of paints that excel in a variety of techniques, to help you get the best results for your model.