



## Installation & Care Guide

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## Important Information

To ensure that you have the most recent version of this Installation & Care Guide, visit: [KleerLumber.com](http://KleerLumber.com)

Installation of Kleer Decking should conform to the same industry-standard building practices used to install wood or composite decking, and should comply with local building codes and the installation guidelines included here.

Kleer Lumber, Inc. claims no liability or responsibility for the improper installation of this product. Installers are solely responsible to ensure that Kleer Decking is appropriate for the intended use, as the product may not be suitable for every application.

Given that every installation and application is distinct and individual, installer's are solely responsible to determine specific requirements for each deck application. Kleer recommends that a licensed architect, engineer or local building official review all designs prior to installation.

**Kleer does not recommend the use of rubber or vinyl products (welcome mats, planters, etc.) on Kleer Decking.** A reaction can occur that causes discoloration of the decking under the rubber/vinyl product. This is a common caution for vinyl decking products.

Keep fire pits away from Kleer Decking as the ashes, embers, or extreme temperatures may melt or deform the deck surface.

– *Continued next page*

## General Information

Kleer Decking is designed to look like real wood, and like real wood, there will be a slight difference in color and grain pattern from board to board. This is intentional and part of the manufacturing process, giving Kleer Decking the most realistic and wood-like appearance possible. This variation is purely aesthetic and does not (and will not) affect the performance of the product.

Unlike wood decking, Kleer Decking will not split, splinter or suffer structural damage from termites or fungal decay, nor will the dimensions of Kleer Decking change with changes in humidity and moisture. Like many other building materials, Kleer Decking will expand and contract along its length with changes in temperature. The expansion and contraction of Kleer Decking may result in slight gaps at the end of the boards or in spliced joints. Expansion and contraction will be more noticeable with larger changes in temperature.

### STORAGE

- Store Kleer Decking on a flat, level surface.
- Do not stack bundles over 8 units high.
- When possible, leave factory applied protective wrap on the product to help protect against dirt and debris.
- Kleer Decking is more flexible than wood so additional care should be taken when handling the product.
- Use care when handling product with forklift; forks can easily damage the material.
- If banding is used during storage or transport, use protective corners to prevent indents from the bands.

### TOOLS REQUIRED

**As with wood or composite decking, safety glasses should be worn during the entire installation process.** Install Kleer Decking using woodworking tools typically used to install wood or composite decking.

- Chalk line, line level, tape measure, carpenter's square, pencil.
- Corded or cordless driver/screw gun.
- Self-feeding screw guns may be used.
- Jig saw
- Miter saw with a fine-toothed, carbide-tipped finish trim blade (12" - 40 tooth minimum) works well for cutting.
- If using a circular saw to cut Kleer Decking, be sure to keep the saw straight through the cut to avoid chipping.

### FASTENERS

Kleer Decking materials can be installed using fasteners similar to those used to install wood or composite decking. Due to the durability of Kleer Decking products, a high-quality fastener that meets the following specifications is recommended:

- Stainless Steel or Exterior Grade Coated Screw
- Minimum Screw Size: #7
- Minimum Length: 2-1/4"
- For saltwater coastal applications, we suggest using the above minimum fastener requirements in 316 stainless steel.
- Do not use nails to fasten Kleer Decking. Nailing does not allow controlled pressure on the fastener, and may result in damage to the deck boards.

### HIDDEN FASTENERS

The KleerKlip™ and Kleer Cortex™ Fastening systems should be used to properly install Kleer Decking. Other types of hidden fasteners may be used. Check with the manufacturer of the fastener and/or Kleer customer service to ensure compatibility.

**Consult the fastener manufacturer instructions to ensure proper installation of hidden fastening systems.**

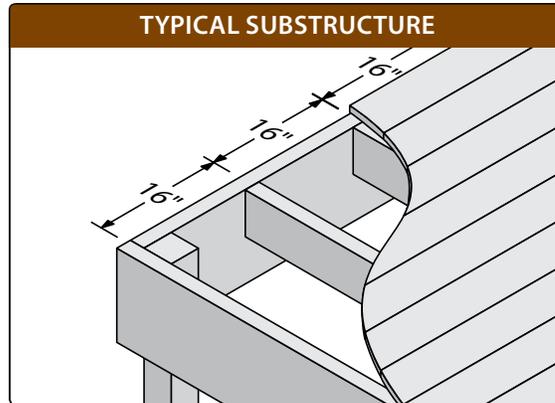
## Deck Substructure

For proper deck installation, follow these guidelines:

- If using Kleer Decking materials on an existing joist structure, check to ensure all joists are level, structurally sound, and that there are no nails or screws protruding.
- Proper joist spacing is required for proper installation. For correct joist spacing:

