Installation & Maintenance Guide

Elements Advanced Polymer Decking

Elements Advanced Polymer Decking & Fascia should be installed using the same good building principals used to install wood or composite decking and in accordance with the local building codes and the installation guidelines included below. Composite Prime® accepts no liability or responsibility for the improper installation of this product. Elements Advanced Polymer Decking may not be suitable for every application and it is the sole responsibility of the installer to be sure that Elements Advanced Polymer Decking is fit for the intended use. Since all installations are unique, it is also the installer's responsibility to determine specific requirements for each Deck application. Composite Prime® recommends that all applications be reviewed by a licensed architect, engineer or local building official before installation. To get more information visit **composite-prime.com**

Tools Required

Elements Advanced Polymer Decking can be installed with a minimum number of readily available tools. Many other tools are available that can be used for installation. All tools should be used per applicable manufacturers' instructions. Some of the basic tool requirements:

- Variable speed cordless drill. DO NOT USE IMPACT DRIVER.
- Chalk Line
- Tape Measure
- Jig Saw
- Carpenter Square
- Spacing Tools
- Miter Saw
- Safety Glasses

Use the jigsaw to cut around obstructions such as posts. For best results, a miter saw with a fine-toothed, carbide-tipped finish trim blade (305 mm (12") - 60 tooth minimum) works well for cutting. For a power miter or compound power miter saw, a fine finish alternate top bevel blade is also recommended. When working with Advanced Polymer products be sure to wear proper clothing and safety equipment. Safety glasses should be used during the entire installation process. Do not use any cordless saws.

⚠ STOP! Read this section before you start!

Always make sure to visit Elements.com to ensure you are viewing the most current installation instructions, care and cleaning, technical information and more.

Elements Advanced Polymer Decking

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

DO NOT use nails to fasten Elements Advanced Polymer Decking.

Cutting or drilling metal should not be done on Elements Advanced Polymer Deck boards as metal shavings may become hot and embed themselves into the deck boards.

Always be sure to check and cut the factory ends of boards to ensure they are square.

Walking Surface

Elements Advanced Polymer deck boards need to be installed embossed side up only.

Static Electricity

The buildup or generation of static electricity is a naturally occurring phenomenon in many plastic based products such as carpeting, upholstery, and clothing, and can occur on alternative decking under certain environmental conditions. Static electricity is not a defect and can occur naturally.

Overhang

For best results, do not overhang over 13 mm (1/2") beyond the edge of the deck framing.

Routing

Elements Advanced Polymer Deck should not be routed on the edges, ends, or sides with the exception of the start/stop boards.

Color and Grain Patterns

Elements Advanced Polymer Deck is designed to mimic the look of 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 Elements Advanced Polymer Deck the most realistic and wood-like appearance possible. This variation is purely aesthetic and does not or will not affect the performance of the product. When working with multiple units of decking, consider pulling boards randomly to mix rather than completing one unit at a time. It is always a good practice to layout deck boards in different lighting conditions/angles before final fastening.

Color and Temperature

Although Elements Advanced Polymer Deck products are cooler to the touch than many other deck board products in similar colors, all decking products will get hot in the sun. Additionally, the darker the decking color, the hotter it will feel.

Air Flow Considerations

In areas with obstructed airflow such as roofs, water management systems, skirting and on-grade applications, a minimum of 38 mm (1-1/2") clearance should be provided.

STOP! Read this section before you start! (continued)

Always make sure to visit composite-prime.com to ensure you are viewing the most current installation instructions, care and cleaning, technical information and more.

Note: more clearance and airflow can help reduce/minimize movement and gapping due to increased heat build.

DO NOT attach deck boards to a floating sub-structure which is not mechanically fastened frequently and sufficiently to the building and roof deck.

Note
Elements Advanced Polymer Deck is NOT intended for use as columns, support posts, beams, joist, stringers, guard railing or other primary load-bearing members. AZEK must be supported by a code-compliant substructure. While Elements Advanced Polymer products are great for deck re-planking (removing old deck surface boards and installing new boards on code-compliant substructure), Elements Advanced Polymer Deck Boards SHOULD NEVER be installed on top of an existing deck.

