

Advanced

Epoxy Resin Art

Master River Tables, 3D Geode Sculpture, Optical Illusions,
Luxury Resin Jewelry, and the Balloon Coating Technique

With 23 Projects and Custom Colour Recipes

- Ch. 1 — Advanced Materials & Equipment
- Ch. 2 — Epoxy Resin Painting
- Ch. 3 — Lace, Textile & Wire Casting
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THE MAYA HARTWELL SERIES:

Book 1: The Epoxy Resin Art · Book 2: Advanced Epoxy Resin Art · Book 3: Selling Resin Art

Preview edition — not for redistribution. Full book available on Amazon.

mayahartwell.com

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This book is a reference, not a linear read. Enter at the chapter relevant to your current work.

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Introduction — The Next Level

There is a point in resin work when the beginner problems stop. You no longer wrestle with sticky surfaces or wonder why your piece cured cloudy. The pre-pour checklist has become automatic. You know your brands, you understand how temperature affects viscosity, and you have stopped hoping for the best and started expecting a specific result.

That is the point this book starts from.

Book 2 is not a continuation of Book 1. It does not review the fundamentals. What this book does is document the techniques that require experience to execute: large-format work where the physics of heat and flow operate differently; sculptural forms that leave the flat panel behind; inclusions and layering that require planning across multiple sessions; and one technique — the balloon coating method — that has not, until now, been formally documented in print.

New to this edition is a full chapter on luxury resin — where epoxy meets precious metals, wearable art, and fine jewelry techniques. This is a territory that no other resin instruction book has entered, and it opens an entirely different market for your work.

A note on how to use this book.

Unlike Book 1, which is designed to be read in order, this book is a reference. If you are building your first river table, go to Chapter 5. If you have seen balloon-coated vessels on social media and want to make one, go to Chapter 9. If you want to create resin jewelry that looks like it belongs in a boutique, go to Chapter 7. Each chapter is self-contained, with material requirements, technique theory, and projects that can be executed independently.

The only exception is Chapter 1, which covers materials and equipment that appear throughout the book. Read that first.

Everything in this book has been tested on a workbench, not theorised at a desk. The failure modes in Chapter 10 are real failures, documented because they happened. The colour recipes in Appendix B are tested concentrations, not estimates.

If a step works, it is in here because it was done until it worked reliably.

— *Maya Hartwell, Austin, Texas*

CHAPTER 1

Advanced Materials & Equipment

Every technique in this book assumes you have the setup covered in Book 1: a level workspace at controlled temperature, proper ventilation, nitrile gloves, the two-cup mixing method, and a working torch. Those fundamentals do not change.

What this chapter adds is the layer of equipment and materials that opens up at advanced level — tools that are unnecessary for coasters but essential for large-scale casting, sculptural work, and the more demanding techniques in the chapters that follow.

THE PRESSURE POT

A pressure pot is a sealed chamber connected to an air compressor that cures resin under elevated pressure — typically 40 to 60 PSI. At this pressure, any bubbles in the mixed resin are compressed to a size invisible to the naked eye. The resin cures around them in that compressed state, and the finished piece is optically clear even in applications where bubble-free results are otherwise impossible.

When the pressure pot is optional:

For most coating pours — canvas, coasters, trays — a pressure pot is not necessary. Bubbles in thin coating pours rise and pop within the working window, and careful torch technique eliminates the remainder.

When the pressure pot is required:

For optical clarity in thick clear casting. If you are casting a clear paperweight, a deep terrarium, or any piece where the resin must be genuinely water-clear at two or more inches of depth, bubbles introduced during mixing are physically impossible to remove by torching alone — they are too deep to rise and pop before the resin gels. The pressure pot is the only solution.

Selecting a pressure pot:

Minimum useful size: 2-gallon pot (fits molds up to approx. 8" diameter). Look for pots rated to 60 PSI minimum. You will work at 40–50 PSI. Brands: TCP Global and California Air Tools. Expect \$80–\$150. Safety: never exceed PSI rating, inspect gasket before each use, never open while pressurised — release air valve fully first.

ADVANCED PIGMENTS

Mica powder — a deeper understanding:

The particle size of mica determines how it behaves in deep casting. Fine-particle mica (under 25 microns) distributes evenly through a thick pour and produces soft, diffuse shimmer. Coarse-particle mica (over 150 microns) creates stronger sparkle points but tends to settle toward the bottom of a deep pour over the cure time.