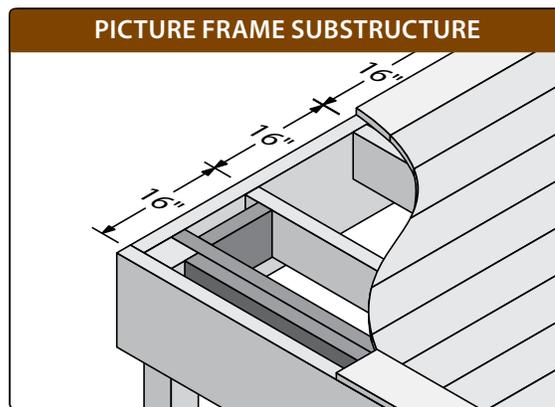
### Typical Substructure:

For applications with deck boards installed perpendicular to joists, Kleer Decking may be installed over 16" on-center joist spacing. For improved results, Kleer Decking may be installed over 12" on-center joist spacing. For commercial applications, 12" on-center joist spacing is required.



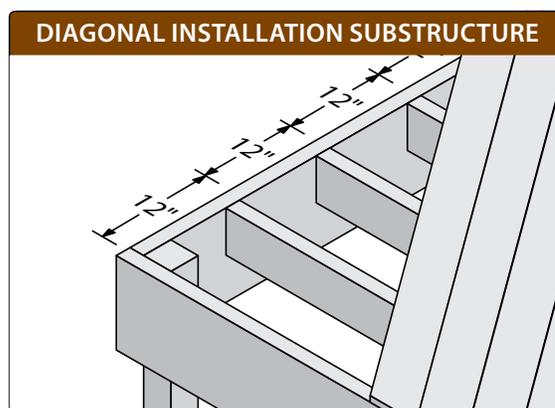
### Picture Frame Substructure:

For applications with deck board installed to "picture frame" the deck, use the same joist spacing as shown for the typical substructure installation, plus provide additional supports for picture frame structure.



### Diagonal Installation

**Substructure** (for Herring Bone Pattern deck boards): For deck boards on a 45° angle, such as a herringbone pattern, Kleer Decking must be installed over 12" on-center joist spacing.



## Important Information

*Continued from page 1*

Sanding will change the appearance of the surface of the Kleer Decking, and may remove the protective cap stock layer of board, which will void the product warranty. For the same reason, routing is not recommended.

DO NOT use glue or caulk to fasten Kleer Decking or to seal the joint between two deck boards and any other surface. This will inhibit the natural expansion and contraction of the deck boards and will impede the drainage of the deck. *(Note exception for affixing Kleer Fascia board on page 5)*

Kleer Decking is NOT intended for use as columns, support posts, beams, joist stringers or other primary load-bearing members. Kleer Decking must be supported by a code-compliant substructure.

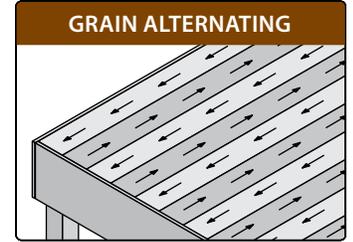
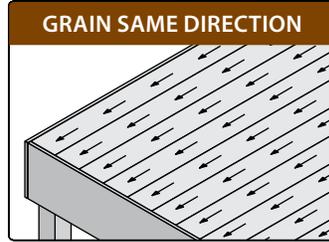
Kleer Decking is great for refurbishing projects where old deck boards are removed and Kleer Decking is installed. As with any new deck, refurbished decks require a code compliant substructure. **Kleer Decking CANNOT be installed on top of existing deck boards.**

**Do not exceed 12" on-center joist spacing for all commercial applications.**

# Kleer Decking Installation

## POSITIONING AND GRAIN ORIENTATION

Layout and select the general position of Kleer Decking prior to installation. Kleer Decking is one-sided and should be installed with the wood grain side facing up as the walking surface. The grain pattern on Kleer Decking is directional, which can create interesting patterns. Consider whether the grain pattern of each board will run in the same direction or alternating directions.



## EXPANSION & CONTRACTION, AND GAPPING REQUIREMENTS

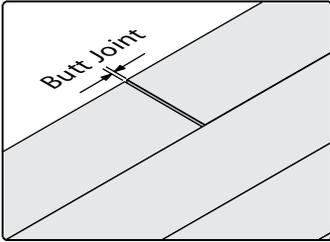
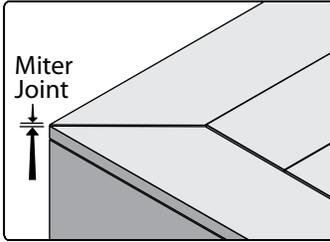
Kleer Decking expands and contracts with changes in temperature, as compared to the dimensions of real wood, which fluctuate with changes of moisture and humidity. Expansion and contraction are most significant where extreme temperature fluctuations exist and may result in slight gaps, which might be noticed at the ends of boards, or in splice joints.

soon after cutting as possible. As an example, if you cut your boards to length in the afternoon, install them the same day if possible. If the boards are left outside in the cool air overnight, they will most likely contract slightly by morning.