Failure to install Elements Advanced Polymer Decking products in accordance with applicable building codes and this Installation Guide may lead to personal injury, affect deck system performance and void the product warranty.

Roof Top Decks

When considering Elements Advanced Polymer Deck in a roof top application, it is imperative that the framing/sub-structure to which the decking will be attached is securely attached to the building or roof deck using suitable mechanical fasteners. Do not use adhesives to attach framing to the building or roof surface, and NEVER ATTACH DECK BOARDS TO A FLOATING FRAME/ SUB-STRUCTURE. Frequently check tops of sub-structure framing members to ensure that they are in plane, as Advanced Polymer Decking will conform to the contour of the framing members to which it is attached. It may be necessary to shim or plane framing members due to thickness variations in lumber, or variations in the surface to which the framing/sub-structure is attached. Securely attaching rigid blocking between framing members at frequent intervals should also be incorporated to help limit sub-structure movement. Framing or sleepers must be sufficient to resist thermal movement of decking in any direction, or uneven walking surface may appear. Proper drainage and air flow should also be considered, with a minimum of 38 mm (1 ½") sleeper height necessary and deck boards must be attached to the properly secured sub-structure with a minimum of a 3 mm (1/8") gap between deck boards. It is the installer's responsibility to determine if Elements Advanced Polymer Deck is suitable for a specific roof top application. Composite Prime® recommends that all applications be reviewed by a licensed architect, engineer, or local building official before installation. If you have any questions or need further assistance, please call Composite Prime® Customer Service on 0113 426 2770 or visit our website at **composite-prime.com**

Extreme Heat Warning

Be aware of excessive heat on the surface of Elements Advanced Polymer products from external sources, such as but not limited to, fire, hot ashes/embers, fire pits, grills or reflection of sunlight from energy-efficient window products. Reflection of sunlight from Low-emissivity (Low-E) glass can potentially harm Elements Advanced Polymer products. Low-E glass is designed to prevent passive heat gain within a structure and can cause unusual heat build-up on exterior surfaces. This extreme elevation of surface temperatures, which exceeds that of normal exposure, can possibly cause Elements Advanced Polymer products to melt, sag, warp, discolor, increase expansion/ contraction, and accelerate weathering. It is recommended to add additional framing, tighter joist spacing (152 mm to 203 mm (6 to 8") maximum). Also, only use top-down fastening in these locations such as near glass, areas of high heat build or sunlight reflection. Current or potential Elements customers that have concerns about possible damage by Low-E glass should contact the manufacturer of the product which contains Low-E glass for a solution to reduce or eliminate the effects of reflected sunlight.

Metamerism

Metamerism is the phenomenon wherein two colored samples will appear to be of the same shade under one light source but will appear to be different shades under a second source.

When installing Elements Advanced Polymer deck boards at different angles, metamerism may make the boards installed at one angle appear to be of a different shade than the deck boards installed at the other angle, depending on the lighting and the angle which the deck is viewed. This is a natural phenomenon, not a defect, and can occur even when the deck boards are cut from the same boards or come from the same unit. Metamerism is an aesthetic issue and not a performance or product warranty issue.

Excessive Construction Debris

It is important during construction, the deck's surface stay clear from excessive build-up of dirt, sand, and dust from tile, concrete, landscape blocks, or any other masonry products. If these materials are not removed immediately, the deck surface will become difficult to clean and can potentially damage the deck's surface finish.

Do not use Elements Advanced Polymer Deck as a work surface.

When installing Elements Advanced Polymer Deck, best practice is to install after all other construction (siding, roofing, painting, etc.) is completed, otherwise permanent damage may occur.

