TINY ROOMS THERAPY
MINIATURE DIY

DIY – EBOOK – TUTORIAL 2024

INSTRUCTIONS, TIPPS, LINKS

DIORAMA BUILDING

MATERIAL • GLUE • ACRYLIC PAINTS • SPRAY PAINTING

https://www.tinyroomstherapy.com/tut/diorama-building.pdf

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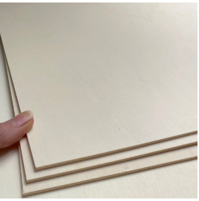
Tools & Materials

MODEL MAKING MATERIALS

In the world of miniatures and model making (architecture, industrial design, film production, and hobbies), thin sheets wood, Mdf, cardstock and paper are the most important building materials. These are not only widely available, but they can also be laser cut, hand cut with a craft blade or cut with a cutting machine.
But there are of course different considerations for the choice of material – like air dry clay or polymer clay for miniature food or dollhouse decor items.
Very common is the use of acrylic sheets (transparent; for windows, doors), sometimes also polystyrene sheets, thin metals and fabrics.



- The main building material for my doll furniture and dioramas is **AA-graded plywood in a thickness of 3 mm**.
- The plywood is super **high quality, free of toxic ingredients** and sourced from certified **sustainable** poplar plantations in Italy.
- This material has a **very pleasant even surface** and is easy to work with. It has no knotholes, bruises or rough fibers. It is flexible, bendable and very easy to sand.
- Lasercutting results in light golden brown edges only – no burn or charring.
- It's also lightweight, which makes not only small, but also larger high quality model making projects possible in the first place!

PLEASE NOTE!

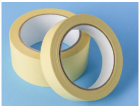
- When you unpack your DIY kits, you'll notice, that the plywood seems to be thin and a bit wobbly (the large wall pieces).

- Please **don’t worry about that** – when you assemble the parts (tabs, slots, wood glue, tapes…) **the interlocking parts will create absolute stability**. Your diorama walls will stand perfectly straight, everything will be completely sturdy. 🤩

THE PERFECT GLUE

- For the assembling process you'll need glue – the best choice is of course simple wood glue (Gorilla Glue, PVA Glue,...)!
- You can wipe away excess glue easily.
- Once dry the bond ist very strong.
- It’s transparent when dry.
- For a perfect, non-messy glue application I recommend getting a small flexible plastic bottle (10 ml) with a fine metal (!) nozzle and silicone cap.
Keep a pin or needle handy, you'll sometimes need it to poke the nozzle.
- Fill the bottle with glue. It will allow you to place the tiniest dots of glue exactly where you need it. You will love this!

- For special purposes you might need super glue, E 6000 glue or special adhesives for plastics. But we don't need these for the diorama montage!



TAPE, CLAMPS & HEAVY OBJECTS

- When you're building your miniture diorama elements, you'll find many tabs and slots, that will guide you to the perfect assembling.
- Put (wood, PVA,...) glue on all connecting lines and slots, insert the matching tabs and then make sure, they stay there!
- To achieve that, you can temporarily use painters tape, clothes pins, clamps in different sizes to hold the parts in place, while the glue bonds.
- With larger parts it might be advisable to additionally weight the glued areas down, because wood can develop quite a momentum of it's own, when in contact with larger amounts of liquids (from the glue!).
- You can use heavy objects like books, dumbbells, food cans or containers filled with sand (like decor sand).

Paint it!

HOW TO PAINT YOUR DIORAMA ELEMENTS

- Painting the wood building will transform the appearance on the architectural roombox elements into beautiful doll habitations...

• **Very important:** Please let the glue dry completely before starting to paint – when the glue has not dried sufficiently, the moisture in the paint might dissolve the connections again, resulting in lot's of troubles!

REGULAR PAINT (low cost)
After the glue has dried for several hours, preferrably over night, you can brush on regular artists acrylic paint of your choice.

- High quality paint has usually more pigments, this will help you get quicker to your desired results! Allways apply several thin coats, let the paint dry between layers.
- You can also use matte wall colors from the hardware store – but then you have to be especially careful to only apply very thin coats of paint at a time.
- You'll have to apply one or two additional layers at the brown edges.

SPRAY PAINT (recommended for large objects like dioramas)

- I recommend using (water based) acrylic spray paint, inks and markers – this allows for a beautiful, even finish and quicker painting... Hereinafter I'll explain the reasons and advantages...
- But to say first things first: This option it is of course more costly and requires a room or outdoors where you can spray paint!
- I'm using very high quality MOLOTOW spray and ink products in combination – see below!!!
- The links I'm providing are NOT affiliate links – I'm getting nothing for recommending them. 😅 The products are also available at Amazon and other suppliers…

PRODUCT INFORMATION AND INSTRUCTIONS FOR SPRAY PAINTING AND LIQUID ACRYLIC INKS

The perfect paint for miniatures:

MOLOTOW COVERSALL WATER-BASED SPRAY PAINT
+ **MOLOTOW ONE4ALL REFILL INK** (liquid, same color, to use with a paint brush)
+ **MOLOTOW ONE4ALL ACRYLIC MARKER** (same color, for quick paint appication – optional)
+ **EMPTY DRIPSTICK** (for quick paint appication – optional)

MOLOTOW COVERSALL is a

- highly professional artists brand
- water-based lacquer, strongly pigmented formula,
- ultra matt, **highly opaque**, permanent,
- good UV and weather resistance
- **ultra-fast-drying**, even coating
- low odor, for indoor and outdoor use
- **90** color shades

(The available color palette is enormous; I used „nature white")

The difference of the paint quality to regular acrylic paint is **totally satisfiying**:
No brush strokes anywhere (surface texture can destroy the miniature illusion),
no sticky surfaces,
no unwanted gloss.

