

Trex[®]

INTERNATIONAL
ARCHITECTURAL GUIDE

AUSTRALIA

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INTRODUCTION

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WHY TREX®

As the world's leading wood-alternative decking manufacturer for nearly 20 years, Trex stands for outdoor living in the most innovative way possible. In fact, Trex practically invented the concept, making it easy to minimize the work and maximize the wow.

The possibilities you'll find with Trex begin where form beautifully meets function. Our rich color collections and natural wood-grain finishes offer a low-maintenance palette to design the outdoors of your dreams. Plus, our decking is incredibly easy to install, leaving no painting, staining, splintering or rotting to worry about—ever.

Call it perfection by design.

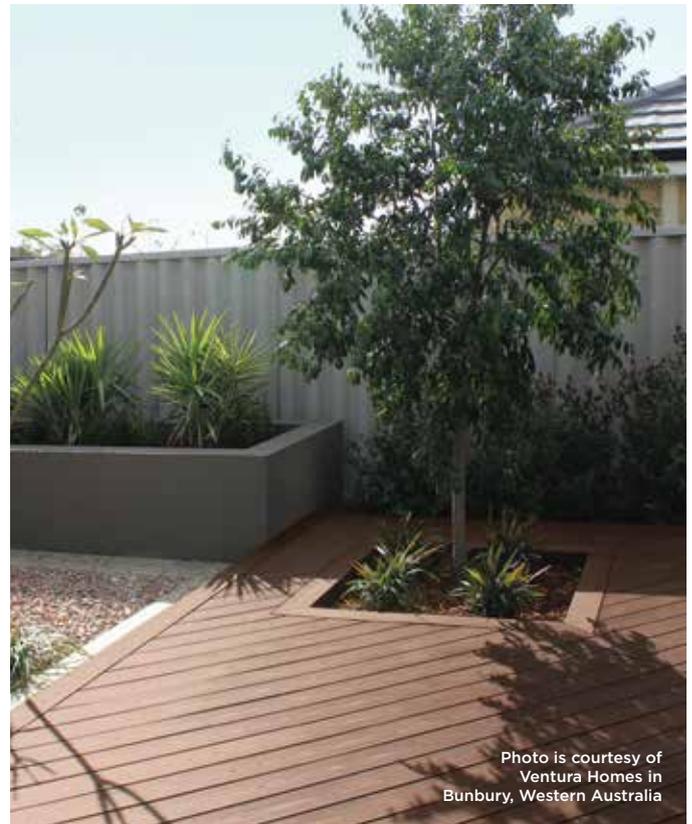


Photo is courtesy of
Ventura Homes in
Bunbury, Western Australia

- » Superior style and beauty
- » Low maintenance
- » Rich, deep palettes
- » A green product from a legendary green company
- » The broadest range of style and finish options
- » Soft, splinterless comfort that will never rot
- » A home buyer's dream

THE TREX WARRANTY

Our proven track record of manufacturing durable, high-quality products has made us the world's leading brand. Trex promises our products will not rot, warp or splinter.