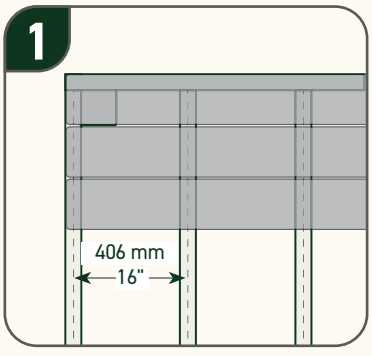
If a build-up does occur please refer to the Care and Cleaning section in this guide, or our website, composite-prime.com

IMPORTANT: Do not allow airborne dust from concrete, landscape blocks, or any masonry product, including fiber, cement, siding and trim, to accumulate on Elements Advanced Polymer Deck as it may damage the surface of the deck. Do not cut any product on or near Elements Advanced Polymer Deck.

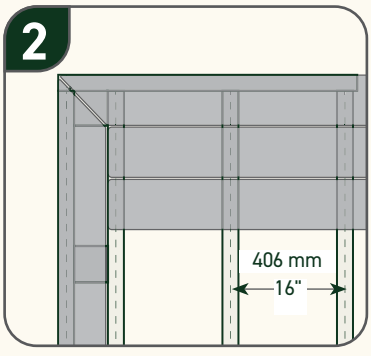
Substructure/Preparation

Follow these guidelines for best deck installation:

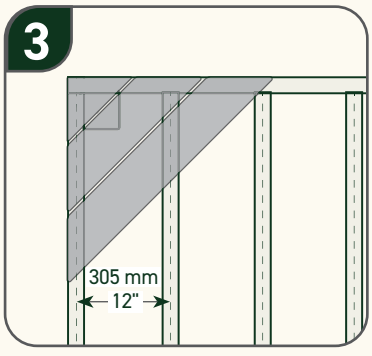
- As joists are installed, run string line frequently to ensure that the tops of the joists are in plane, as Advanced Polymer Decking will conform to the contour of the joists to which it is attached. It may be necessary to shim or plane joists due to size variations in lumber. Be sure to sort and exclude any extremely crowned joists/lumber material.
- Prior to installation, check to make sure all joists are level, structurally sound, and there are no nails or screws protruding.
- Proper joist spacing is required for proper installation. Joist spacing should never exceed 406 mm (16") on center. For a more rigid feel, 305 mm (12") may be preferred. However, all angled or commercial installations of decking require 305 mm (12") on center maximum.
- Install solid wood blocking between each joist, placed in rows at maximum every 1,22 m - 1,83 m (4' - 6') within the structure using exterior grade screws. Solid blocking will help reduce up or down movement and/or twisting of joists. Limiting joist movement can help reduce excessive gapping and also ensure a more uniform finished surface of the Elements Advanced Polymer Deck.
- It is recommended to add additional framing, tighter joist spacing (152 mm to 203 mm (6" to 8") maximum). Also, only use top-down fastening in locations such as near glass, areas of high heat build or sunlight reflection.



406 mm (16") BASIC INSTALLATION SUBSTRUCTURE
406 mm (16") on center maximum joist spacing. (305 mm (12") on center for commercial applications)



PICTURE FRAME INSTALLATION SUBSTRUCTURE
406 mm (16") on center maximum joist spacing plus additional support for picture frame structure (305 mm (12") on centre for commercial applications)



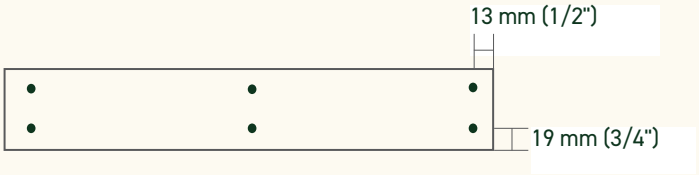
DIAGONAL INSTALLATION SUBSTRUCTURE
305 mm (12") on center maximum joist spacing. More severe angles may require closer joist spacing.

