

RESIN PROFIT LAB · RESIN BASICS

RESIN BASICS: ILLUSTRATED GUIDE



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Everything that happens between opening the bottles and holding a hard, glossy piece: **measure, mix, color, pour, cure and finish**, with a photo for every step.

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THE ONE RULE OF THIS GUIDE

Resin is chemistry, not art, until it's in the mold. Measure exactly, mix fully, respect the temperature. Do those three and the art part takes care of itself.

1 BEFORE YOU OPEN THE BOTTLES

Safety first, every single time

Epoxy is safe to work with **when you respect it**. Five habits on one side, five rules on the other.



Always

- **Nitrile gloves**, always. Latex lets resin through
- **Window open** or a fan pushing air out
- **Safety glasses** when you mix and pour
- **Organic vapor respirator** for big pours or a small room
- Long sleeves and an **apron**

Never

- Resin on skin: **soap and warm water**, never alcohol or acetone
- Kids and pets **out of the room** while you work
- No eating or drinking at the resin table
- Leftover mixed resin: **let it harden**, then trash
- Itchy rash? **Stop and see a doctor**. It can become an allergy

◆ WHY GLOVES MATTER SO MUCH

Skin contact is the real risk with resin, not the smell. **Change your gloves the moment they get resin on them**, instead of wiping and continuing.

2 STEP 1 · MEASURE

The ratio is not a suggestion

Most beginner kits are **1:1 by volume**: the same amount of resin and hardener. Check your label: some resins are 2:1. **A wrong ratio never fully hardens**, no matter how long you wait.



Eyes at the level of the lines. Pour the first part, then the second part to exactly double.

PIECE	TOTAL MIX	RESIN + HARDENER
Practice keychain	0.3 oz	1 tsp + 1 tsp, roughly
Set of 4 coasters, 4 in	7 oz	3.5 oz + 3.5 oz
Round tray, 12 in	12 oz	6 oz + 6 oz
Ocean tray, 18 in	40 oz	2 or 3 batches of 14 oz

◆ EMMA'S TIP

Mix **10% more than you think you need**. Running out in the middle of a pour leaves a line in your piece. A little extra becomes a keychain.

3 STEP 2 · MIX

Three slow minutes, scraping every side

Most sticky pieces are not bad resin. They are **under-mixed resin**. The unmixed part hides on the walls and the bottom of the cup.



Flat stick, slow circles, scrape the wall. Use your phone timer: 3 full minutes.

1

Pour both parts

Resin first, hardener second, into one clean cup.

2

Stir 3 minutes

Slowly, like folding cream. **Scrape the walls and the bottom** every 20 seconds.

3

Check the streaks

Cloudy swirls mean it isn't mixed. **Keep going until it's crystal clear.**

◆ EMMA'S TIP

Warm the closed bottles in **warm tap water for 10 minutes** before mixing. Warm resin mixes easier and lets the bubbles out by itself.

4 STEP 3 · COLOR

A little pigment goes a long way

Split the mixed resin into small cups and color each one. **Too much pigment can stop resin from curing**: stay under about 4% of the mix, which in real life is a pinch or a few drops.



Ocean palette: teal, deep navy, opaque white and clear with gold mica.

COLOR WITH	HOW MUCH	USE IT FOR
Mica powder	A pinch per ounce: about **1/8 tsp per oz**	Shimmer and the gold sand
Liquid pigment	**1 or 2 drops** per ounce, then add more	Deep blue, teal
White pigment	A few drops, opaque	The foam lace on the waves
Gold leaf flakes	Sprinkle by hand on the wet resin	Sparkle on the sand

◆ EMMA'S TIP

Test a color on a **spoon or a plastic lid** first. Wet resin always looks darker in the cup than in the finished piece.

5 STEP 4 · POUR

Low, slow, and on a level table

Hold the cup **about 2 inches above the mold** and pour a thin stream. A thin stream lets air escape. A splash traps it.



The thin stream goes to the center and spreads by itself to the edges.

1 ## Level first

Check the table with a level, or a glass of water. **A tilted mold makes a lopsided piece.**

2 ## Fill to the line

Stop **just below the rim**. Overfilled molds leave a sharp lip to sand.

◆ EMMA'S TIP

Respect the **max pour depth** on your label. Too deep in one pour gets hot, can crack and can damage your mold. Deep pieces go in layers or with deep pour resin.

6 STEP 5 · BUBBLES

Pop them in the first 15 minutes

Small bubbles rise to the top on their own. Help them with **quick passes of a heat gun**, about 6 inches above the surface, always moving.



