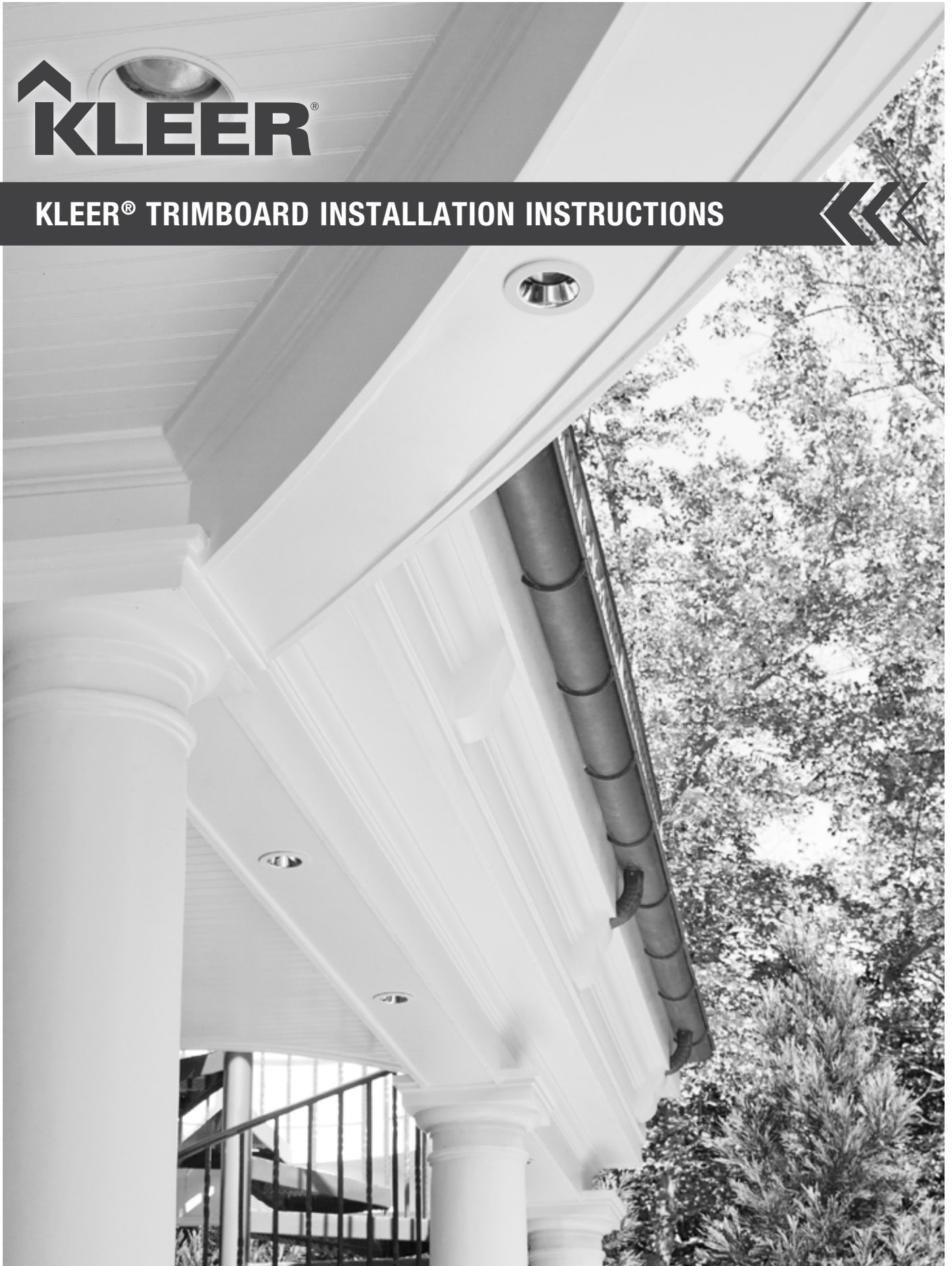




KLEER® TRIMBOARD INSTALLATION INSTRUCTIONS



INTRODUCTION TO KLEER® TRIMBOARDS

Kleer is a highly versatile product for many exterior and interior trim and decorative applications. For additional information, visit the resources page on KleerLumber.com.

Building code requirements vary from area to area. Check with local authorities for building code requirements in your area. Carefully read all installation instructions before proceeding. Observe safety precautions.

