

Label Surface Preparation & Application Guide

This document defines required procedures for substrate preparation and pressure-sensitive label application. These steps must be followed to ensure proper adhesion, durability, and long-term performance across a wide range of surface types.

1. Storage & Conditioning

- Store labels at approximately 72°F (22°C) and 50% relative humidity.
- Allow labels to condition at room temperature (70°F–100°F) prior to application.
- Surfaces must be a minimum of 50°F (10°C) at time of application.

2. General Surface Preparation Rules

- Assume all substrates are contaminated and require cleaning.
- All surfaces must be clean, dry, and free of dust, oil, grease, wax, silicone, and oxidation.
- Clean edges, seams, rivets, corners, and recesses thoroughly.
- Apply labels immediately after cleaning to prevent re-contamination.
- Do NOT use ammonia-based cleaners or application fluids.
- Dry application only.

3. Approved Cleaning Methods

3.1 Standard Cleaning (Light Soiling)

- Use warm water and a synthetic detergent (no waxes or lotions).
- Rinse thoroughly and dry with lint-free towels.

3.2 Solvent Cleaning (Heavy Oils / Grease)

- Use approved industrial solvents compatible with the substrate.
- Wipe dry immediately before solvent evaporates.
- Replace cloths frequently to avoid re-depositing contaminants.

3.3 Isopropyl Alcohol (IPA) Cleaning

- Use undiluted rubbing alcohol or 2:1 water to IPA for industrial grade.
- Dry wipe immediately before evaporation.

3.4 Light Particulate Removal

- Use tack cloth, vacuum, or soft broom only after prior cleaning.

4. Surface-Specific Preparation Requirements

4.1 Painted Surfaces

- Paint must be fully cured per manufacturer specifications.
- Avoid flat latex, chalking, silicone-containing, or oil-alkyd paints.
- Weathered paint must be refurbished prior to cleaning.
- Typical cleaning: Standard → Solvent (if needed) → IPA.

4.2 Wood & Wood-Based Products

- All wood must be sealed, primed, and painted on all sides and edges.
- Unpainted wood is not recommended.
- Avoid matte or flat finishes.
- Clean as painted surfaces once sealed.

4.3 Steel & Galvanized Steel

- Do not apply labels to raw or rusted steel.
- Galvanized steel must be tested and properly primed and painted.
- Remove zinc residue prior to painting.

4.4 Aluminum

- Surface must be degreased and etched or chemically treated.
- Remove oxidation before cleaning.

4.5 Stainless Steel

- Surface remains cold longer; ensure dry conditions.
- Clean thoroughly using Standard → Solvent → IPA.

4.6 Plastics (Polycarbonate, Acrylic, ABS)

- Test for outgassing where applicable.
- Ensure full curing prior to application.
- Clean using Standard or IPA methods.

4.7 Fiberglass (New or Weathered)

- Test for outgassing prior to production.
- Oxidized fiberglass requires aggressive cleaning.
- Re-clean with IPA after oxidation removal.

4.8 Glass & Non-Porous Surfaces

- Remove contaminants using razor scraping if required.
- Clean with IPA or approved solvent.
- Dry completely before application.

4.9 Concrete & Masonry

- Surface must be sealed or painted to be non-porous.

5. Label Application Procedure

- Do not touch adhesive surface.
- Apply from one edge to the opposite edge to prevent air entrapment.
- Use firm thumb pressure or a soft roller.
- Repeat pressure passes 2–3 times.

6. Adhesive Cure & Performance

- Initial bond is immediate but not final.
- Maximum adhesion achieved after 24–72 hours.
- Avoid stress, washing, or abrasion during cure.

7. Testing & Responsibility

- Where possible, test adhesion before placing full order.
- Re-test when application surface changes.
- Applicator is responsible for compatibility and preparation.