Everything You Need to Know About Custom Packaging*

*But Were Afraid to Ask

A practical step-by-step guide to sizing, artwork, printing, and sourcing the right packaging for your brand — without the guesswork.

Lessons and Resources from the Packaging Studio Team

Packaging Studio by mimeo

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Packaging Types, Materials & Branding Tips

Your brand means as much to us as it does to you.

At Packaging Studio, we know a thing or two about crafting beautiful labels and packaging to create one-of-a-kind unboxing experiences — but we also know the vision, grit, and tenacity it takes to launch a business.

Coming from the world of online digital print (we invented the concept in 1998), we expanded into custom labels and packaging in 2023. We learned fast that expertise in print is just the tip of the iceberg when you're navigating dielines, dimensions, substrates, MOQs, and print methods.

That's why we built this guide — to shorten your learning curve, help you avoid costly mistakes, and get
your packaging right the first time. Whether you're shipping from your garage or scaling to retail, this is
your starting point.

Let’s dive in.

Tom and the Packaging Studio Team

STEP 1

How to Figure Out the Right Packaging Size

If your packaging size is wrong, everything downstream breaks — pricing, production, shipping, and margins. Here's how to get it right from the start.

Start With the Product, Not the Package

You need exact specs before touching any sizing calculator:

- Length, Width, and Height (or thickness)
- Weight
- Is it rigid or flexible?
- Does it need inserts or padding?

Measure precisely. Do not estimate.

Sizing by Package Type

Rigid Product Boxes

Sizing is formula-based. Start with your product's internal dimensions and add clearance for a proper fit.

Formula: Internal box size = Product size + clearance

Add 0.125"– 0.25" per side for a snug fit | Add more if using foam, inserts, or tissue | Always calculate internal dimensions — not external

Example: Product = 5" x 3" x 1" → Add 0.25" → Box internal = 5.25" x 3.25" x 1.25"



Flexible / Mylar Bags & Stand-Up Pouches

Sizing for flexible packaging is volume-based. You need to know:

- Product weight (grams or ounces)
- Product type (powder, coffee, gummies, liquid, etc.)
- Desired fill level and headspace (10–20%)
- Seal area allowance (0.5"–1" top and bottom)

AI Sizing Prompt for Flexible / Mylar Bags & Stand-Up Pouches

Use this prompt with any AI assistant (ChatGPT, Claude, etc.) to calculate your packaging size:

> I need help calculating the correct packaging size.
> **My packaging type is:** [MYLAR BAG / STAND-UP POUCH/RIGID BOX / MAILER BOX / OTHER]
> **Product dimensions — Length:** [IN] / Width: [IN] / Height: [IN]
> **Product weight:** [WEIGHT + UNIT]
> **The product is:** [RIGID / SOFT / POWDER / GUMMIES / LIQUID / OTHER]
> **I will be using:** [NO INSERT / FOAM INSERT / CARDBOARD INSERT / TISSUE / OTHER]
> **I want the fit to be:** [SNUG / STANDARD / EXTRA ROOMY]
> Please calculate recommended internal packaging dimensions and explain why.

Pro Tip:
To find the right size, measure your product, then add 0.25"–0.5" on each dimension for a clean fit. Volume = Length x Width x Height.

Auto-Bottom / Pop-and-Lock Beverage Boxes

This is different from all other box types. You do NOT start with box dimensions — you start with the container.

You need to know:

- Can or bottle diameter and height
- Total pack count (4 / 6 / 8 / 12)
- Layout orientation (2x2, 3x2, 4x2, 3x4, etc.)
- Divider type (none, cardboard partition, full insert)
- Handle cutout required? (Yes/No)
- Board thickness (usually 18pt–24pt SBS or kraft)

Beverage boxes are layout-driven. Orientation determines footprint and stacking strength. Precision matters because stacking and pallet fit depend on it.