ENVIRONMENTAL LEADERSHIP

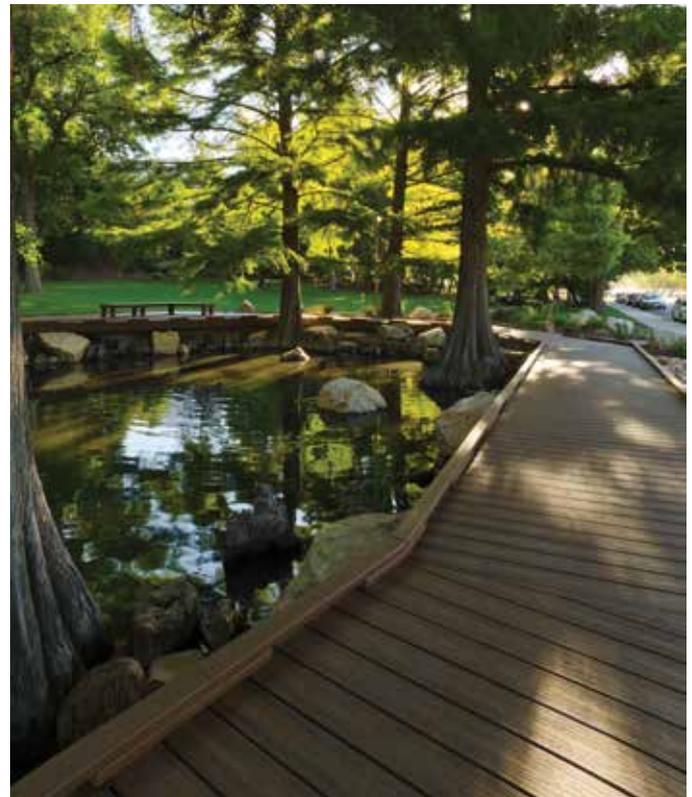
Our company was built upon green principles and values, from our innovative materials to our eco-friendly processes. In fact, we reuse as smartly as possible, creating innovative new products from not-so-new beginnings, and, of course, screening everything closely for quality before it goes near a Trex plant.

RECYCLED MATERIALS

- » Trex saves around 180 million kilos of plastic and wood scrap from landfills every year.
- » Our decking, in addition to reclaimed wood and sawdust, used to be plastic packaging. We are one of the largest plastic recyclers in the United States of America.
- » Trex hasn't felled one tree in all our years in the decking business. Instead, we use what others don't, including:
 - Reclaimed wood from woodworking operations
 - Used pallets
 - Sawdust (upwards of 90 million kilos a year)

ENVIRONMENTALLY FRIENDLY PROCESSES

- We regularly seek out third-party audits to make sure we're continuously improving our green practices while meeting all environmental, health and safety guidelines and regulations.
- » Trex trailers used to transport wood dust utilize vegetable-based oil hydraulics.
 - » Factory runoff/refuse is recycled back into the manufacturing line.
 - » As much as possible, Trex packaging is made from recycled paper and plastic.



GREEN AFFILIATIONS



- » Trex is the first company in the wood-alternative decking industry to receive an International Code Council Evaluation Service® (ICC-ES)* SAVE Verification for Recycled Content.