Pigment concentration in deep casting also behaves differently to coating pours. A mica concentration that produces vibrant teal in a quarter-inch coating pour may look nearly black in a two-inch casting — the light has to travel further through the pigmented resin. For deep clear casting with colour, start at roughly half the concentration you would use in a coating pour and adjust based on test pours.

Transparent pigments:

Transparent liquid pigment concentrates allow light to pass through the resin rather than reflecting off suspended particles. In deep casting, transparent pigments produce a glowing, stained-glass quality that opaque mica cannot replicate — the colour appears to come from within the piece rather than from its surface.

Transparent pigments are essential for the ocean resin painting technique in Chapter 2 and for the deep sea diorama in Chapter 6. They do not separate by particle size, do not settle, and distribute with absolute uniformity through a pour.

Fluorescent and UV-reactive pigments:

Fluorescent pigments appear brighter and more saturated under blacklight than standard mica. They are different from glow-in-the-dark pigments, which require UV charging and emit light in the dark. Fluorescents only react while UV is present. Both types have niche applications in the decorative inclusions work in Chapter 6.

Chapter 1 continues in the full book:

Specialty resins (crystal-clear, flexible, UV-cure). Rotary tools and post-cure carving equipment. Professional pigment brands and concentration reference. River table specific tools: router sled, orbital polisher, floor hardener.

CHAPTER 7

Luxury Resin — Jewelry, Fashion & Precious Metals

There is a line in resin art that most instructional books never cross — the line between craft and jewelry. On one side sit coasters, trays, and wall panels. On the other sit wearable pieces in gold settings, crystal-edged geode coasters that retail for \$90, and botanical rings that cost \$2 to make and sell for \$45.

The techniques are not harder. They are smaller.

Working at jewelry scale means working with 1–3ml of resin instead of 30ml. It means measuring pigment by weight (0.1g precision) instead of by scoop. It means understanding that a single bubble in a pendant is not a minor flaw — it is the difference between a piece that looks handmade and a piece that looks homemade.

This chapter covers four areas that no other resin art book has addressed:

- Micro-pour technique — the specific adaptations required when working below 5ml, including how mixing, bubble removal, and cure time behave differently at this scale.
- Metal bezel work — how to select, prepare, and pour into gold-plated, sterling silver, and stainless steel jewelry settings without adhesion failure.
- Crystal and precious inclusion — techniques for embedding real crushed quartz, amethyst, and 24k gold leaf in ways that maximise visual impact and justify premium pricing.
- Matched pair production — the method for producing earring pairs, cufflink sets, and coordinated collections where colour consistency is non-negotiable.

The pricing gap in resin jewelry is extraordinary. A gold-plated bezel costs \$1.50. Three millilitres of pigmented resin costs pennies. A sheet of imitation gold leaf costs \$0.30. The finished pendant, presented in a velvet box, sells for \$45–\$80 on Etsy with consistent five-star reviews. No other resin product category offers this ratio of material cost to retail price.

4 PROJECTS IN THIS CHAPTER

Project 1 — Ocean Swirl Pendant Necklace: gold bezel, teal/navy micro-pour, gold leaf veining

Project 2 — Teal Drop Earrings: matched pair technique, cell formation at jewelry scale

Project 3 — Geode Coaster with Crystal Edge: free-form, real crushed quartz, gold veining

Project 4 — Pressed Flower & Gold Leaf Ring: botanical encapsulation, dome technique

CHAPTER 5 — EXCERPT

Large-Scale River Tables

The river table is the project most associated with advanced resin work, and the one most often attempted too early. A river table is not a difficult project. It is an expensive one — in materials, time, and the cost of getting it wrong. This chapter covers every decision point from slab selection to final finishing.

WOOD SELECTION

The most important decision in a river table is made before any resin is mixed: the choice of wood. The slab determines the visual character of the piece, its structural behaviour over time, and its compatibility with the resin at the interface.

Moisture content:

Wood must be at 6 to 8 percent moisture content before pouring. Wood above this range will continue to shrink after the table is completed; the resin does not move with it, and the interface cracks. This is the single most common cause of river table failure and the one most consistently ignored by first-time builders.