Expansion and Contraction

Elements Advanced Polymer Deck will expand and contract, move, and gap with changes in temperature, unlike wood whose size will fluctuate with moisture changes. The expansion and contraction encountered may result in gaps, which might be noticed at the ends of boards or in splice/butt joints. Gapping is normal and some gapping can be expected. Using top-down fastening method for the deck boards according to the Installation Guidelines will help minimize expansion and contraction.

Note: Splices/butt joints are where gapping most commonly occurs. Limiting length of deck boards for long runs can help minimize gapping. Adding design features such as properly framed parting or breaker board can reduce or eliminate the need for butt joints. Also consider using shorter deck board lengths or a design which allows running deck boards in shortest possible direction.

- For better results keep decking as cool as possible during attachment. Direct full sun exposure will increase board temperature and length. If attaching during high heat, larger gapping can be expected.
- **DO NOT leave a gap at butt joints, splices or miters.**
- Expansion/contraction is most significant where extreme temperature change may exist.
- Best practice is to cut and fasten the deck boards as soon after cutting as possible.
- Be sure to fasten ends of boards, splices, or abutments to building or structure securely into framing using 2 screws. Position the screws at or within 13 mm (1/2") of each board end or joint and 19 mm (3/4") from side of deck plank.
- For butt joints, be sure to trim cut factory ends to ensure squareness. Do not scarf cut butt joints.

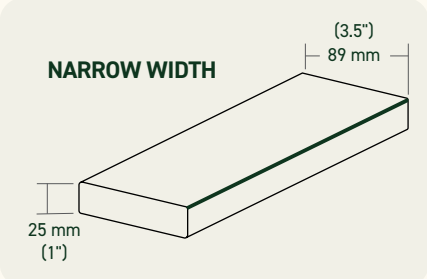


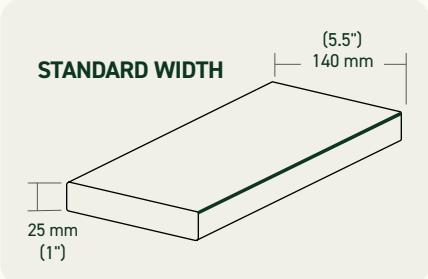
- To help reduce or minimize movement, gapping, and expansion/contraction with Elements Advanced Polymer deck, consider using only top-down fastening methods such as Cortex for the entire deck.
- Provide a 3 mm to 6 mm (1/8" to 1/4") side to side gap between deck boards.
- Framing/sub-structure must be securely attached to ground footings or building structure. No floating sub-structures should be used in any application with Advanced Polymer Deck, including on grade, concrete, or in roof top applications.
- For best results, stagger splices and miters across deck surface so that all splices and miters do not break on the same joist or beam.
- To further minimize expansion and contraction, proper ventilation and air flow should be considered.
- Some area building codes may require double joisting when joining boards end to end. Always check with your local authority for specific requirements before installation.
- During installation, frequently check that Elements Advanced Polymer Deck boards are installed straight and with consistent gapping and spacing by using a string line.