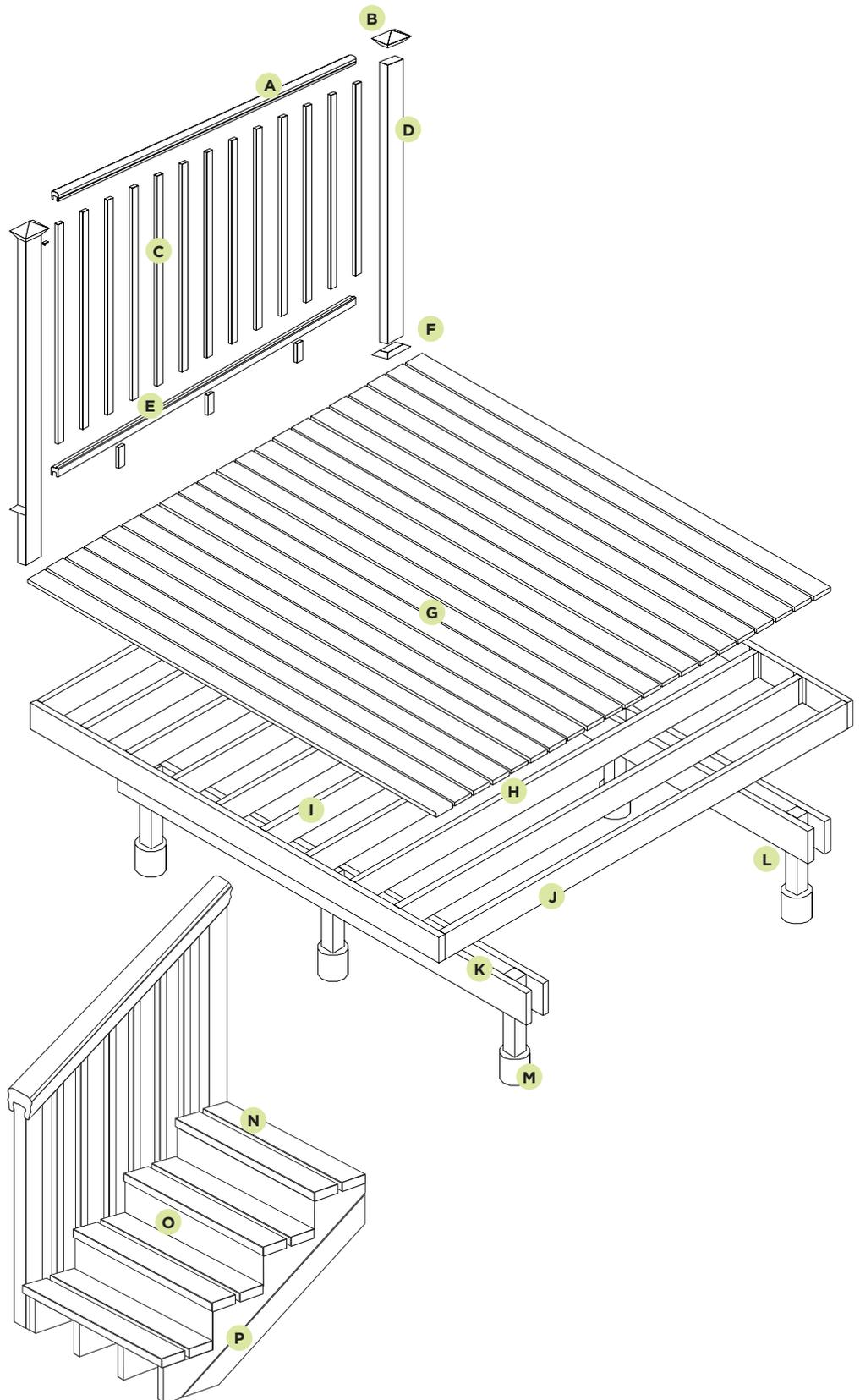


- » Trex decking & railing contribute to a building's enviable LEED points (a nationally accepted benchmark for design, construction and operation of high-performance green buildings).

*See page 28 for ICC-ES SAVE Report

PARTS USED TO CONSTRUCT A DECK

- A Top Rail
- B Post Cap
- C Baluster
- D Rail Post
- E Bottom Rail
- F Post Skirt
- G Decking
- H Joist
- I Rim Joist
- J End Joists
- K Beam
- L Post
- M Footing
- N Tread
- O Riser
- P Stringer



GLOSSARY OF TERMS

Items highlighted in green are available from Trex.

A Top Rail

The horizontal member installed on edge, attached to the top of the balusters as well as the posts.

B Post Cap

A decorative cap attached to the top of the post to protect the post from the weather.

C Baluster

A vertical railing member, filling the area between the posts.

D Rail Post

A vertical member that supports the railing.

E Bottom Rail

The horizontal member, installed on edge, attached to the bottom of the balusters as well as the post. The bottom rail is not required if the balusters extend to and are attached to the rim joist.

F Post Skirt

A piece of trim that covers post cutouts in decking allowing for faster installation.

G Decking

The decking boards that serve as the walking surface.

H Joist

Dimensional lumber, set on edge, which supports decking.

I Rim Joist

A board fastened to the end of the joists, typically opposite of the ledger.

J End Joists

The joists at the end of a series of parallel joists.

K Beam

Supported by posts, the beam is the main horizontal support for the deck.

L Post

Vertical supports that rest on footings and support the beam.

