



MILLWORK, CASEWORK + CABINETRY FABRICATION + INSTALLATION GUIDE v1.5

Please read through the entirety of these instructions before beginning.

1. Handling Ekoa® Sheets

- To prevent surface cracking, roll the Ekoa sheet following the fiber direction and support both ends when moving or transferring on-site.
- For visual guidance, see our wall protection installation video:
www.youtube.com/watch?v=9wGMVNucvLI

2. Caution – Wet & Damp Environments

- Ekoa is not recommended for consistently wet or damp environments such as bathrooms, steam rooms, kitchen sink areas, planters, or in contact with floors subject to mopping. Please consult an Ekoa team member before proceeding in these areas.
- Protect all exposed edges from moisture intrusion. To prevent delamination, fully seal edges with a waterproof sealant (such as silicone) anywhere that water exposure is possible.
- Ekoa should not extend to floor level. At any floor transition, specify a rubber, metal, or other resilient, replaceable base to absorb contact from mopping and vacuuming — Ekoa is not intended to serve as a wear surface at the floor line.

3. Substrate Preparation

- Acceptable substrates include MDF, plywood, HDF, or similar panel products.
- Ensure substrates are dry, sound, clean, and free from dust, oil, or contaminants, and that they are appropriate for your project.

4. Acclimation

- Unroll and allow Ekoa sheets to flatten with 'showside' down on a clean surface. Acclimate in a temperature-controlled environment at 65-75°F and no more than 50% humidity for at least 24 hours before fabrication.

5. Cold pressing

- Use a cold-press method with polyvinyl acetate (PVA) wood glue, e.g., Titebond II (preferred) or Titebond III (with additional cleanup care).
- Clean both Ekoa sheets and substrate thoroughly before adhesive application.
- Apply adhesive evenly on both substrate and sheet backs; avoid adhesive contact with the surface of

the Ekoa. If contact occurs, remove *immediately* (to prevent difficult cleanup & diminished appearance) following the recommended cleanup procedures:

- Titebond II: Use a lightly dampened cloth with water before curing.
 - Titebond III: Use denatured alcohol sparingly; avoid acetone, as it damages Ekoa.
- If adhesive residue remains after curing, use a small amount of isopropyl alcohol applied to a microfiber cloth to gently wipe the area. Avoid excessive rubbing or pressure, as this can damage the surface. Afterward, lightly clean the area with a water-dampened cloth to remove any remaining alcohol.
- Position sheets carefully for correct alignment and grain orientation.
- Use a cold-press process to apply uniform pressure according to adhesive instructions until cured.

6. Balanced Construction

- To avoid warping, always apply a backing layer (Gatorply, Ekoa, or similar) of comparable thickness and composition to the substrate's opposite side.

7. Edge Banding (if required)

- Apply edge banding for finished edges using adhesives. Henkel DORUS KS 351 or Festool 499812 EVA Edge Banding Adhesive is recommended.
- When using alternative edge banding products or adhesives, follow the manufacturer's recommendations and test both application and performance prior to installation.

8. Edges and Finishing

Like other premium laminates and veneers, Ekoa requires careful edge and finishing procedures to achieve optimal results. Follow these steps:

- Adhesive:
 - Ensure all adhesives are fully cured before proceeding.
- Edge Treatment:
 - Use a 1/32"–1/45" (0.75mm–1mm) roundover bit to soften corners [note: 1/45" (1mm) is preferred]. Move slowly along the edge and clean the router bit frequently to prevent residue buildup.
 - For best results, use the Festool trim router with the Festool 1.5° horizontal base attachment, which angles the bit to protect the surface.
- Edge Repairs:
 - Delamination: Inspect edges and corner joints for delamination. Repair by carefully lifting the affected area, injecting or brushing in super glue gel (cyanoacrylate adhesive), and then pressing and holding until cured (or use an accelerator per the manufacturer's instructions). Clean, file, and sand as needed.
 - Chipping: Check for chips in the Ekoa surface around edges. Fill any voids with super glue gel and gently file flush with a mill file (bastard cut).