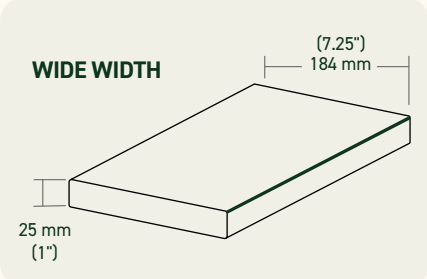
Fasteners

- Due to the durability of Elements Advanced Polymer decking products, a high-quality fastener is recommended that meets the following specifications: use Cortex hidden fasteners or a high quality stainless steel screw (minimum #7 size and minimum length of 57 mm (2-1/4")).
- Be sure that screws are driven to a minimum depth of 32 mm (1 1/4") into solid wood framing below the bottom of the Elements Advanced Polymer Deck Board. This will enhance holding power and uplift resistance. **the fastener should be tested**
- Avoid using flathead screws. Trim head screws typically provide a better result. As always, **on a sample board before being used on your deck.**
- Be sure to install 2 screws per joist on each deck board regardless of temperature during attachment of Elements Advanced Polymer deck boards, be sure to keep butt joints and miters tight and place fasteners within 13 mm (1/2") of ends.
- The fastening pattern and installation methods are the same for standard width 140 mm (5.5"), narrow width 89 mm (3.5"), and wide width 184 mm (7.25").
- For salt water coastal applications, we suggest using the above minimum fastener requirements in 316 stainless steel.
- Composite Prime® recommends using Cortex® fasteners with Elements Decking. Cortex® fasteners are specifically engineered and tested to work with unique profile and material characteristics designed to deliver the best results and to minimize the risk of issues during or after installation, including but not limited to gapping, warping, board movement, oil canning, and squeaking. These types of issues are not covered by Elements's product warranty and Composite Prime® will not be financially liable in the event such issues arise.
- WARNING: When installing Elements Advanced Polymer with hidden fasteners, always use a beater board against side of deck board. Do not strike deck board directly with hammer or rubber mallet or damage to the deck plank may occur.
- WARNING: When installing fasteners, some shoe soles or harder knee pads may leave scuffs when dragged across deck surface. Shoe covers are recommended.

Board Profiles

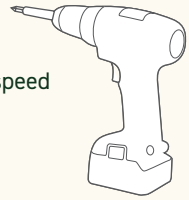






Cortex® Hidden Fastening System Installation Instructions

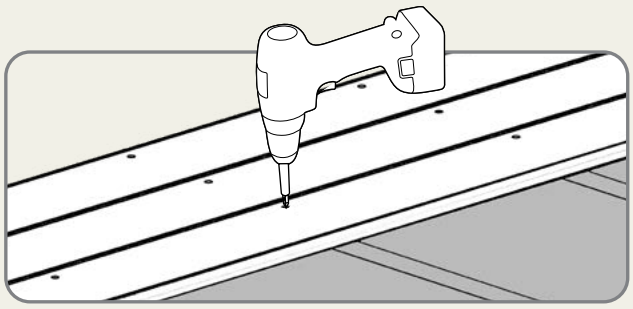
Suggested Drills

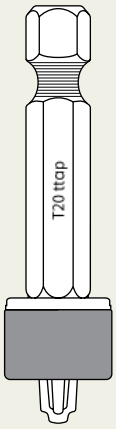


Corded or cordless drill (18V variable speed recommended).
Do not use impact drivers.

1 DRIVE SCREW

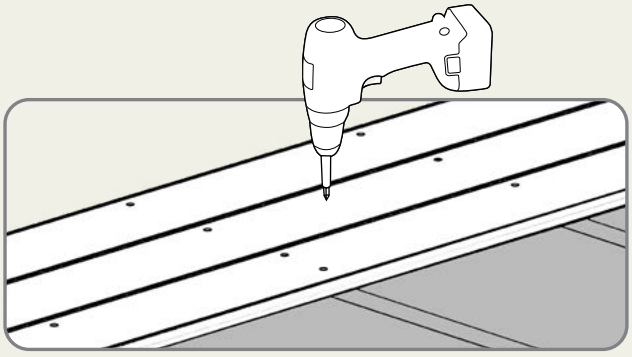
- Using Setting Tool provided, drive screw at medium or high speed until it disengages at the proper level below the deck surface.
- Drive at one continuous speed, do not slow down or toggle the drill trigger in a start/stop manner.





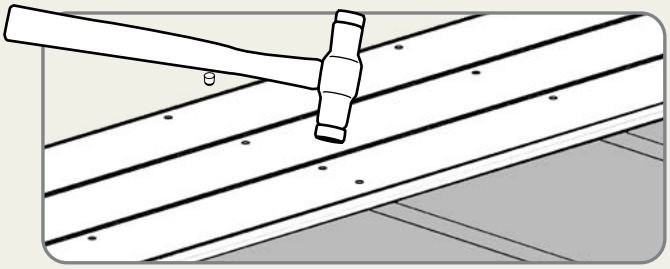
2 INSTALL DECK SCREWS INTO JOISTS

- Install two screws into decking at each joist.
- Maximum spacing between each row of screws should be 406 mm (16") on center (up to 610 mm (24") on center for MAX boards).
- Reference Pages 5 & 6 for proper fastener placement.



