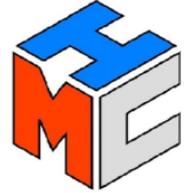




# Sticky Fingers



The Hornchurch Model Club Newsletter

Issue 199 November 2021

## Next Month – Christmas Nibbles and Quiz



### *A view from the Hill...*

By the time you read this, **Scale Model World 2021** “The world’s greatest scale model show”, will be over and I am sure that I will be loaded down with all sorts of things I never knew I wanted until I saw them! This is my first time at this show, not only as a club member but as your club President. Lucky me, I get to go to a meeting of all the club presidents (can’t wait for that... stop laughing Mr. Bagshaw) A full Report on the show, (but not the presidents meeting) will be in Decembers Sticky Fingers.

Talking of model shows I have spent quite a while recently looking through the pictures from **SMW 2019** show comparing the many club stands... seeing what looks good and not so good and looking for ways we can up our game with our own club displays.

So, the first question is when you go around a show, what catches your eye? Is it a well laid out display? Is it a particular model? Or is it something unusual? What never fails to amaze me is you will often see a fantastic model completed with many hours of work, and incredible attention to detail with a superb paint finish just plonked down onto a plain boring cloth... It looks great but what is it?

Looking at our own displays compared to some others it is clear that our models are as good as any out there with plenty of variety and imagination on show. So how can we make it better? It’s good to see all that all our models are on bases, this really helps then to stand out. What next? **LABELS!**

Why labels? Well first, it helps tell what is it? If you are as often is the case on the stand on your own and someone asks you about a model you know nothing about, at least you can say something. I personally know nothing about cars, and I wouldn’t expect anyone but me (sad person that I am) to have a detailed knowledge of the Finnish air force!

A basic label could be: *What it is, the scale, the manufacturer, who built it... for example*

**Hawker Hurricane Mk.1 - 303 Squadron 1940 - Airfix 1/72<sup>nd</sup> - Graham Hill**

Possible extras to a more detailed kit could be: Any modifications or conversions etc.

If there is anything unusual or interesting about your model, then add that. For instance, The Israeli air force obtained a MiG 21 and gave it the number **007**. This is a picture of Sean Connery (aka 007) standing next to that aircraft. Putting this picture next to the model of the aircraft you would have something far more interesting than just a plain silver MiG 21 dumped lonely and uncared for just dumped on a table. Or perhaps a picture of **Roy Chadwick** between an Avro Vulcan and an Avro 504K.



There is always a reason why we build any particular model and if it is interesting then why not share it.

Of course, not every model will have a back story but something like this will hopefully get more people to stop and look and gives us a chance to talk to them and maybe get them to join. I hope that this has given you all food for thought and we can make our displays much more engaging.

Our next meeting is December 20<sup>th</sup> and to keep with tradition there will be a Quiz (not too long I promise) and please bring some nibbles to share.

In January we will start planning for a full range of meetings / activities for 2022 so if there is anything you would like to see happen or something you want the club to do let us know. After all it is our Club, and the aim is to make each meeting / event as enjoyable as possible.

Happy modelling,

**Graham**

## Johns Jottings...

Hello, my fellow members...As you read this, we will have had the much-anticipated return of **Scale Model World** (albeit a truncated version). Next month's newsletter should feature a full report on the show with tales of great finds and any shenanigans that may have occurred... at time of writing this our club is expecting to be manned over the weekend by at least 6 members, not bad considering the overnight nature and distance in attending the show.

Hopefully we are starting to see a return to normality in our club meetings, even returning to the large hall which had seemed unlikely. I think it is going to take a few meetings to get back to full strength and I know without a full AGM to sort out and plan a full year of activities the meetings are a bit sparse... this will change, just don't lose faith.

In addition to Telford, Hornchurch have been approached by the **London Plastic Modellers Show** to attend their Sunday show in Camden on the 5th December. They have already taken on additional space to ensure social distancing guidelines that may be in place are maintained. There is a competition with new categories to include model trucks, tractors, and farm machinery, as well as an expanded fantasy and sci-fi section. I hope to see some members there...

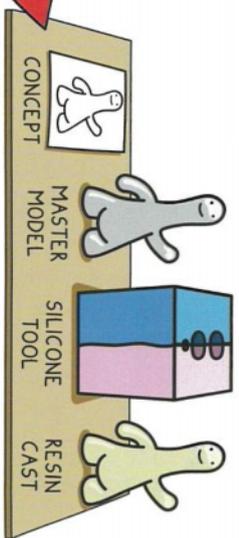
**John**

One rather useful process with many advantages for our hobby is the ability to create multiples of parts from kits we are building... these can range from replacement wheels or wing tips to cockpits or seats... almost anything really. The following is a guide to the process I came across online and I wanted to share with you all... and hopefully you give it a go.