M Footing

The below-ground support of a deck's post, usually made from concrete.

N Tread

The walking surface of each step in a stairway.

O Riser

A board attached to the vertical face of a step between treads.

P Stringer

The support frame of stairs where the risers and treads attach to.

NOT SHOWN

Cantilever

The allowable overhang past the joists or rim joists.

Fascia Board

The boards used to cover rim joists and end joists (also known as face boards).

Inset

An area of a deck that has been cut out to accommodate landscape elements such as trees.

Ledger

A board, equal in size to the joist, which anchors the deck to the house and supports one end of the deck.

Span

The distance a board is designed to span, under normal load conditions, between supports.

Top Plate

Attached to the posts and the top rail to support the top rail and balusters (also known as top cap or handrail).

PRODUCT OFFERING

- 9 Trex Transcend[®] Decking
- 10 Trex Enhance[®] Decking
- 11 Trex Hideaway[®] Hidden Fasteners
- 12 Color Palette
- 13 Product Specifications

Trex Transcend®

THE GOOD LIFE IS WAY BETTER OUTSIDE

Revolutionary Trex Transcend® combines enduring beauty and unsurpassed performance. No more either/or. Offering benefits unmatched by wood and traditional composites, Transcend decking guarantees a fade- and stain-resistant finish. And when it comes to beauty, longevity and comfort, Transcend is pure Trex®, featuring decking boards and railings that won't rot, warp, crack or splinter. A perfect upgrade from better to best.

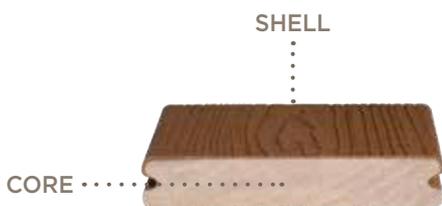


Photo is courtesy of Summit Homes in Perth, Western Australia

TROPICAL COLORS



CLASSIC EARTH TONES



UNYIELDING TRANSCEND SHELL

- » Each board is wrapped on the three sides that brave the elements for superior weather protection
- » Underside breathes to avoid the surface separation some competitors suffer, ensuring lifelong durability
- » Transcend shell is thicker than competitive offerings

PROFILES INCLUDE:

25 mm x 140 mm Square Edge Board



25 mm x 140 mm Grooved Edge Board



Trex Enhance®

REPLACE WOOD WITH WOW

Enhance® is our low-maintenance composite that offers all the charm and none of the trouble of real wood. With its high-definition grain pattern and hidden fasteners, Enhance features a rich, sophisticated finish at a value that only adds to its appeal. A quick cleaning with soap and water coupled with a smart, simple design scheme means the perfect makeover choice. What could be breezier, or easier?



PROFILES INCLUDE:

25 mm x 140 mm Square Edge Board



25 mm x 140 mm Grooved Edge Board



WE'VE GOT THINGS COVERED

Each Enhance board is wrapped on three sides with a protective shell that repels whatever the weather can throw at it, leaving behind a beautiful, rich finish.

Trex Hideaway® HIDDEN FASTENERS

INVISIBLE INSTALLATION THAT'S TWICE AS FAST AS SCREWS

Trex Hideaway® Hidden Fastening System clips between each board for perfectly consistent spacing and no visible screws on top.

- » Quick, simple installation takes half as long as the traditional screw-through method
- » The comfortable, uniform texture feels good underfoot
- » For use with Trex® grooved boards