MATERIALS & TOOLS

Materials

- Kleer Trimboards, Beaded products, One-Piece Corners, Mouldings
- Kleer Cortex Hidden Fastening System, stainless steel nails or exterior-grade screws
- Kleer Nail Stick
- Kleer Structural Sealant
- Kleer Cellular PVC Adhesive
- Similar sealant products formulated for cellular PVC
- (optional) 100% acrylic latex exterior paint

Tools

- Woodworking tools
- Tape measure
- Eye protection
- Mask
- Protective gloves

STORAGE AND HANDLING

- Kleer is more flexible than wood. When possible, Kleer should be stored on a flat, level surface and handled with extra care to avoid damage (**Fig. 1**).
- Kleer is shipped from the manufacturing plant in either KleerPak plastic wrap or woven covers to protect it from dirt and debris until installed. If dirty, clean with a soft brush and mild household cleaner. Stubborn stains may be removed with denatured alcohol (**Fig. 1**).

APPLICATIONS

There are a variety of Kleer Trim products such as Trimboard, Beaded products, One-piece Corners and Mouldings. Each product installs in a similar manner. By following the specific instructions outlined in this document, you will help ensure a successful installation that will provide long-lasting beauty and durability.

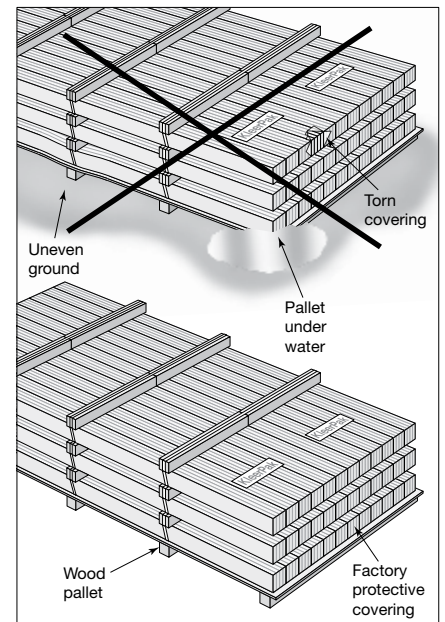


Fig. 1

CUTTING, DRILLING AND MILLING

- Klear can be cut, drilled and milled using the same tools used with wood.
- When cutting or milling, use carbide-tipped bits or blades for best results.
- Special care should be used with jig/band saws as they may create excessive heat and melt the PVC along the edge. Failure to support Klear across the entire cut length or the use of dull blades to cut Klear can result in a rough edge. If this happens, sand with 150–220 grit sandpaper to create a smooth edge.
- When drilling, frequently remove excess shavings to avoid heat buildup.

HEAT BENDING

- Heat the Klear product with convection ovens, heat blankets or box heaters to an internal temperature of about 190°F to 215°F. This will make the material pliable enough to be formed into various curves and shapes for custom applications.
- To prevent damage such as discoloration or scorching of the surface, always maintain a steady, internal temperature of 190°F to 215°F.
- Always wear protective gloves thick enough to protect hands from the heated material to avoid skin burns.

EXPANSION AND CONTRACTION

Like many building materials, Klear will expand and contract with changes in temperature. This is normal and is not covered by the Klear Limited Lifetime Warranty. Under normal conditions and when properly fastened, Klear will expand/contract approximately 1/8" per 18'. Failure to use the proper type and quantity of fasteners may result in expansion and contraction greater than 1/8" per 18'.

For Best Results:

- Klear Trim should be acclimated to the temperature conditions at the time of installation.
- Fastening Klear Trim along its entire length will help minimize expansion and contraction.
- When joining Klear Trim end-to-end (as in long-run applications) pieces may be joined together using scarf joints and Klear Cellular PVC Cement or Klear Cellular PVC Adhesive.
- Create a 1/8" expansion joint for runs over 18' (Fig. 2).

How To Use Sealant For Gaps

Alternatively, rather than gluing pieces together for long runs, leave expansion spaces of approximately 1/8" between the pieces and fill with Klear Structural Sealant. Use scarf joints for all expansion spaces between the pieces in long runs and leave an 1/8" space per 18' of run at each end.

Adjusting For Extreme Temperatures During Installation:

- On cold days (temperatures below 50° F), increase expansion space between boards to slightly more than 1/8" per 18' length (Fig. 3).
- On hot days (temperatures at or above 90° F), eliminate the expansion space and butt the pieces together tightly (Fig. 3).