First, we see how to create the Silicon rubber mould....

# 1. PROCESS OVERVIEW

HERE'S THE LOW-DOWN ON WHAT WE'RE GOING TO BE LEARNING OVER THE COURSE OF THIS GUIDE. THESE ARE THE THINGS THAT YOU WILL BE MAKING.



## PROCESS OVERVIEW

### TERMINOLOGY USED

IT'S BEST IF WE START BY KNOWING SOME OF THE BASIC TERMINOLOGY USED IN THESE PROCESSES SO YOU HAVE A BETTER UNDERSTANDING FROM THE BEGINNING.

**TOOL** - REFERS TO THE SILICONE TOOL.

**FLOW** - THE FLOW OF MATERIAL. COULD BE SILICONE OR RESIN LIQUID.

**CASTS** - RESIN CASTS.

**MATERIAL** - REFERS TO THE MATERIALS YOU ARE USING LIKE RESIN ETC...

**CATALYST** - THE PART OF SILICONE OR RESIN THAT ACTIVATES THE HARDENING.

**SCULPTS** - SHORT WORD FOR SCULPTURES.

**RTV SILICONE** - MEANS ROOM TEMPERATURE VULCANISATION SILICONE RUBBER.

**SHORE HARDNESS** - GIVES INFO ON HOW FLEXIBLE THE SILICONE RUBBER IS.

### WHAT IS SPLIT TOOLING?

A SPLIT SILICONE TOOL IS JUST AS IT SOUNDS, A SILICONE TOOL WITH TWO PARTS. IT'S GREAT FOR MAKING COMPLEX SHAPED CASTS.

### WHAT CAN BE MADE USING THE SPLIT TOOLING METHOD?

LOTS OF GREAT PIECES CAN BE MADE WITH THIS TOOLING METHOD, FROM STATUE BUSTS TO FIGURE DESIGNS ETC....

IT'S A VERY INTERESTING PROCESS IN TERMS OF SILICONE TOOLING, AND IT'S A VALUABLE TOOLING METHOD FOR PRODUCING LOW VOLUME RUNS.

### WHAT IF MY DESIGN HAS MANY PARTS?

YOUR DESIGN MAY BE MORE COMPLEX & HAVE MULTIPLE PARTS. THIS MEANS YOU THEN HAVE TO MAKE MORE SILICONE SPLIT-TOOLS, MAKE SURE ALL OF THE PARTS FIT TOGETHER WELL AT THE MASTER MODELLING STAGE.

### HOW LONG DO SILICONE TOOLS LAST?

SILICONE TOOLS USUALLY LAST FOR ABOUT 30 RESIN CASTS. THIS MEANS YOU CAN ONLY MAKE APPROXIMATELY 30 PIECES FROM A SINGLE SILICONE TOOL.

### WHAT ARE THE COSTS FOR MATERIALS & EQUIPMENT?

IT REALLY DEPENDS ON WHERE YOU ARE LOCATED & WHO YOUR SUPPLIERS ARE. SHOP AROUND & CHECK OUT MY SUGGESTIONS AT THE BACK OF THIS HANDBOOK.

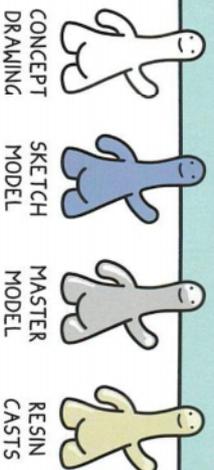
### KEY FOR GUIDE

- MASK ON
- PAY ATTENTION
- WAITING TIME
- HOT
- CORRECT
- INCORRECT

## PROCESS OVERVIEW

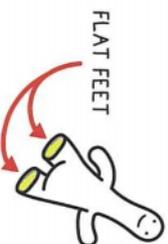
**WHAT WE WILL BE DOING**

CONCEPT DRAWINGS, SKETCH MODELLING WITH PLAY DOUGH, MASTER MODELLING IN SUPER SCULPEY, SILICONE TOOLING AND RESIN CASTING.



### MASTER MODELLING

GARY, THE DESIGN I HAVE CHOSEN TO CREATE FOR THIS TUTORIAL, HAS 2 FEET, HE WILL STAND UPON THESE. I USED HIS FEET TO MAKE SURE I HAVE A GOOD OPEN CAVITY TO POUR RESIN INTO. IT'S A GOOD IDEA TO THINK ABOUT HOW YOUR FIGURE WILL STAND AND WHERE YOU WILL POUR THE RESIN.