Example: 6-pack of 12 oz cans (2.6" dia x 4.83" height) in 3x2 layout

Width = (3 x 2.6") + clearance	Depth = (2 x 2.6") + clearance	Height = 4.83" + top clearance
≈ 8.1" + clearance	≈ 5.4" + clearance	≈ 5.1"–5.25"

AI Sizing Prompt for Auto-Bottom / Pop-and-Lock Beverage Boxes

> I need help calculating the correct size for a beverage carrier box
> **Box style:** [AUTO-BOTTOM / POP-AND-LOCK]
> **Pack count:** [4 / 6 / 8 / 12]
> **Container type:** [STANDARD 12 OZ CAN / 16 OZ CAN / BOTTLE / CUSTOM]
> **Container diameter:** [INSERT DIAMETER IN INCHES OR MM]
> **Container height:** [INSERT HEIGHT]
> **Preferred layout orientation:** [2x2 / 3x2 / 4x2 / 3x4 / OTHER]
> **Will there be dividers?:** [NO / PARTIAL / FULL PARTITION]
> **Handle cutout required?:** [YES / NO]
> **Board thickness:** [IF KNOWN, INSERT; OTHERWISE STATE UNKNOWN]
> Please calculate recommended internal box dimensions and explain why.

Common Standard Mailer Box Sizes

If you're using standard mailer boxes, here are the most common sizes used for ecommerce shipping:

5”x 3”x 1.5”	6”x 4”x 3”	6”x 5”x 2.25”	7”x 5”x 3”	8”x 8”x 5”
9”x 6”x 4”	9”x 7”x 2.25”	9.5”x 7.75”x 4”	11.25”x 9”x 3”	12”x 10”x 4”

STEP 2

Artwork & Dielines — How to Avoid Print Rejections

This is where most first-time buyers make expensive mistakes. Packaging is NOT a social media graphic. It must be built to manufacturing specs. Sending the wrong file means weeks of revisions and delayed launches.

What is a Dieline?

A dieline is like a blueprint for your packaging. It shows exactly where the material will be cut, folded, and glued. Think of it as the flat template that, when assembled, becomes your finished box or pouch. You should NEVER design your artwork before getting the official dieline from your manufacturer.

Where to Get Dielines

- From your supplier — always request the final approved dieline before designing.
- DieCutTemplates.com — free dielines for standard sizes; paid downloads for custom.
- PacDora — subscription service for unlimited dieline creation and downloads.
- Adobe Illustrator — create custom dielines if you know the exact specs.

Universal File Requirements (All Packaging Types)

File format	Adobe Illustrator (.AI) or print-ready PDF
Color mode	CMYK only — never RGB
Image resolution	300 DPI minimum — all images embedded
Bleed	0.125" (standard U.S.) — extend all background colors
Safe zone	Keep text/logos 0.125"–0.25" inside cut lines
Fonts	Outlined or embedded — never live fonts
Dieline layer	Locked, non-printing, clearly labeled
Spot colors	Clearly labeled on separate layers

Artwork Rules by Packaging

Flexible / Mylar Bags & Stand-Up Pouches

Flexible packaging is printed flat on rollstock, then formed, filled, and sealed. Your artwork must account for all panels.

- Front and back panels
- Side gussets (stand-up pouches)
- Bottom gusset
- Heat seal areas — top AND bottom
- Zipper placement
- Tear notches
- Valve placement (coffee bags)

Critical rules for flexible packaging:

- Do NOT place text or logos in seal areas — they will be obscured
- Extend background color fully through all bleed areas
- Avoid thin lines under 0.25 pt — they can disappear in flexo printing
- Use rich black (C60 / M40 / Y40 / K100) for solid black areas
- Convert all RGB colors to CMYK before exporting
- If using metallic film, clear windows, or spot finishes — put them on separate labeled layers
- Include a White Ink layer as a base for colored areas on metallic film

Rigid Product Boxes (Tuck, Mailer, Folding Cartons)

Boxes are printed flat, then die-cut and folded. Your dieline will show cut lines, fold lines, glue flaps, dust flaps, bleed lines, and safe zones.

- Never design across fold lines without checking alignment carefully
- Do not place text or branding over glue areas
- Maintain minimum 8pt font size for legibility
- Keep barcodes on flat panels — never near folds
- Barcode quiet zones must remain clear of any design elements
- Board thickness affects panel size — always use the final supplier dieline

Auto-Bottom / Pop-and-Lock Beverage Boxes

These boxes carry weight, so structural accuracy is non-negotiable. Your artwork must account for these structural elements:

- Handle cutouts
- Lock tabs
- Bottom auto-lock mechanism
- Reinforced panels
- Interior flaps

Additional rules:

- Avoid heavy ink coverage on fold stress points — it can crack on folding
- Use proper trapping (0.1–0.2 pt typical for flexo printing)
- Confirm ink type (water-based vs. soy vs. UV) with your supplier
- If using kraft board, colors will appear muted — adjust your expectations and proofs accordingly

Pre-Flight Checklist

Before sending your artwork to any printer, run through this checklist:

File format	✓ AI or print-ready PDF
Color mode	✓ CMYK only
Bleed	✓ 0.125" included on all sides
Fonts	✓ Outlined or embedded — never live fonts
Images	✓ All linked images embedded, 300 DPI
Dieline layer	✓ Locked and set to non-printing
Spot colors	✓ Clearly labeled on separate layers
Resolution	✓ Checked at 100% view

If your file is built correctly, printers approve it fast. If not, you lose weeks in revisions — and sometimes pay replate fees.