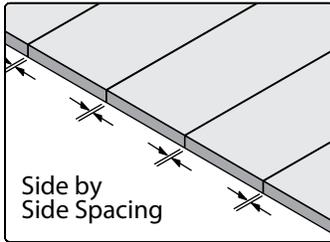
To ensure the best possible fit, Kleer Decking should be installed as

The ambient temperature should be used to determine the appropriate gaps between joints, deckboards, and other structural components. Follow these guidelines for best results:

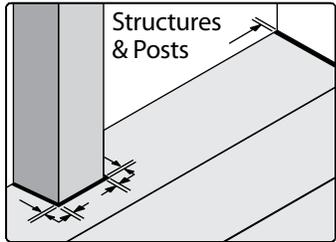
Gapping Requirements for Butt Joint & Miter Joints		
When ambient temp is 32°F or below	When ambient temp is 33°F to 74°F	When ambient temp is 75°F or above
1/4" gap	1/8" gap	No gap required

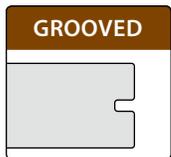
Side-by-Side Spacing Between Deck Boards
1/8" to 3/16"



Spacing Between any Adjoining Structure or Post
3/16"



## FASTENING KLEER DECKING WITH GROOVED EDGES



- The KleeKlip™ fastening system should be used to install Kleer Decking.
- Before using other

types of hidden fasteners, consult with the manufacturer to ensure compatibility.

- Refer to the installation instructions provided by the hidden fastener manufacturer for proper installation.

## FASTENING KLEER DECKING WITH SOLID EDGES



- For hidden fastening of Kleer Decking with solid edges use KleeCortex Fasteners. Refer to the installation instructions on the KleeCortex Fastener package for proper installation techniques.
- Alternatively, install using #7 x 2-1/4" stainless steel or exterior grade coated deck screws.
- Install fasteners perpendicular to deck board surface and drive so they are flush with the surface. DO NOT OVERDRIVE SCREWS.

- Fasten 3/4" from the outside edges of each deck board, using two fasteners per joint, including end joints.
- No pre-drilling is required.
- Be sure to fasten ends of boards, splices, or abutments to buildings or structures securely into framing using 2 screws that are positioned within 1/2" of each board end or joint.
- Some area building codes may require double-joists when joining boards end to end. Always check with your local code authority for specific requirements before installation.

# Stair Code Compliance

In order to meet the AC 174 Requirement for stair loading, use one of the three methods of construction shown below:

**1**

Using galvanized angle brackets as supports, attach 2x6 treated pine centered under treads

Kleer Deck board

Treated Pine

Stair Riser

Kleer 1" x 6" Deck boards attached to stringers using two #7 x 2-1/4" screws per stringer

Wood

Angle Brackets

17.25"

36.0"

**2**

Kleer 1" x 6" Deck boards attached to stringers using two #7 x 2-1/4" screws per stringer

9.00" Max.

36.0" Min.

**3**

Attach 2" x 4" treated pine centered under treads using pneumatic framing nailer. Nail positions as shown.

Kleer Deck board (typ.)

7.500"

4.125"

1.875"

3-1/4" x .0131 roundrive framing nail (typ.) in locations shown using pneumatic nailer

Kleer 1" x 6" Deck boards attached to stringers using two #7 x 2-1/4" screws per stringer

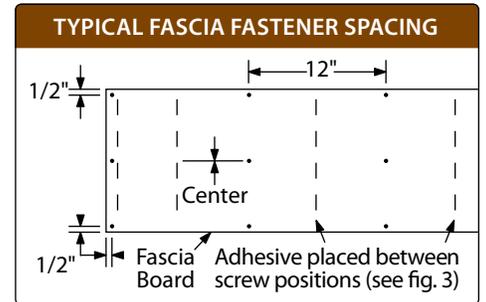
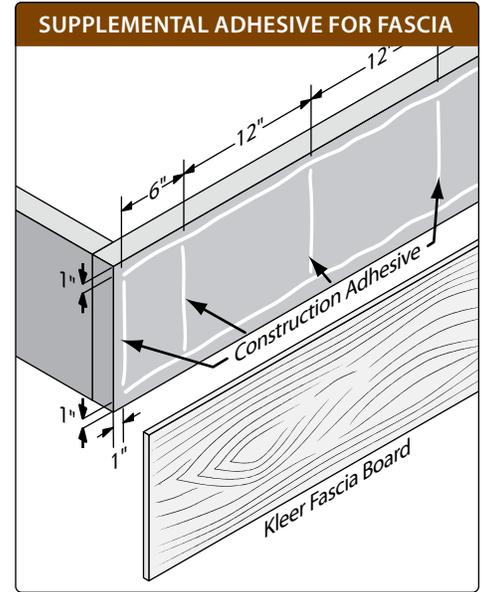
24.00"