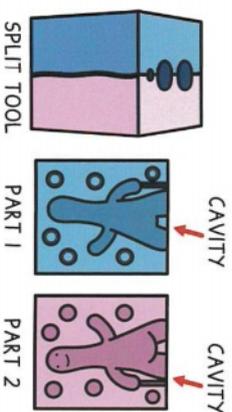


### THE SILICONE TOOL

EVERYTHING IN YOUR SILICONE TOOL WILL BE REPLICATED WHEN YOU CAST IN RESIN. FOR INSTANCE, ANY SMALL IMPERFECTIONS YOU HAVE WILL ALSO BE REPLICATED.

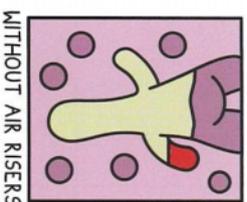
FYI - I HAVE USED ONE TYPE OF SILICONE BUT I HAVE USED 2 COLOUR TINTS SO YOU CAN SEE CLEARLY WHICH IS PART 1 AND 2.

PART 1 IS MALE  
PART 2 IS FEMALE.  
YOU WILL SEE WHY LATER IN THE PROCESS.

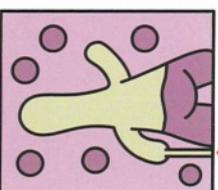
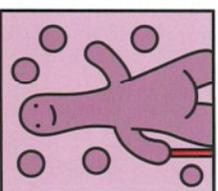


### AIR RISERS / RESIN VENTING

THE SILICONE TOOL MAY NEED AIR RISERS TO PREVENT AIR POCKETS FROM FORMING WHEN POURING YOUR RESINS.



WITHOUT AIR RISERS



WITH THE AIR RISERS INCLUDED, THE RESIN RUNS FREE

## 4. SILICONE TOOLING

LET'S GET READY TO START THE EXCITING PROCESS OF MAKING YOUR FIRST SILICONE **SPLIT TOOL**.



ALWAYS WEAR A MASK WHILE USING THESE MATERIALS & MAKE SURE YOUR WORKSPACE IS WELL VENTILATED. TAKE A BREAK OUTSIDE EVERY SO OFTEN TO GET FRESH AIR.

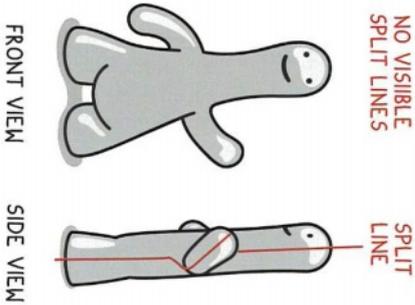
### TOOLS & MATERIALS REQUIRED

## 1 LET'S MAKE A SPLIT TOOL!

THE FIRST THING WE NOTICE ABOUT THE PHRASE **SPLIT TOOL** IS THE WORD **SPLIT**. THE TOOL IS BUILT IN 2 PARTS, MALE AND FEMALE.

THERE'S A GOOD REASON WHY WE MAKE A **SPLIT TOOL**. IT'S BECAUSE THE DESIGN OF THE FIGURE IS SO COMPLEX, THAT IT WON'T COME OUT OF A **ONE-PART** SILICONE TOOL. TO FIND OUT MORE ABOUT **ONE-PART** TOOLS READ HANDBOOK 1.

WE NEED TO CHOOSE A **SPLIT LINE** FROM THE START. I CHOSE A **SIDE SPLIT LINE**, SO I GET A DESIGN WHICH IS BACK AND FRONT, SO FROM THE FRONT YOU DON'T SEE ANY **SPLIT** OR MARKS. JUST GOOD OL' CLEAN DESIGN. AND THIS MEANS MY LITTLE GARY WILL COME OUT OF THE MOLD SUPER EASY.



NO VISIBLE SPLIT LINES

SPLIT LINE

### GARY'S DETAILS

THE THING ABOUT GARY IS THAT HE HAS 2 FEET, ONE RAISED ARM & ONE LOWERED ARM.

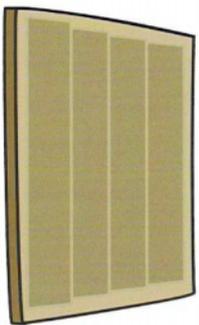
HE'S DESIGNED THIS WAY TO SHOW YOU SOME GOOD TECHNIQUES.

THE TWO FEET ALLOW US TO MAKE A SILICONE TOOL WHICH IS EASY TO BUILD. HE WILL STAND ON HIS FEET, AND WE WILL POUR RESIN IN FROM HIS FEET. PROBABLY HIS LEFT FOOT.

HE'S GOT A RAISED ARM, WHICH CAUSES US NO ISSUES WHEN CASTING.