Both the bottled ink and the spray paint have certain amount of alcohol in it – that's a good thing, because it makes the liquid evaporate and dry FASTER. We like that!

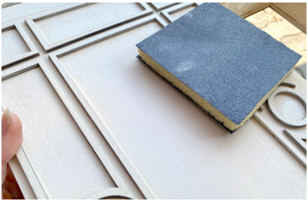
To achieve a perfect result, you'll have to do a few things in combination:

- You can start by using the liquid ONE4ALL ink (and/or the marker, and/or the drip stick) to prime the brown laser cutting edges
  You can do the detail work after spray painting… in fact, you'll do this alternating!
- Spray paint will get "around the corners", painting the sides of the moulding application/trim pieces, but of course not completely – so you have to help it by brushing on the ink.

My spray tent – it's actually a pop-up beach tent!

Important: After the first spraying you'll see the surface get coarse – the reason are the **tiny fibers**, which will react to the liquid and stick out, then they dry out.

- You'll have to lightly **sand** these down!
- After that, most surface fibers will already be bound in the acrylic and won't react much anymore. If some areas still do, just sand again a bit!
- Please wait between paint coats (I know, it can't be finished fast enough 😅!).
  If it's dry to the touch, you can add more paint.



Sand the coarse surface after the first spray coat.

- Shake the can often.

- After spraying, there will be a bit of paint at the fine nozzle hole, just scratch that paint off.

———

AND:

This is quite rare, but it can happen, if the cans you get, are a bit older:
If **no paint comes out, or it starts to spout**, you'll have to do the following:

- Take the can in your hand, as you would a glass of water, then slam it down on a flat surface flat on it's butt! This will free some internal canals and the spray nozzle will (hopefully) work again 😅.

A very unconventional tool:
I use this "face skin cleanser" rotation brush (works with batteries) to also remove fibers and clean out the sanding dust from the moulding recesses.

THE PRODUCTS

- The links I'm providing are NOT affiliate links – I'm getting nothing for recommending them. 😅

Ultra high quality spray paint I use:
COVERSALL WATER-BASED

https://shop.molotow.com/en/product/coversall-water-based-2/

sophisticated, water-based lacquer
strongly pigmented formula
ultra matt
highly opaque
permanent
good UV and weather resistance
ultra-fast-drying
low odor
for nearly all surfaces
for indoor and outdoor use
90 color shades
even coating
Soft Vari-Valve™, smooth handling
patented MOLOTOW™ technology:
anti-drip™, no-dust™, covers-all™, all-season™
easy color identification
exchangeable caps
Made in Germany
400 ml

MOLOTOW THE ORIGINAL
COVERSALL
WATER-BASED
ULTRA-MATT ACRYLIC
AEROSOL
400 ml

The **finish is really fabulous!** As the spray paint is water based (instead of solvent based, like many products), there are no nasty toxic fumes...

ONE4ALL REFILL

30-180 ml ACRLIC PAINT REFILL BOTTLE

https://shop.molotow.com/en/product/one4all-refill-2/

-> Please chose the corresponding liquid ink for your project (I used „nature white“) to apply with a paint brush
It has exactly the same pigments…

With 50 color shades the ONE4ALL system has a broad range of acrylic colors when speaking of 180 ml refill bottles. The acrylic pens / acrylic markers easily can be refilled thanks to the handy refill bottle. The acrylic paint is also available as a smaller 30 ml refill bottle.

ONE4ALL
ACRYLIC
REFILL
180 ml
30 ml

ONE4ALL ACRYLIC MARKER

https://shop.molotow.com/en/product/one4all-acrylic-markers/

-> Those help you work on detailed areas (optional), I only use the 4-8 mm tip, the markers are refillable with the ONE4ALL ink!

ACRYLIC MARKERS FOR ALMOST ALL SURFACES
Highly opaque and UV-resistant on almost all surfaces:
The sustainable ONE4ALL acrylic marker system was built for refilling and is reliable in all functions.
With 74 color shades, these acrylic markers provide a great color range. Thanks to corresponding empty markers, individual color shades can be mixed easily.

EMPTY DRIPSTICKS

https://shop.molotow.com/en/product/empty-dripsticks-2/

-> Quick application of more ink (optional; if you don't want to always use a paint brush).

The empty squeeze markers with different applicators.
For rough and uneven surfaces, Dripsticks with a rollerball made of metal are the best choice, while soft and even surfaces are better treated with Dripsticks with **felt applicators**.
For filling in and mixing the inks, the rear tank cap can simply be unscrewed in a clean and comfortable way.

Dear miniature-fans,

I hope, you were very successful and are now a proud owner of a fabulous new selfmade craft project. I would LOVE*LOVE*LOVE to see, what you have made and how you have customized your creation.

Thank you for buying this e-book, cutting file or kit!

Keep creating miniatures and have a wonderful time!
Love, Mirjam

TINY ROOMS THERAPY

Modern Miniature Design

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