UNIVERSAL FASTENER
glass-filled nylon



START CLIP
stainless steel



COLOR PALETTE

TRANSCEND DECKING

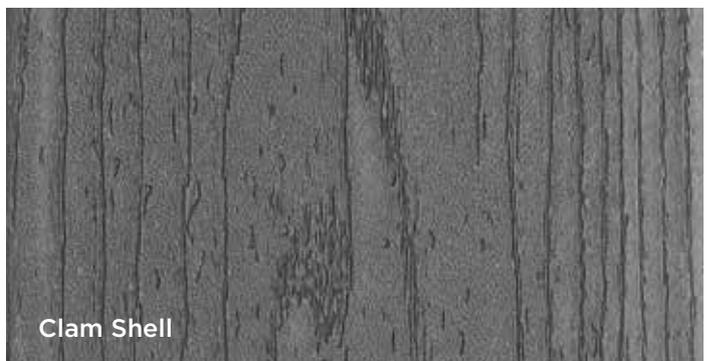
TROPICAL COLORS



CLASSIC EARTH TONES



ENHANCE DECKING



PRODUCT SPECIFICATIONS

DECKING	DESCRIPTION	ITEM NUMBER	COLORS
<p>25 mm Square Edge Board</p> 	25 mm x 140 mm x 3660 mm Transcend	XX010612TS48	LR, SR, TT, FP, GP, RS, TH, VL
	25 mm x 140 mm x 4870 mm Transcend	XX010616TS48	
	25 mm x 140 mm x 6090 mm Transcend	XX010620TS48	
	25 mm x 140 mm x 3660 mm Enhance	XX010612ES48	BD, CS
	25 mm x 140 mm x 4870 mm Enhance	XX010616ES48	
	25 mm x 140 mm x 6090 mm Enhance	XX010620ES48	

<p>25 mm Grooved Edge Board</p> 	25 mm x 140 mm x 3660 mm Transcend	XX010612TG48	LR, SR, TT, FP, GP, RS, TH, VL
	25 mm x 140 mm x 4870 mm Transcend	XX010616TG48	
	25 mm x 140 mm x 6090 mm Transcend	XX010620TG48	
	25 mm x 140 mm x 3660 mm Enhance	XX010612EG48	BD, CS
	25 mm x 140 mm x 4870 mm Enhance	XX010616EG48	
	25 mm x 140 mm x 6090 mm Enhance	XX010620EG48	

XX = COLOR PREFIX:	LR Lava Rock	TT Tiki Torch	GP Gravel Path	TH Tree House	BD Beach Dune
	SR Spiced Rum	FP Fire Pit	RS Rope Swing	VL Vintage Lantern	CS Clam Shell

TREX HIDEAWAY® HIDDEN FASTENING SYSTEM	DESCRIPTION	ITEM NUMBER
<p>Start Clip (stainless steel)</p> 	2.5 clips per linear meter of start board and finish board (36 per bag)	STARTERCLIP
<p>Universal Fastener (glass-filled nylon)</p> 	4.6 m ² Bag (90 per bag)	UNIVCONCLIP

TECHNICAL SPECIFICATIONS

- 15 Australian Physical & Mechanical Properties
- 17 Architectural Specifier – Composite Decking
- 22 Material Safety Data Sheet (MSDS)
- 28 ICC-ES SAVE (Recycled Content Certification)