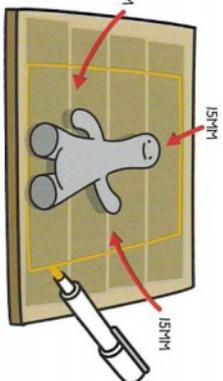
HE HAS A LOWERED ARM. WE WILL NEED TO ADD AN AIR RISER TO HIS HAND TO MAKE SURE THIS GETS FULL OF RESIN.

## PART 1 - SILICONE TOOL - STEP-BY-STEP

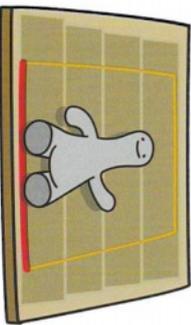


1 TAKE A STRONG SHEET OF CARDBOARD AS A BASE TO WORK UPON.

2 COVER THE CARD BASE IN STICKY TAPE SO THAT THE CLAY DOES NOT MET THE CARD.



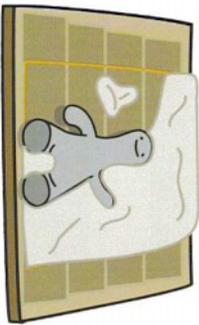
3 DRAW A BOX AROUND YOUR FIGURE WITH A RULER SO YOU HAVE 15MM SPACE AROUND IT.



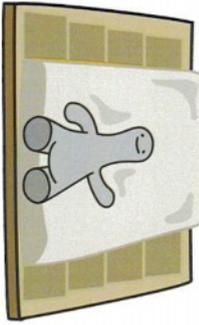
4 PLACE YOUR FIGURE AT THE BOTTOM OF THIS DRAWN BOX. THIS WILL BE THE EDGE OF THE SILICONE TOOL.