STEP 3

Printing — Choosing the Right Partner, Method & Quantity

You've sized it. You've built the artwork correctly. Now comes the real business decision: how to print it. This is where economics and strategy matter as much as design.

The 5 Economic Factors You Must Prioritize

Every serious packaging order comes down to five variables. You cannot maximize all five at once. Decide what matters most right now.

1. **Price Per Unit**
   Every serious packaging order comes down to five variables. You cannot maximize all five at once. Decide what matters most right now.

2. **Minimum Order Quantity (MOQ)**
   The floor your supplier sets. Understanding MOQ is essential before budgeting. Specialty finishes almost always raise MOQ requirements.

3. **Product Size**
   Larger packaging = more material cost + higher shipping cost. Size decisions ripple through your entire supply chain.

4. **Quality & Specifications**
   Material type, finish, coating, color profile — all of these affect perceived brand value and actual cost.

5. **Turnaround Time**
   Faster production costs more. Longer lead times reduce cost — but delay revenue. This is a business decision, not just a printing one.

Quantity	Price/Unit	Total Spend	Savings vs. Low Qty
2,500 units	$1.40	$3,500	—
5,000 units	$0.92	$4,600	$0.48/unit saved
10,000 units	$0.65	$6.500	$0.75/unit saved

Nearly double the units for ~30% more total spend. If you have sales velocity, ordering higher volume almost always makes financial sense.

Note: Add-ons like clear windows, foil stamping, spot UV, embossing, specialty coatings, and custom inserts almost always increase MOQ requirements. More customization = higher minimums.

Printing Methods — Which One Is Right for You?

Digital Printing	Lower MOQ / Faster / Higher unit cost at scale **Best for:** short runs, market testing, SKU variety, personalized packaging
Flexographic (Flexible Packaging)	Higher MOQ / Lower unit cost at scale / Plates required **Best for:** 10,000+ unit runs of pouches, bags, and rollstock
Offset (Folding Cartons / Beverage Boxes)	High quality / Efficient at medium–large runs / Best color consistency **Best for:** retail boxes, folding cartons, beverage carriers. Sheets are printed flat, then die-cut and folded.

Spec Confirmation Checklist — Before You Order

Never assume. Confirm every one of these items in writing with your supplier:

- **Material type:** SBS, kraft, PET/PE, BOPP, foil, etc.
- **Thickness / gauge:** Measured in mil (flexible) or pt (rigid)
- **Finish:** Matte, gloss, soft-touch matte, no coating
- **Color profile:** CMYK standard vs. Pantone spot colors
- **Proofing process:** Digital proof only, or physical sample?
- **Structural testing:** Required for beverage carriers and heavy-load boxes

When to Book a Consultation

If you now have: approximate sizing, artwork in progress (or complete), a realistic quantity in mind, and a target launch date — the next step is sorting through the economic trade-offs with someone who knows the numbers.

At Packaging Studio, we'll walk you through MOQ tiers, pricing, lead times, and spec decisions so you don't overspend or under-order. The right print strategy protects your cash flow and brand quality at the same time.

Book a call with our team: packagingstudio.com

STEP 4

Packaging Types, Materials & Unboxing Experience

Creating a Branded Unboxing Experience

Every detail of your packaging sets the tone for your customer's experience. Whether you're shipping from a garage or a warehouse, investing in packaging signals to customers that you care about the details — and it builds brand equity with every single order.

Start where you are. Custom labels on plain boxes are a great first step. Custom mailer boxes create a premium, 'Apple-like' unboxing moment when you're ready to scale.