3 INSTALL PLUG

- Place plug into cored hole with grain aligned and gently tap flush with deck surface.
- Always use a smooth faced plastic hammer to avoid damaging the deck surface while setting the Cortex plug.
- When installing Collated Cortex Plugs:
    1. Tear off one strip of collated Cortex plugs
    2. Position the leading plug into hole
    3. Gently tap plug into place
    4. Pull collated strip away from installed plug
    5. Tap plug once more to flush



IMPORTANT- when installing Cortex plugs use caution to prevent damage to the Advanced Polymer deck surface.

Important Information

- The Cortex Setting Tool must be used to set the Cortex screw to the proper depth.
- The Cortex fastener must be driven perpendicular to the deck surface for proper fit and ideal finished look (DO NOT drive on angle).
- The cored hole must be free of debris or moisture. Use a smooth plastic hammer head to set the Cortex plug.
- The interaction between the deck board, screw, and plug is essential. Use of non-Cortex Screws or plugs will nullify the warranty.
- Fasteners should be positioned approximately 13 mm (1/2") from board ends and 19 mm (3/4") from board sides.

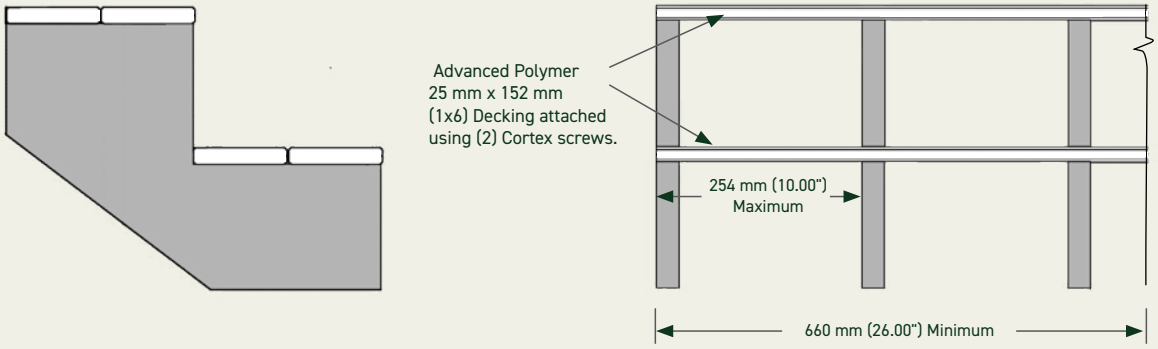
Restricted Cortex Uses

The Advanced Polymer Cortex System is designed for traditional elevated deck surfaces. The following applications require a different fastening method:

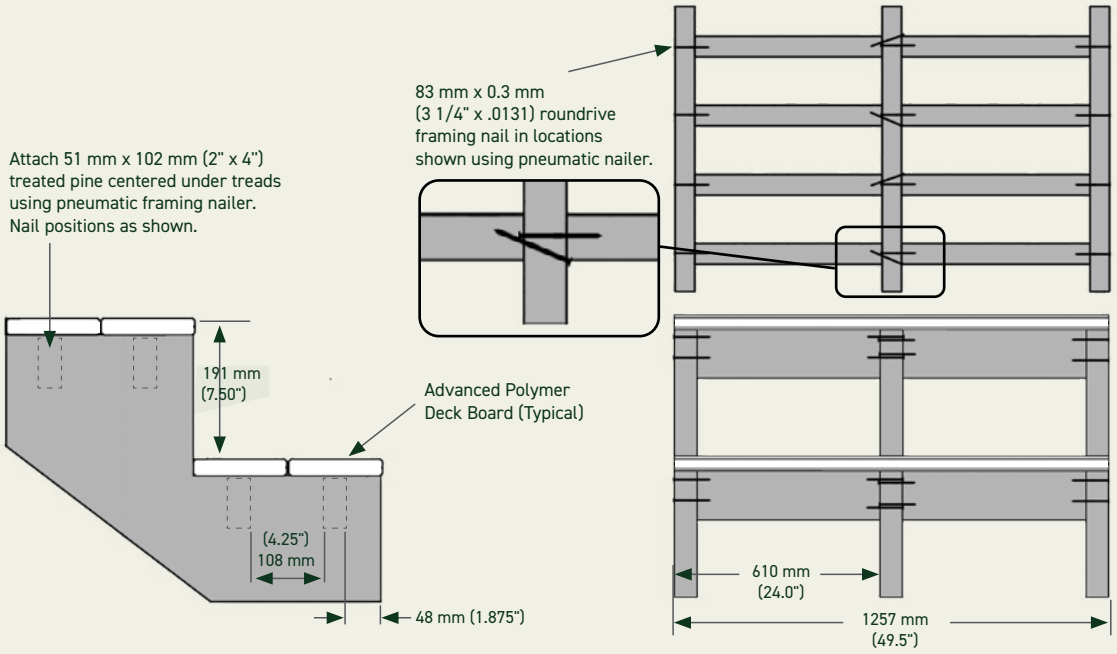
- Advanced Polymer Cortex should not be used with Advanced Polymer Fascia or any other material which is 16 mm (5/8") or less, or less than 16 mm (5/8") thick.
- Docks or decks with framing members in constant contact with saltwater.

The maximum allowable stringer spacing is as shown:

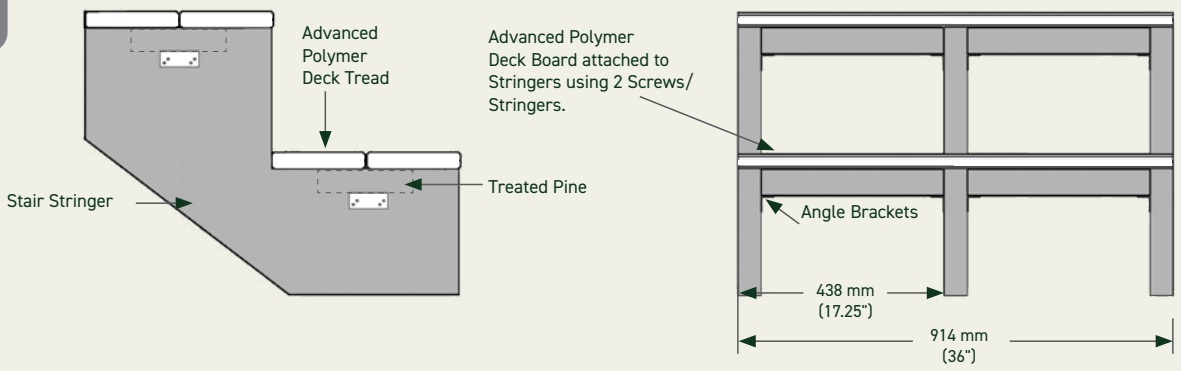
1



2



3



- Stairs should be constructed per local code requirements.