5 OPEN UP YOUR CLAY AND PUT ON SOME GLOVES

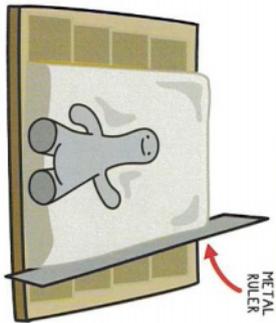


6 PUT CLAY ALL AROUND YOUR FIGURE. MAKE SURE YOU CAN THINGE THE SPLIT LINE. DON'T GO ABOVE THE SPLIT.

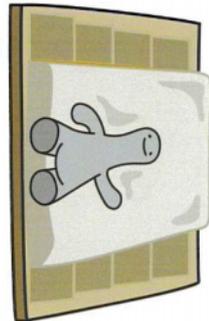


7 COMPLETELY SURROUND THE FIGURE WITH CLAY, LEAVING THE FEET OPEN AT THE BOTTOM.

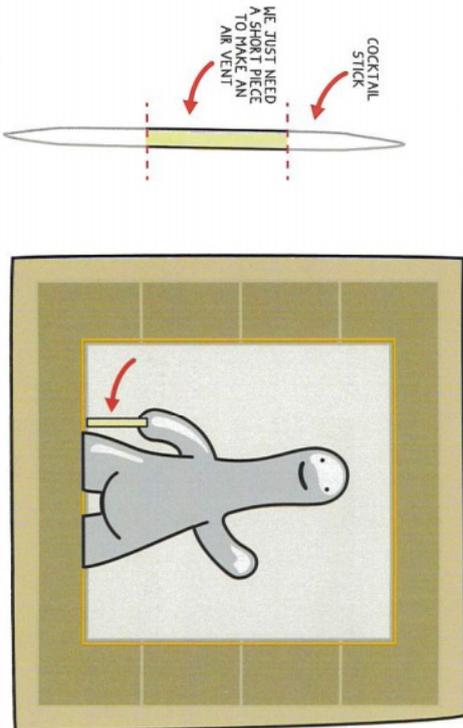
# PART 1 - SILICONE TOOL - STEP-BY-STEP



**8** SQUARE UP THE EDGES UP WITH A RULER. YOU CAN SLICE OFF SOME OF THE CLAY IF NEEDS BE.

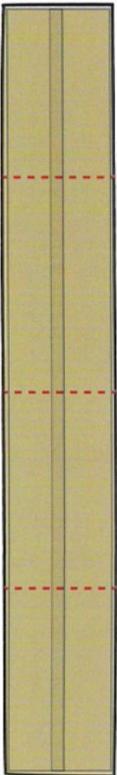


**9** MAKE SURE THE CLAY IS QUITE SMOOTH AND LEVEL ALL OVER.



**10** LET'S ADD ONE AIR VENT TO THE TOOL. TAKE THE COCKTAIL STICK AND CUT IT TO SIZE. ADD IT TO THE CLAY.

**11** MAKE SURE THE STICK IS FIRMLY IN PLACE AND TOUCHES THE OUTSIDE BOX AND THE MASTER MODEL.

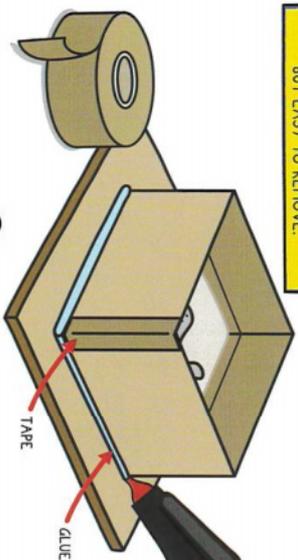


**12** TAKE A LONG STRIP OF CARD. AND MARK IT THE SAME LENGTHS AS THE DRAWN BOX. THIS WILL TURN INTO A CONTAINER.

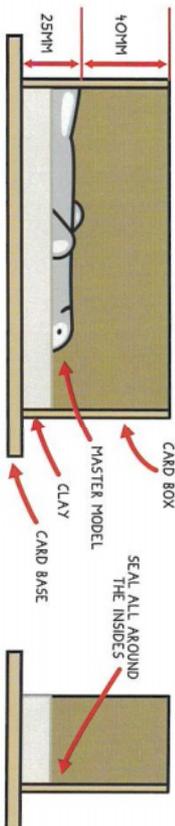
**13** ONCE IT'S BEEN MARKED. ADD TAPE TO THE INSIDE OF THE STRIP AND FOLD IT SO IT MAKES A BOX. THIS HELPS THE SILICONE TOOL RELEASE LATER.

# PART 1 - SILICONE TOOL - STEP-BY-STEP

LET'S MAKE A BOX CONTAINER THAT'S WATER TIGHT AND STRONG, BUT EASY TO REMOVE.

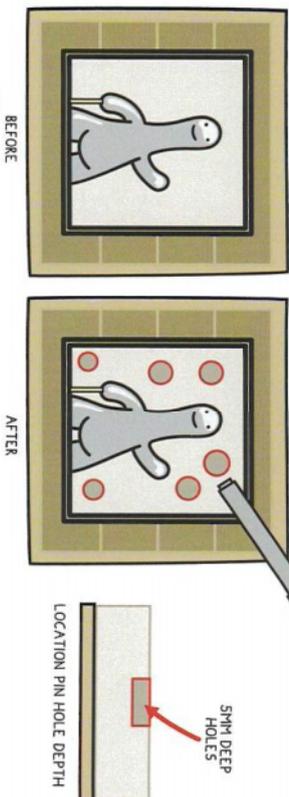


**14** USE A HOT GLUE GUN TO SEAL THE BOTTOM EDGES OF THE BOX, SO THAT THE SILICON DOES NOT LEAK OUT. AND USE TAPE FOR THE SIDE.



**15** THIS IS WHAT IT SHOULD LOOK LIKE FROM THE SIDE. INSIDE THE BOX.

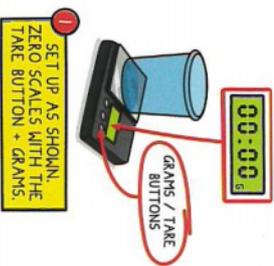
**16** MAKE SURE THE CLAY TOUCHES THE SIDES OF THE BOX ON THE INSIDE. USE YOUR FINGERS TO MAKE A SEAL.



**17** LAST JOB... WITH THE BACK END OF A PEN, ADD SOME LOCATION PIN HOLES. NOT TOO DEEP. LOCATION PINS WILL HELP HOLD THE SILICONE TOOL TOGETHER WHEN BOTH SIDES ARE COMPLETED.

## SILICONE MIXING - STEP-BY-STEP

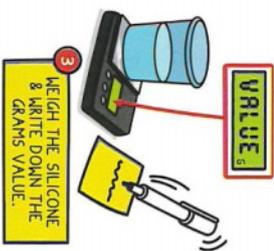
1. SILICONE RUBBER IS A TWO-PART MIXTURE.
2. **PART 1 (PT. A)** SILICONE RUBBER - **PART 8 (PT. B)** HARDENER/CATALYST.
3. KNOW THE PERCENTAGE OF SILICONE TO HARDENER BEFORE YOU START MIXING.
4. KEEP THE LIDS CLOSED ON YOUR SILICONE CANS FOR INCREASED SHELF LIFE.
5. READ THE INSTRUCTIONS WHICH ACCOMPANY THE CANS.
6. CHECK THE EXPIRY DATE AS OLD SILICONE CAN LEAD TO POOR RESULTS.