49.50"

## Kleer Fascia Installation

Kleer Fascia boards can provide a professional, finished look for any deck. Follow these guidelines when installing Kleer Fascia boards:

- Attach fascia board to a solid backer wide enough to support the entire width of the fascia board. Use 2" x 12" wood rim board or rip-cut rim joist cover to fit precisely.
- Fascia may be installed to cover the ends of deck boards on the deck surface, provided 3/16" gap is allowed (Refer to "Spacing Between any Adjoining Structure or Post table," page 3).
- In addition to high quality screws, use a exterior rated construction adhesive that is engineered for use with PVC (*low modulus*) to install Kleer Fascia boards. This will help mitigate the affects of expansion.
- Refer to the illustrations at right to determine the proper spacing of adhesive and fasteners, and also for required spacing between butt joints for fascia boards.
- Holding the fascia tight to the framing material, drive the screw flush with the fascia surface.
- Install three screws from top to bottom with top and bottom screws positioned 1/2" from the edge as shown in illustration titled "Typical Fastener Spacing" at right. The third screw should be approximately centered in the board. Repeat this configuration every 12 inches.
- Continue fastening in pattern described being sure to work left to right, or right to left. This will ensure the flatness of the fascia, and reduce the chance of buckling.
- Drive fasteners at 90° to Fascia board and, flush with the Fascia board surface.
- Screws at ends of boards should be at least 1/2" from the end to prevent splitting.



Fascia Butt Joint Gapping Requirements		
≤ 32° F	33° F to 74° F	75° +
1/4" gap	1/8" gap	No gap req'd.

**KLEER™ Trimboard**  
 KleerTrimboard can also be used as fascia boards using the same installation methods described.

## Cleaning and Care

It is recommended that you wash your deck periodically with warm soapy water or ordinary household cleaning products to remove stains, dirt and debris. To remove rust stains, use a household cleaner such as a toilet bowl cleaner.

Power washing is not required to clean Kleer Decking; however, if you chose to do so, Kleer Decking may be power washed with a gas or electric-powered spray hose. The level of the power washer should be set no higher than 1100 PSI (pounds per square inch). A fan tip nozzle should be used along with the proper cleaning product. Spray in the direction of the wood grain pattern at a minimum of 12" from the surface of the decking.

**!** Some products, such as sunblock and insect repellent, contain chemicals that may alter the surface of Kleer Decking. Check product labels and consult with the manufacturer as to product compatibility with plastic materials, such as Kleer Decking, prior to use on or near Kleer Decking. Avoid the use of rubber-backed mats, tarps, pool toys, and other non-porous items on the deck for any extended period of time as these items may cause discoloration to the decking surface.

For ice removal, most products containing calcium chloride can be used without damage to the deck surface. These products may leave a white residue that can be cleaned using the cleaning guidelines above. *(These guidelines may not cover every care and maintenance scenario encountered. For additional questions about care and maintenance, call Kleer Lumber, Inc. at 1-866-KLEER-70)*

### PVC PRODUCT CLEANERS\*

**General Cleaners** (e.g. Simple Green®) can be used to clean dirt, bird droppings, spider webs, etc. from PVC products. Stain-specific cleaners are listed below. Rinse all cleaners with water before they dry.

#### Stain Cleaners

- For stains such as food oils and grease, ketchup, mustard, red wine, coffee, etc., use warm soapy water.
- For gum, grass, car grease: Fantastik®, Lestoil®, Lysol®
- For motor oil, rust, top soil: Murphy® Oil Soap, Windex®
- For crayon: Lestoil®
- For oil-based caulk (i.e., DAP): Fantastik®
- For felt-tip pen, paint, pencil, tar: Brillo® Pad, Soft Scrub®

*\* Kleer Lumber, Inc. does not endorse products or processes and makes no warranties for the products referenced herein. Reference to proprietary names is for illustrative purposes only and is not intended to imply that there are not equally effective alternatives.*

## Heat Build-Up Considerations

Be aware that excessive heat build-up on the surface of Kleer products from external sources such as but not limited to fire or reflection of sunlight may potentially cause damage.

For example, sunlight, which may be reflected by low-emissivity (Low-E) glass, can potentially lead to damage of Kleer Decking and Fascia products due to increased surface temperatures which far exceed that of normal exposure to direct sunlight.

Possible damage by these types of heat sources, or sources of reflected concentrated light, may include melting, sagging, warping, distortion, surface discoloration, increased expansion or contraction, and unusual weathering. Such damage is not covered by warranty.



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