Verify moisture content with a pin-type or pin-less moisture meter before purchasing. Do not accept a supplier's assurance without measurement.

Species selection:

Walnut is the reference species for US river table work: excellent stability, low tannin reactivity, machines cleanly, widely available in bookmatched pairs. Oak is more accessible and less expensive, but its high tannin content requires thorough sealing — two seal coats minimum — to prevent discolouration at the wood-resin interface. Maple offers outstanding stability but its pale colour reduces visual contrast with most river colours; dark or near-black rivers work best with maple.

MOLD BUILDING

A river table mold is built, not bought. The standard construction uses melamine-coated particle board for the base and sides — resin does not bond well to melamine, which allows clean release after cure. Joints are sealed with silicone caulk, which must be fully cured before resin contact (minimum 24 hours for standard silicone).

Build the mold to hold both slabs and the river channel simultaneously, with the slabs positioned at their final spacing. The mold sides should be at least 20mm taller than the intended pour depth to provide safety margin for deep-pour expansion.

CHAPTER 9 — THE CHAPTER NO OTHER BOOK HAS

The Balloon Coating Technique

The technique is exactly what it sounds like: an inflated balloon, coated in successive layers of pigmented epoxy resin, built up to a structural thickness, then deflated or burst to reveal the hollow sculptural form inside. The result is a vessel — a vase, a bowl, a sculpture — made entirely of cured resin, with a surface texture determined by the drip patterns of the coating layers and the colours chosen for each successive coat.

It is not a new idea. The technique has roots in the sculptural work of Korean designer Seungjin Yang, who developed large-scale balloon furniture pieces exhibited at design fairs in Milan. What has changed is access: balloon modelling supplies are inexpensive and widely available, and the technique has been adapted by artists online.

What has not existed, until now, is a formal written instruction.

MATERIALS REQUIRED

Not all resins can be used for balloon coating. This is critical. You need: slow-cure coating epoxy only — minimum 45-minute pot life. The curing reaction generates heat; a fast-cure resin generates enough heat to rupture the latex balloon. Polyester resin is absolutely prohibited — its exotherm is too extreme.

Suitable brands: ArtResin, Pro Marine, Craft Resin, TotalBoat Halcyon.

Equipment:

Long modelling balloons (260 size) for vase shapes, round balloons for bowl forms. Hooks or a hanging system — the balloon must hang freely while each coat is applied and during the first two hours of cure to allow even drip distribution. Nitrile gloves only — never latex for this technique. Infrared thermometer to monitor surface temperature during early cure.

THE COATING PROCESS

First coat:

Inflate the balloon to 70–80% of maximum capacity — not full inflation, which makes the walls too thin and heat-sensitive. Mix resin according to brand ratio. Dip or brush the first coat onto the balloon, working from the bottom up. The layer should be 1–2mm thick — no more. Hang immediately and allow to drip freely.

Monitor surface temperature for the first two hours. If it exceeds 40°C (104°F), move to a cooler space immediately.

Subsequent coats:

Apply each successive coat when the previous layer has cured to a firm, non-tacky surface — typically 18–24 hours at 72°F. Do not apply the next coat too early: a partially-cured layer cannot support the weight of a fresh coat and will sag. Do not apply too late either: a fully cured layer requires light sanding between coats to ensure adhesion. The window is: firm to the touch but still slightly warm.

A structural vessel requires 5–7 coats. Each coat builds the wall thickness by approximately 1–2mm. For a vase intended to hold water, 7 coats minimum.

4 PROJECTS IN THIS CHAPTER

- Project 1 — Balloon Vase: single elongated balloon, monochromatic, entry-level
- Project 2 — Balloon Bowl Set: internal coating technique, three coordinated sizes
- Project 3 — Balloon Dog Sculpture: balloon modelling combined with resin coating
- Project 4 — Balloon Stool: multi-balloon structural assembly, load-bearing tested

PREVIEW EDITION

Advanced Epoxy Resin Art

by Maya Hartwell

This preview contains the table of contents, introduction,
and excerpts from Chapters 1, 5, 7, and 9.

The full book includes 10 chapters, 23 projects,
15 colour recipes, and 3 appendices.

Sign up for early access and a launch discount at

mayahartwell.com/resin-book2