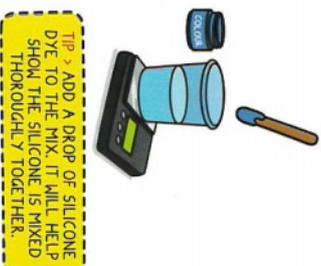
1 SET UP AS SHOWN. ZERO SCALES WITH THE TARE BUTTON + GRAMS.



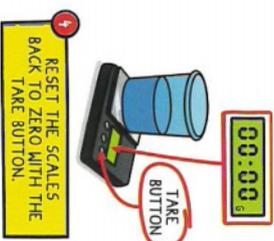
2 OPEN PT. A & POUR THE SILICONE VERY SLOWLY INTO THE PLASTIC CUP.



3 WEIGH THE SILICONE & WRITE DOWN THE GRAMS VALUE.



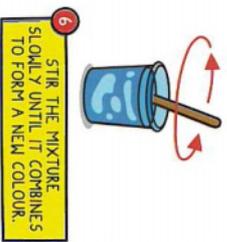
TIP > ADD A DROP OF SILICONE DYE TO THE MIX. IT WILL HELP SHOW THE SILICONE IS MIXED THOROUGHLY TOGETHER.



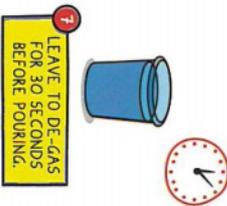
4 RESET THE SCALES BACK TO ZERO WITH THE TARE BUTTON.



5 POUR IN PT. B WITH THE CORRECT WEIGHT ON TOP OF PT. A.



6 STIR THE MIXTURE SLOWLY UNTIL IT COMBINES TO FORM A NEW COLOUR.



7 LEAVE TO DE-GAS FOR 30 SECONDS BEFORE POURING.

## SILICONE POURING - STEP-BY-STEP



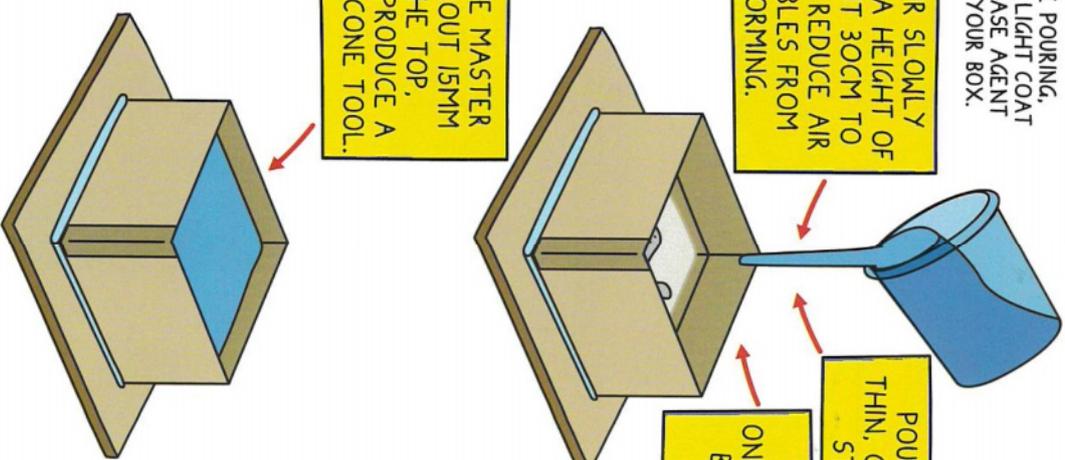
BEFORE POURING, SPRAY A LIGHT COAT OF RELEASE AGENT INSIDE YOUR BOX.

POUR SLOWLY FROM A HEIGHT OF ABOUT 30CM TO HELP REDUCE AIR BUBBLES FROM FORMING.

POUR WITH A THIN, CONSISTANT STREAM.

POUR DOWN ONE SIDE OF THE BOX. KEEP IT FLOWING.

COVER THE MASTER MODEL ABOUT 15MM OVER THE TOP. THIS WILL PRODUCE A STRONG SILICONE TOOL.