Common Packaging Solutions

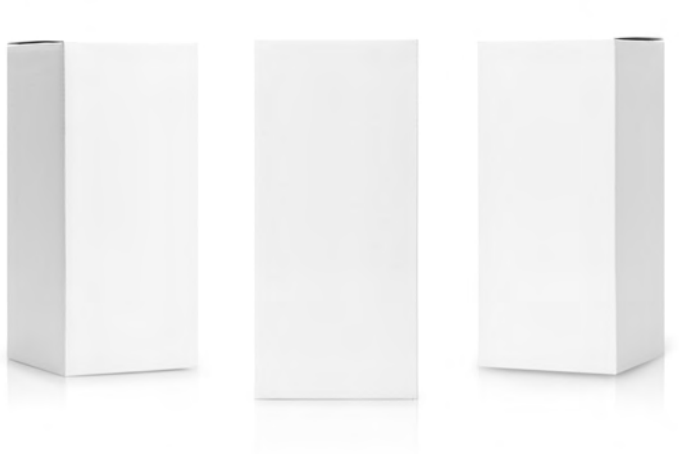


Mailer Boxes

Perfect for ecommerce shipping, subscription boxes, and direct-to-consumer goods. Made from durable corrugate, available in standard or custom sizes. Can be printed inside and outside for a premium unboxing feel.

Product Cartons / Boxes

Make products stand out on retail shelves. Printable with specialty finishes like spot UV, foil stamping, or soft-touch coatings for a premium look. Sized to your product.





Flexible / Mylar Packaging

Ideal for cannabis, nutraceuticals, food, and coffee. Available as stand-up pouches, flat pouches, and rollstock. Features include zipper closures, hang holes, valves, and tear notches. Keeps products fresh and shelf-ready.

Beverage Carriers

Auto-bottom and pop-and-lock styles for 4, 6, 8, and 12-pack can or bottle configurations. Structural accuracy is critical — these carry weight. Available in SBS white or kraft board.





Printed Labels

More than stickers — die-cut roll labels offer fast, flexible branding for jars, bottles, and boxes. Waterproof options available for beverage brands. Great for high-volume, lower-cost brand application.



Box Materials 101

The material you choose affects structural integrity, print quality, and cost. Here's what the terms actually mean:

Material	Best For	Notes
B Flute Corrugate	Shipping / mailer boxes	More durable; better for transit protection
E Flute Corrugate	Retail / display boxes	Thinner; allows higher-quality printing
18pt CS2 Paper / SBS	Product cartons, folding boxes	Standard for retail CPG; 4-color print both sides
Kraft Brown Corrugate	Simple mailers, eco brands	Natural look; great for 1-color logo printing
High-End White Corrugate	Premium unboxing, gift boxes	Takes 4-color imagery beautifully
Oyster Kraft	Premium exterior, economy interior	White outside, brown inside; cost-efficient premium
PET/PE (Flexible)	Food, cannabis, nutraceuticals	Moisture barrier; printable via flexo
BOPP (Flexible)	Snacks, dry goods	High clarity; excellent print surface

Design and Branding Tips

You don't need to be a professional designer to create great packaging artwork. Here are the tools and resources our team recommends:

Tools

PacDora (pacdora.com)
Subscription service for unlimited dieline creation and downloads. Best for brands that will be creating multiple packaging types.

Adobe Illustrator
The industry standard for building packaging artwork. Required for finalizing dielines and preparing print-ready files.

DieCutTemplates.com
Free standard dielines and paid custom downloads. Great starting point for common box and pouch shapes.

Resources

Dribbble — 11 Principles of Design
Covers balance, proportion, contrast, hierarchy, and more. A practical read for founders creating their own packaging concepts.

@DesignMadeSimple (YouTube)
Graphic designer Nick Saporito's channel covering Illustrator, Affinity Designer, and Photoshop. Step-by-step and beginner-friendly.

@ShippingThings (YouTube)
Covers shipping, logistics, and packaging decisions. Great for understanding how box sizing affects shipping costs and fulfillment.

Reddit — r/smallbusiness
Real advice from real founders. Useful threads on packaging, suppliers, costs, and what actually works at the startup stage.

Ready to Get Started?

You now have everything you need to move forward with your packaging — the right size, the right artwork, and the right strategy for your print run.

✓ Size it correctly
Get your dieline first

✓ Build artwork to spec
CMYK, 300 DPI, bleed included

✓ Choose the right print strategy
Balance MOQ, cost and timeline

Our team is here to help you align volume, specs, and timeline with your margins — so you don't overspend or under-order.

packagingstudio.com
tom@packagingstudio.com

Have packaging resources to share?
We'd love to hear from you.

Happy Packaging!