Sweep side to side. Never stop in one spot: too much heat makes ripples.

1

Prevent

Warm bottles, slow mixing, a low pour. **Most bubbles never get in.**

2

Check again

Look again after **10 to 15 minutes** and do one last quick pass.

◆ EMMA'S TIP

Keep flames away from silicone molds and plastic. **A craft heat gun is the safest tool** for beginners, and it also makes the white lace on the ocean waves.

7 STEP 6 · CURE

Warm, covered and still

Resin cures while you sleep, **if the room is warm**. Cold is the number one reason for soft, cloudy pieces.



A clear bin upside down keeps out dust and hair. The thermometer keeps you honest.

WHEN	WHAT HAPPENS	WHAT TO DO
Below 70 °F (21 °C)	Very slow, may stay soft or cloudy	Warm the room first
75 to 85 °F (24 to 29 °C)	Dry to touch in about 24 h	The ideal range
Demold small pieces	After 24 to 48 h	When it's hard, not just dry
Full cure	About 72 h	Before sanding hard, using or delivering
Deep pour (sinks, tables)	Several days	Follow the label exactly

◆ EMMA'S TIP

Keep the temperature **steady for the first 24 hours**. A heater that turns off at midnight can leave an orange-peel surface.

8 STEP 7 · FINISH

Demold, sand and top coat

The finish is what makes people say **“you made this?”**. Ten extra minutes here double what the piece looks like in a photo.







1 Demold

Bend the silicone **away from the piece**, all the way around, then push from the back. Never pry with a knife.

2 Sand the edge

Wet sandpaper, from **coarse to fine**: 220, then 400, then 800 grit. Wet sanding keeps the dust down.

3 Top coat

For a glass shine, a **thin coat of resin** on top, with the piece raised so drips fall off the edge.

◆ EMMA'S TIP

A tiny dust spot on top? **Sand that spot lightly and add a top coat**. It disappears completely. That is the fix that saves most first pieces.

9 FIXES

What went wrong, and how to fix it



Cloudy and full of tiny bubbles: cold resin, stirred too fast.



Soft, sticky and wrinkled: the ratio was off or it wasn't mixed.

WHAT YOU SEE	WHY	FIX IT
Sticky or soft spots	Wrong ratio or not mixed enough	Scrape off the soft part, pour a new, well-mixed coat
Cloudy, milky	Too cold, or humidity	Warm room; sand and top coat once hard
Lots of tiny bubbles	Cold resin, fast stirring, high pour	Warm the bottles, stir slowly, pour low
Craters, little dents	Dust, oil or water on the surface	Clean mold; sand and top coat
Wavy, ripply top	Too much heat in one spot	Keep the heat gun moving
Yellow over time	Sun and old resin	UV-resistant resin; keep from direct sun

◆ EMMA'S TIP

Write down **the temperature, the amounts and the time** of every pour in a notebook. When something goes wrong, your notes tell you why in one minute.

10 YOUR MOLDS

Take care of your molds

A $10 mold that you use over and over **is what makes the math work**. Treat it well and it gives you 20 pours or more.

1 **Clean**

Peel off leftover bits, lift dust with **packing tape**, wash with mild soap and let dry.

2 **Store flat**

In a box, **not folded and not stacked** with heavy things on top.

3 **No sharp tools**

Never use a knife or a skewer inside the mold. **One scratch shows on every piece.**

4 **Mold release**

A light spray of mold release before each pour **helps big molds last longer**.

5 **Replace it when**

It tears, turns cloudy inside or your pieces start coming out **dull instead of glossy**.



Gentle hands, a clean mold, a shiny piece.

◆ EMMA'S TIP

The shine of your piece is **a copy of the inside of your mold**. A glossy, clean mold gives a glossy piece. A dusty, scratched one gives a dull piece.

BEFORE YOU CLOSE THIS GUIDE

You know the basics. Now pour.

- [ ] I set up my **safe table**
- [ ] I measure the **ratio exactly**
- [ ] I mix for **3 full minutes**
- [ ] I color with **a pinch, not a spoon**
- [ ] I cure at **75 to 85 °F**, covered
- [ ] I know the **fixes** for my mistakes

◆ A NOTE FROM EMMA

Every artist you admire has a drawer of sticky, cloudy, bubbly practice pieces. Mine is full. Measure, mix, keep it warm, and let the mold do the work. Your first good piece is closer than you think.

Emma Miller



Next: Your First Piece to Sell. The 12-inch ocean tray, step by step, ready to photograph and offer on Day 3.