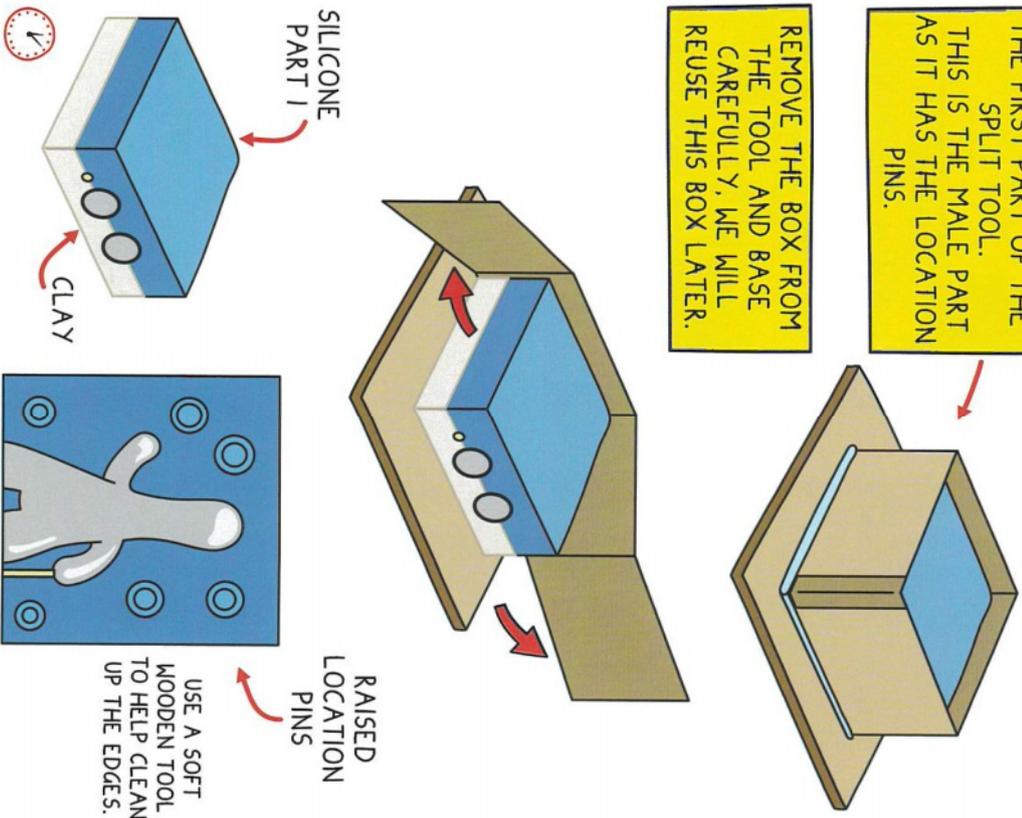


LEAVE THIS SILICONE TO CURE. IF YOU LIKE, USE THE CUP AS A TEST. IF THE MIXTURE INSIDE THE EMPTY CUP HAS CURED, THEN YOUR MOLD IS READY TOO.

## DE-MOLDING - PART 1 - STEP-BY-STEP

LET'S DE-MOLD THE FIRST PART OF THE SPLIT TOOL. THIS IS THE MALE PART AS IT HAS THE LOCATION PINS.

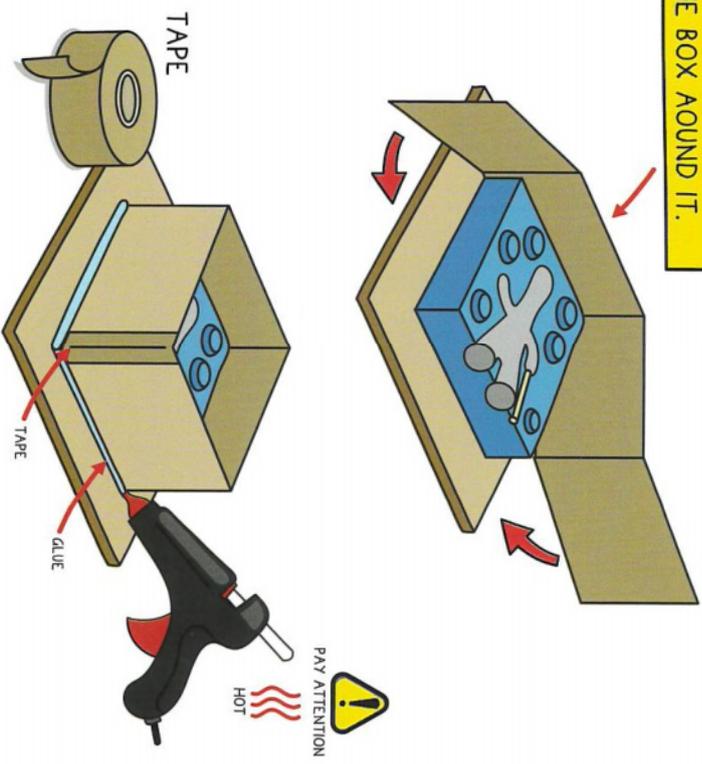
REMOVE THE BOX FROM THE TOOL AND BASE CAREFULLY, WE WILL REUSE THIS BOX LATER.



