

The Label Spec Cheat Sheet

Every field a printer needs to quote and run your label — condensed from the PackOS label library.

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1 · THE SPEC — WHAT A COMPLETE ORDER ANSWERS

1	Size & shape	Finished W × H, plus shape: rectangle (corner radius — 1/8 in is a typical default), circle, oval, or custom. Sized from the container's flat area, not the artwork; standard sizes reuse existing dies.
2	Material	The face-stock family — paper vs film. Dry & indoor leans paper; wet, oily, chilled, or squeezed means film. Table below.
3	Adhesive	The adhesive family, matched to the surface and the environment the label must survive. Table below.
4	Finish	Lamination, varnish, foil — or nothing. Protection first, shelf presence second. Strip below.
5	Cut & format	Kiss-cut on rolls is the production default (rolls feed applicators); sheets suit small hand-applied runs; die-cut singles are event stickers.
6	Roll spec	Unwind position + core ID + max OD + labels per roll — all dictated by the applicator that will run them. Box below.
7	Quantity & versions	Total count and how many artwork versions share the run. Setup amortizes, so unit price falls as runs grow.

Common size families: 2–3 in circles (jar lids) · ~7×2.25 to ~9×3 in bottle wraps · 4×6 in shipping · 1×2.625 in address. Typical, not mandatory — the container decides.

3 · FACE STOCK — MATERIAL FAMILIES

Uncoated / textured paper	Dry goods, craft & premium looks. Absorbs moisture, scuffs — short indoor life.
Semi-gloss paper	The retail default — food, boxes, barcodes. Sheds splashes; edges still wick water.
White BOPP	Bottles, jars, fridge & bath. Waterproof, oil- and chemical-resistant.
Clear BOPP	The "no-label" look on glass & clear containers. Needs white ink under the art.
Vinyl	Squeeze bottles, compound curves, outdoor. The most conformable film.
PET	Harsh service — chemicals, heat, UV, outdoors. Stiff: flat or simple curves only.

Rule of thumb: if the product sweats — a cold bottle out of the fridge — paper is out and film is in.

5 · FINISH

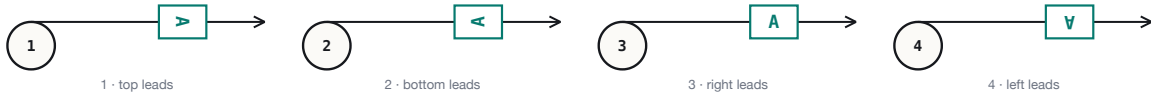
LAMINATION Gloss, matte, or soft-touch film bonded over the print. The workhorse protection for anything handled wet or often.	VARNISH Printed coating, gloss or matte, spot-applicable. Thinner and cheaper than laminate; protects less.	FOIL Hot-stamped or cold-applied metallic. Highest shelf impact; adds tooling and setup, so it rewards larger runs.
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6 · ROLL SPEC — FROM THE APPLICATOR'S MANUAL, NOT FROM MEMORY

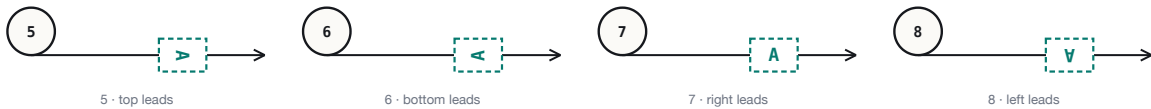
CORE ID Must match the applicator mandrel. 3 in (76 mm) is the common automatic fit; 1 in (25 mm) hand & desktop; 1.5 in (40 mm) also seen. The machine manual is the authority.	MAX OD Capped by the equipment. Order the largest outer diameter the machine accepts — bigger rolls, fewer reloads.	LABELS PER ROLL Set by core + OD + label height + gap + stock thickness. Have the supplier calculate the exact count.
WIND DIRECTION Print faces out (visible on the roll) or in (toward the core) — dictated by the machine's peel path.	UNWIND POSITION Which edge of the copy leads off the roll — the eight positions below. Machine application must match exactly.	HAND VS MACHINE Hand-applied: almost any unwind works — take the stock wind. Machine or co-packer: copy the spec sheet exactly before ordering.

7 · UNWIND POSITIONS 1–8

WOUND OUT — PRINT FACES AWAY FROM THE CORE



WOUND IN — PRINT FACES THE CORE



The 1–8 numbering is a widely used convention, not an enforced standard — converters' charts vary. State it in words ("position 3 — right edge of copy off first, wound out"; PackOS Quick Quote numbers positions 1–4 the same way) and confirm against your applicator's spec sheet.

2 · WRAP MATH

WRAP WIDTH $W = \pi \times D$ partial wrap: $W = \pi \times D - \text{gap}$ full wrap: $W = \pi \times D + \text{overlap}$ $(\pi \approx 3.1416)$ gap 1/8–1/4 in typical keep art clear under the overlapping end
HEIGHT $H = \text{straight wall only} - \text{clear the shoulder taper \& base curve}$
EXAMPLE 3 in dia jar → $\pi \times 3 \approx 9.42$ in around

Better still: wrap a flexible tape around the container — it measures the true circumference, including out-of-roundness. Overlap or gap, decide deliberately: a near-miss butt seam telegraphs every application tolerance.

4 · ADHESIVE FAMILIES

Permanent	The default. Bonds hard, keeps building over dwell time; removal tears or leaves residue.
Removable	Peels cleanly within a designed window; time or heat can set it harder.
Repositionable	Low first grab so you can lift and re-place at application, then it sets.
High-tack / LSE	Low-energy plastics (HDPE, PP), textured, powder-coated, recycled surfaces.
Freezer / all-temp	Cold chain & frozen — standard adhesives stiffen and lose tack in the cold.
Wash-off	Releases in a caustic or hot-water wash; returnable & refillable containers.

Two questions catch most mistakes: what is the surface, exactly — and how cold is the container at application?