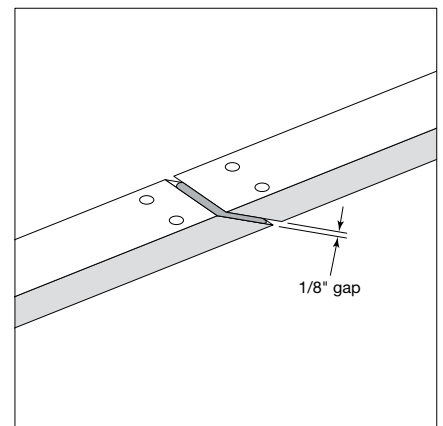


Fig. 2

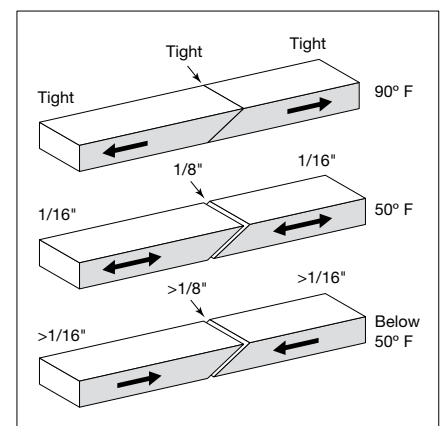


Fig. 3

FASTENING

Fasten with stainless steel or hot-dipped galvanized nails with blunt tips and round heads (wood siding nails, box nails, etc.). Exterior coated or stainless steel trim-head screws (nothing smaller than a #6 screw) and Cortex® Fasteners may also be used.

DO NOT USE STAPLES, WIRE NAILS, or BRADS to fasten Klear products. Any fastener that can easily bend with bare hands will not provide adequate strength (Fig. 4).

- Standard pneumatic nailers, set at 70 to 80 psi, may be used to fasten Klear. Adjust air pressure as necessary.
- Pre-drilling is not typically required unless using large nails or installing in temperatures below 40°F.

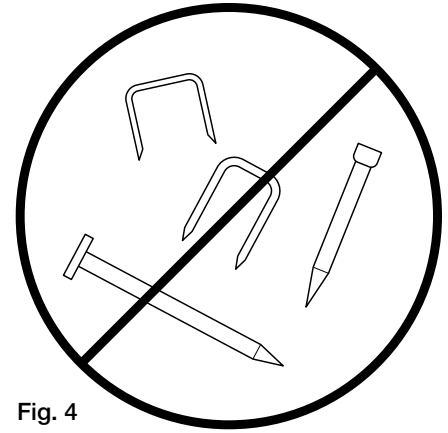


Fig. 4

Suitable Substrates

- Fasten Klear to a flat, solid wood substrate at least 1-1/2" thick using nails or screws that penetrate into the substrate a minimum of 1-1/2".
- When spanning framing greater than 16" on-center, use Klear products that are a minimum 5/4" (nominal) thickness.

Note: Do not install any Klear Trim on framing wider than 24" on-center.

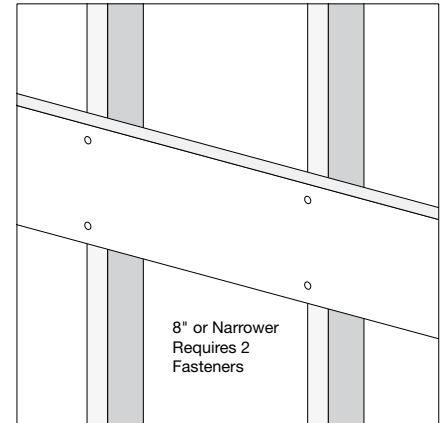


Fig. 5

Nail Spacing

- 8" or narrower Trimboard require two fasteners evenly spaced across the face of the board and fastened to 1-1/2" thick framing no more than 16" on-center (Fig. 5).
- 10" and 12" Klear Trimboards require three fasteners evenly spaced across the face of the board and fastened to 1-1/2" thick framing no more than 16" on-center (Fig. 6).
- When joining Klear end to end (as in long-run applications) fasten within one inch of both sides of the joint using the proper size fasteners.
- Klear must have fasteners no more than 2" from each edge.