REMOVE ALL THE CLAY FROM THE SILICONE TOOL. VERY IMPORTANT THAT YOU DO NOT REMOVE THE FIGURE OR THE AIR RISER IF POSSIBLE. YOU SHOULD BE LEFT WITH A CLEAN SILICONE MALE TOOL.

## PART 2 - SILICONE TOOL - STEP-BY-STEP

PUT THE SILICONE TOOL PART 1 UPSIDE DOWN ONTO THE BASE PLATE & RE-CONSTRUCT THE BOX AROUND IT.

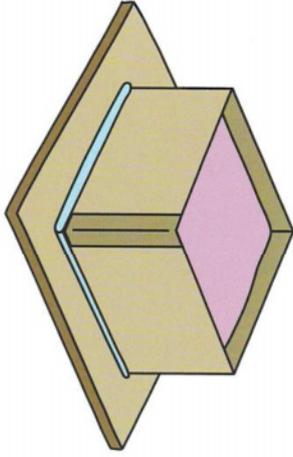


A FINISHED MOLDING BOX, READY FOR TOOLING. NOW WE WILL POUR SILICONE OVER PART 1, FORMING SILICONE TOOL PART 2. GO TO MIXING / POURING SILICONE PAGE, THIS TIME I WILL ADD A RED SILICONE DYE TO MAKE THE SECOND TOOL PART 2. JUST SO YOU CAN SEE THE DIFFERENCE. DON'T FORGET TO USE SPRAY RELEASE AGENT!

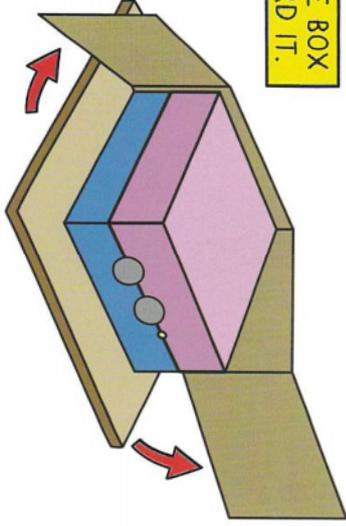


## DE-MOLDING THE SPLIT TOOL

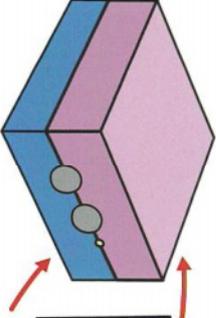
WELL DONE YOU,  
YOU ARE NOW ABOUT TO  
SEE IF YOUR HARD WORK  
HAS PAID OFF.



REMOVE THE BOX  
AND DISCARD IT.



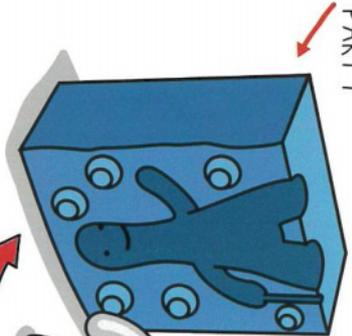
THE SPLIT TOOL  
SHOULD LOOK  
LIKE THIS.



YOU MAY NEED  
TO CLEAN UP THE  
EDGES WITH A  
KNIFE.

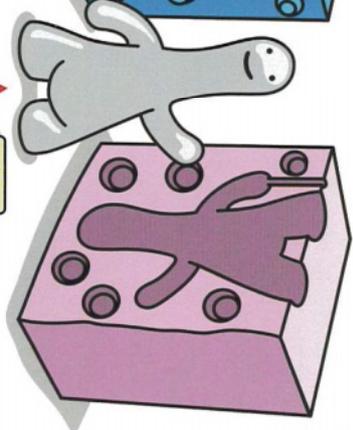
## DE-MOLDING THE SPLIT TOOL

TOOL  
PART 1



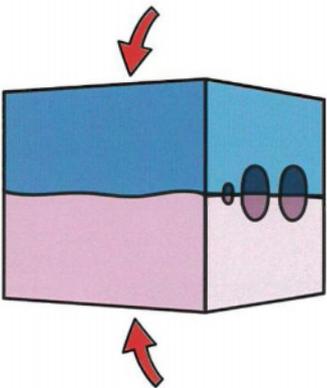
MASTER  
MODEL

AIR RISER



TOOL  
PART 2

OPEN UP THE TWO PARTS, AND POP OUT THE MASTER MODEL  
AND THE AIR RISER. NOW YOU HAVE A SPLIT TOOL, READY FOR  
MAKING AN ARMY OF RESIN FIGURES.



NOW YOU CAN PUT THE 2 PARTS OF YOUR SPLIT TOOL  
TOGETHER AND YOU WILL SEE IT IN ACTION.  
THE LOCATION PINS WILL HELP YOU JOIN THE TOOL TOGETHER.