Considerations

- Depending on environmental conditions, Elements Advanced Polymer Deck colors may appear to lighten over time as part of the natural weathering process.
- Please be aware that excessive heat build on the surface of Elements Advanced Polymer products from external sources such as, but not limited to, fire, hot ashes/embers, fire pits, grills or reflection of sunlight from energy-efficient window products. Reflection of sunlight from Low-emissivity (Low-E) glass can potentially harm Elements products. Low-E glass is designed to prevent passive heat gain within a structure and can cause unusual heat build-up on exterior surfaces This extreme elevation of surface temperatures, which exceeds that of normal exposure, can possibly cause Elements Advanced Polymer products to melt, sag, warp, discolor, increase expansion/contraction, and accelerate weathering.
- Static build-up is a natural occurring phenomenon that can occur with many plastic products including PVC Decking. It could occur with Elements Advanced Polymer products under the right environmental conditions. The buildup or generation of static electricity is a naturally occurring phenomenon in many plastic based products such as carpeting, upholstery, and clothing, and can occur on alternative decking under certain environmental conditions and is not a product defect.
- Although Elements Advanced Polymer products are cooler to the touch than many other deckboard products in similar colors, all decking products will get hot in the sun. Additionally, the darker the decking color, the hotter it will feel.
- **IMPORTANT**: Do not allow airborne dust from concrete, fiber cement siding, landscape blocks, or any masonry product to accumulate on the Elements Advanced Polymer Deck surface as it may damage the surface of the deck. Do not cut any product on or near Elements Advanced Polymer Deck.

Storage & Handling

- Store Elements Advanced Polymer Deck, Porch, & Fascia boards on a flat and level surface.
- Store products in a cool, shady area prior to installation.
- Do not stack bundles over 8 units high.
- Always leave factory applied protective wrap, If stored outdoors, the product must be covered with non-translucent material.
- Use care when handling product with a forklift as forks can easily damage the material.
- If banding is used, use protective corners to prevent indents from the bands.
- Avoid storing Elements Advanced Polymer Deck boards in areas of excessive heat.

Warranty

Elements Products are made exclusively from technologically advanced materials designed to provide years of enjoyment. Elements Advanced Polymer Decking products are covered by a Limited Lifetime Warranty for residential applications and a 20-year Limited Warranty for commercial applications. The warranty covers defects resulting in blistering, peeling, flaking, cracking, splitting, cupping, rotting or structural defects from termites or fungal decay. Elements Advanced Polymer Decking products are also covered by a 50-year limited residential fade and stain warranty. Visit composite-prime.com to view complete warranty information.

Care & Maintenance

To keep your Elements Advanced Polymer Deck/Porch looking its best:

- Avoid the use of rubber-backed mats, tarps, pool toys, and other non-porous items on the deck/porch for any extended period of time as these items may cause discoloration to the decking surface.
- Some products, such as sunblock and insect repellent, contain chemicals that may alter the surface of Advanced Polymer Deck, Porch, Fascia, & Risers. Check product labels and consult with the manufacturer as to product compatibility with plastic materials, such as Advanced Polymer Deck, Porch, Fascia, & Risers, prior to use on or near Advanced Polymer Deck/Fascia.
- Do not get any PVC glue or similar product on the surface of any Advanced Polymer Decking/Porch Product as it may discolor and permanently damage the surface.
- Always read the cleaning product manufacturers specific information before using any product on your Advanced Polymer Deck and follow their instructions. Outside of the list above, it is also a good idea to test the cleaner on a scrap piece or inconspicuous area of the deck to make sure it does not harm the surface.
- WARNING: Keep children and pets away from cleaning products and Advanced Polymer Deck until dry.
- Note: If any of the suggested cleaning methods are not satisfactory, take before and after photos of the attempt and contact Composite Prime® Customer Service at 0113 426 2770.
- It is always a good idea to test on a scrap piece or confirm cleaning process prior to cleaning the entire deck or large area.
- Store products under cover to maintain a clean surface.
- If stored outdoors, they must be covered with a non-translucent material.

Ice and Snow:

- As with any walking surface, Advanced Polymer deck products may become slippery in Winter weather. Take caution when walking on the your Advanced Polymer deck in these conditions.
- For ice removal, most products containing calcium chloride chloride in flake or pellet form can be used without damage to the deck/porch surface. For more pet friendly options, most products containing magnesium chloride can also be used without damaging the deck surface.
- These products may leave a white residue which can be cleaned using the cleaning guidelines above.
- Metal shovels or plastic shovels with a metal leading edge will damage the surface of Advanced Polymer Deck and are not recommended for clearing snow from deck/porch surface.