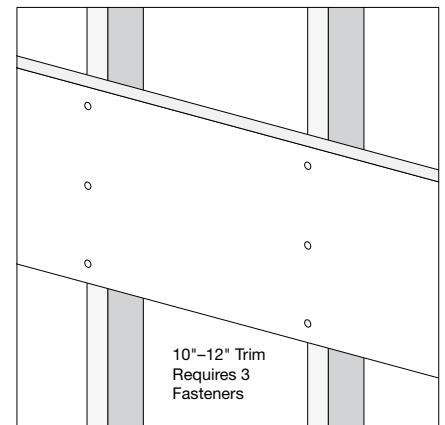


Fig. 6

Klear Sheets Spacing

- Klear sheets 3/4" thick or greater require fastening every four inches along no more than 16" on-center framing across the width of the sheet (Fig. 7).
- Thinner sheets require fastening every four inches along no more than 12" on-center framing across the width of the sheet.
- If installing Klear Sheets in temperatures below 50° F, leave a 1/4"-1/2" expansion space at each end of the run and cover the space with Klear Trim.

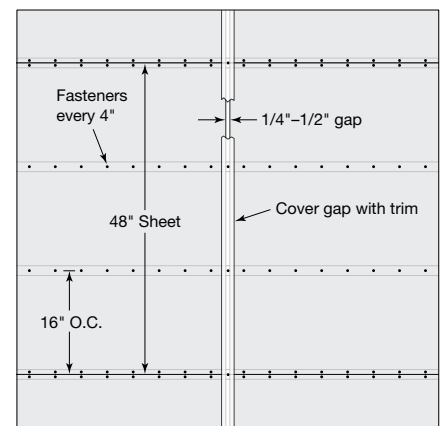


Fig. 7

Fastening Tip: Use of urethane construction adhesive (along with mechanical fastening) may help to minimize expansion and contraction, particularly when Klear is painted dark colors (LRV less than 55%—see PAINTING section).

GLUING

Kleer can be both edge and face glued. Before gluing, make sure surfaces are clean, dry and smooth enough to make full contact.

- To prevent separation, joints may be glued using Kleer Cellular PVC Cement or Kleer Cellular PVC Adhesives. These adhesives have limited working time. Clamping, nailing or screwing both sides of the joint will allow time for the adhesive to fully cure.
- When joining two pieces of Kleer together to form a continuous length, fasten within 1" of each side of the joint using the proper fasteners.
- For best results, use Kleer Laminating Grade Adhesive when face gluing Kleer to Kleer (lamination) (**Fig. 8**). If Kleer Cellular PVC Cement is used when face gluing Kleer to Kleer (lamination), lightly sand each face to ensure proper adhesion.
- Kleer can also be laminated to a variety of substrates using glues appropriate for both PVC and the substrate. Consult with the adhesive manufacturer and always test the bond prior to installation. Never use adhesives alone to attach Kleer to a substrate.

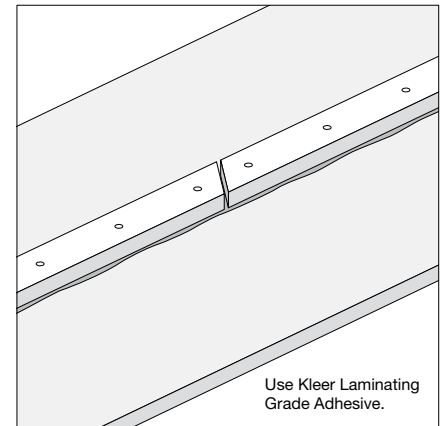


Fig. 8

INSTALLING KLEER BEADED PRODUCTS

Kleer Edge & Center Bead Board

- In soffit and porch ceiling applications, Kleer 1" Edge & Center Bead Board can be installed perpendicular to 24" on-center, or less, framing without a substrate. KLEERLok and KLEERBeed should be installed perpendicular to 12" on-center, or less, framing. All framing members should be a minimum 1-1/2" thick.
- For concealed fastening, Kleer 1" Edge & Center Bead Board should be fastened at each framing member (24" on-center maximum) by toe-nailing through the tongue with 15 gauge finish nails, or face-fastened using Cortex Fasteners for Kleer PVC Trim.

KLEERLok SFS Products

- KLEERLok SFS products feature a nailing flange for easier concealed fastening. Fasten KLEERLok SFS through the nailing flange every 12" at each framing member using siding or 15 gauge finish nails (**Fig. 9**).
- KLEERLok SFS does not need to be painted for protection, but can easily be painted to match any exterior decor (see PAINTING section).

Note: Additional face-fastening and/or the use of construction adhesive is required to help restrict expansion and contraction in runs longer than 16'.

KLEERBeed Beaded Sheets

- KLEERBeed should be face-fastened every 4" along a minimum of 12" on-center. Nail holes may be filled with Kleer Nail Stick (if product is being painted), Kleer Structural Sealant or Kleer Cellular PVC Time Adhesive.
- If installing Kleer Beaded Products in temperatures below 50° F, leave a 1/4"-1/2" expansion space at each end of the run and cover the space with Kleer Trim.