- Edgeband Shaping:
 - File or sand edge-band to edge-band corner joints to a 45° angle or a smooth radiused edge.
- Sanding:
 - Block sand all edges with 220-grit sandpaper to achieve a smooth radius. **Note: the surface of an Ekoa sheet should never be sanded, as this can damage the surface. Only the sand the edges where faces and edge banding meet.**
- Color Touch-Up (where required):
 - Apply a stain pen to exposed edges, wipe off immediately, and repeat as needed for color consistency.
- Sealing Edges:
 - Apply a clear Varathane 248125 polyurethane pen evenly along the edge, then wipe off excess with a paper towel. Allow 15 minutes to dry.
 - Hand-sand edges smooth with 320-grit sandpaper.
 - Apply a second coat of polyurethane pen, wipe excess, and let dry for 15 more minutes.
 - Lightly finish with a 400-grit sanding sponge.
 - For added durability, apply a third pass of polyurethane pen and wipe off excess.
- Blending Sheen:
 - To blend any patches, sealer, or repairs, gently sand surface with a 220-grit sanding sponge along the grain. Clean with a dampened paper towel.
- **Cleanup**
- Remove adhesive from surfaces immediately to preserve finish and maintain appearance.
- Clean dust and dirt with a lightly water-dampened microfiber cloth; avoid abrasive scrubbing and take care not to scratch the surface.
- For stubborn marks, use isopropyl alcohol, applying gently to avoid affecting the surface quality. Always test on scrap material or in an inconspicuous area first. After cleaning, wipe away any alcohol residue with a clean microfiber cloth dampened with water.

10. Tools + Processing Best Practices

- Surface Preparation:
 - Before every cut or step, ensure the material surface is free of dust and debris. Use compressed air to blow away particles, preventing scuffs or transferring debris between processing steps.
- Cutting Tools:
 - Always use sharp cutting tools for laminated Ekoa panels or sheet material.
 - For blades, use new single-sided razor blades on each cut.
 - Fully support the material on a rigid surface, make several passes to work through layers, and test cut first to refine your technique. An undercut angle helps if material is unsupported.
 - Limit material overhang before using a trim router. Ensure router bits are clean and in good condition between cuts.

- Seams:
 - Butt join along the factory edge of Ekoa when possible for optimal seam appearance.
 - Pre-color Ekoa edges with a stain pen before cold pressing for the cleanest-looking seams and easier post-pressing touch-ups.
 - Seal seams with a polyurethane pen, wiping off excess with a paper towel.
- Edge Treatment:
 - If fabricating by hand, use a 1/32"–1/45" (0.75mm–1mm) roundover bit to finish edges [note: 1/45" (1mm) is preferred].
 - For superior results, use a trim router, such as Festool paired with the Festool 1.5° horizontal base attachment, which angles the bit to protect the surface.
- Adhesives:
 - Immediately remove any adhesive squeeze-out and residue.
 - Carefully assess and repair the surface finish as needed for suitability.
- Milling/CNC:
 - For precision cuts, use a single-fluted carbide spiral downcut bit.
 - Control processing speed to reduce heat transfer, which can degrade the surface appearance.
 - Clean bits regularly to maintain cut quality.
- Surface Protection:
 - Prevent burnishing and scuffing from tools.
 - Use painter's tape or protective film as needed between the Ekoa surface and your equipment.
- Filing:
 - A mill file (bastard cut) should be used by experienced technicians to smooth super glue fills.
- Heat Management:
 - Minimize heat transfer to avoid damaging the surface appearance.
- Tool Testing:
 - Test all tools on unneeded/scrap Ekoa before project use to confirm quality fabrication.
- Chemical Exposure:
 - Protect the surface from glues, harsh cleaners, and other chemicals.
 - Remove residue immediately and inspect for surface suitability.
- Fasteners:
 - Size and place fasteners properly to prevent witness marks, blemishes, or surface deviations that would affect appearance.

- Edge/Corner Touchup:
 - Color, sand, and seal exposed edges and corners per the finishing instructions above.
- Balancing Step:
 - Do not skip the panel balancing step—unbalanced panels may warp over time.
- Safety:
 - Always follow safety guidelines and manufacturer instructions for adhesives and equipment.
- Test First:
 - If your application deviates from any of these recommendations, perform suitability tests before proceeding.