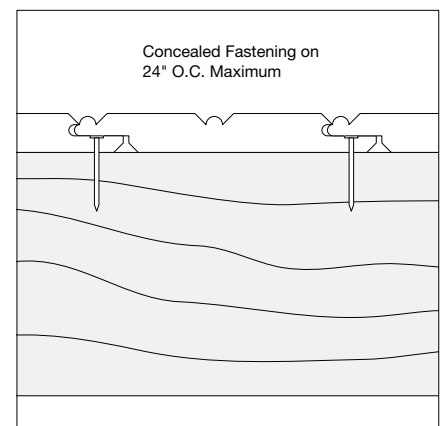


Fig. 9

INSTALLING KLEER CORNERS

Kleer Corners and Kleer Konceal Corners offer reduced installation time and improved finished appearance opportunities.

- Make sure the corner is properly positioned prior to fastening. Take special care to leave appropriate expansion and contraction spacing at both the top and bottom of the corner product.
- Standard 3-1/2" and 5-1/2" wide (per side) corner products require two fasteners evenly spaced across each side spaced no more than 16" apart along its length (**Fig. 10**).
- Custom sizes larger than 8" wide (per side) require three fasteners across each side spaced no more than 16" apart along its length.

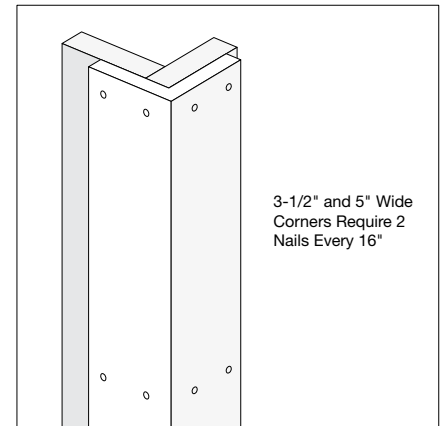


Fig. 10

INSTALLING KLEER MOULDINGS

- Joints may be glued using products like Kleer Cellular PVC Cement or Kleer Cellular PVC Adhesives. When bonded correctly, the joint becomes an integral part of the system to which it is being applied.
- Use Kleer Structural Sealant with mechanical fasteners to improve holding power and make the installed moulding more secure.
- Install Kleer mouldings using 6d and 8d galvanized or stainless steel nails 12" on-center and approximately 3/4" from each edge.
- Pre-punch moulding for easier hand nailing and use a nail set to countersink nail heads.

Note: In temperatures 40° F or below, pre-drilling is required.

PAINTING

Kleer Trim products do NOT need to be painted for protection or to retain its Limited Lifetime Warranty. Kleer Trim can be painted to complement other trim colors on a home using 100% acrylic latex paint or other coatings specifically formulated for use on vinyl products. Kleer Trim products typically outperform painted wood surface in adhesion and longevity.

Choose a Color

- Choose a color with a Light Reflective Value (LRV) greater than 55%.
- If a color with an LRV lower than 55% (dark color) is desired, choose a coating specifically formulated to paint exterior vinyl a dark color, such as Benjamin Moore Vinyl Select or Sherwin Williams® VinylSafe.*
- Excessive expansion or contraction resulting from the use of a dark color with an LRV less than 55% is not covered by the Kleer Limited Lifetime Warranty.

Prepare the Surface

- Ensure all surfaces are clean, dry and free from debris or surface contaminants.
- To clean the surface, use a soft brush and standard household cleaner if necessary before painting.

Apply the Paint

- Apply paint with a brush, sprayer or roller. Always follow the paint manufacturer's recommendations for best results.

Note: It may take longer for the paint to fully cure (up to 30 days) on Kleer Trim products compared to wood.

** Any reference herein to a specific product does not constitute or imply an endorsement by Westlake Royal Building Products and is for reference only.*

These installation guidelines are suggested techniques to be used when installing Kleer PVC products under typical conditions. Westlake Royal Building Products does not represent or warrant that these techniques will work in all applications. Westlake Royal Building Products assumes no liability for any damages, including but not limited to, damages to the person, property, incidental, special and/or consequential damages, whether or not foreseeable, resulting from, and/or relating to the installation of our products, or from failure to comply with applicable local building codes. Please refer to Kleer's Limited Lifetime Warranty for more details concerning our exclusive and sole warranty.



Trimboard Installation Instructions

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