AUSTRALIAN PHYSICAL & MECHANICAL PROPERTIES OF TREX TRANSCEND® AND TREX ENHANCE®

AUSTRALIAN PHYSICAL & MECHANICAL PROPERTIES			
CRITERION	TEST METHOD	RESULTS	TEST EXPLANATION
Friction Coefficient	AS / NZS 4586 : 2004	Result/Class	
Trex Transcend	Appendix A, Wet Pendulum	28/ Y (high)	Contribution to slip when wet with water
	Appendix B, Dry	0.45 / F-Pass	Classification of Pedestrian Surface Materials according to dry floor friction test
	Appendix A, B (dual)	Y	
	Appendix C wet barefoot ramp	31 degrees / C (highest class)	Classification of Pedestrian Surface Materials based on wet barefoot ramp test. Class A = lowest angle; C = highest angle. (higher is better)
	Appendix D, oil-wet ramp	15.1 degrees / R10 (Class 3 of 6)	Classification of Pedestrian surface materials according to the oil-wet ramp test
Trex Enhance	Appendix A, Wet Pendulum	30/Y	Contribution to slip when wet with water
	Appendix B, Dry	0.45/F	Classification of Pedestrian Surface Materials according to dry floor friction test
	Appendix A, B (dual)	Y	
	Appendix C wet barefoot ramp	31 degrees/C (highest class)	Classification of Pedestrian Surface Materials based on wet barefoot ramp test. Class A = lowest angle; C = highest angle. (higher is better)
	Appendix D, oil-wet ramp	17.4 degrees / R10 (Class 3 of 6)	Classification of Pedestrian surface materials according to the oil-wet ramp test
Combustion Testing	AS 1530.8.1-2007		
Trex Transcend - Square Profile		BAL A29	A burning 'crib' is placed on a constructed Trex deck. The peak 'heat flux' is evaluated at its maximum and recorded
Trex Transcend - Groove Profile		BAL A19	A burning 'crib' is placed on a constructed Trex deck. The peak 'heat flux' is evaluated at its maximum and recorded
* Australian Lab = Exova Warringtonfire – Melbourne, Vic., Australia			
Combustion Testing	AS 3837:1998		Samples are placed in an oxygen calorimeter. Top of the board is ignited with a pilot capable of 25 kW/m²
Trex Transcend	Avg heat release	144.7 Kw / m ²	Measured 600 seconds after ignition
Trex Enhance	Avg heat release	140.6 kW / m ²	Measured 600 seconds after ignition
Trex Transcend	Max. heat release rate	437.2 kW / m ²	Maximum heat released at any point in 60 minute test
Trex Enhance	Max. heat release rate	365.3 kW / m ²	Maximum heat released at any point in 60 minute test
* Australian Lab = CSIRO Materials Science and Engineering – North Ryde, NSW, Australia			

PHYSICAL & MECHANICAL PROPERTIES OF TREX TRANSCEND® AND TREX ENHANCE®

GENERAL PHYSICAL & MECHANICAL PROPERTIES			
CRITERION	TEST METHOD	RESULTS	TEST EXPLANATION
Thermal Expansion Coefficient (Transcend and Enhance)	ASTM D696		
Width		8.94×10^{-5} cm/cm/C	Distance a 305 mm sample expands or contracts in the width direction at various temperatures
Length		4.1×10^{-5} cm/cm/C	Distance a 305 mm sample expands or contracts in the length direction at various temperatures
Compressive Strength (Transcend and Enhance)	ASTM D695		
Surface		12.45 MPa	Force required to compress the surface of a sample between two (2) 50 mm spheres for a 0.2 mm indentation
Edge		13.40 MPa	Force required to compress the surface of a sample between two (2) 50 mm spheres for a 0.2 mm indentation
Relative Density [g/cm³] (Transcend and Enhance)	ASTM D792		
		1.05	Mass per unit volume as compared to water (1.00 g/cm ³)
Resistance to Fungal Infestation	ASTM D1413		
[Brown, White Rot]		No decay	Samples are subjected to wood destroying fungi (white and brown rot) and evaluated for decay and weight loss
Screw Retention (Transcend and Enhance)	ASTM D1761		
#8 screws		1,377.25 N/m	Amount of force it takes for a screw to be removed from a deck board
Water Absorption (Transcend and Enhance)	ASTM D1037		
Vol. %		<0.5%	Weight gain measurement of a deck board when immersed in water for 24 hrs
Mass %		0	Change in mass measurement of a deck board when immersed in water for 24 hrs

*ASTM (American Society for Testing of Materials) tests conducted at Washington State University (Pullman, WA, USA)

ARCHITECTURAL SPECIFIER

COMPOSITE DECKING

PART 1: GENERAL

1.1 Section Includes

- A Composite Decking

1.2 References

- A AS/NZS 4586:2004: Test Method for Slip Resistance classification for new pedestrian surface materials.
- B AS 3959:2009: Construction of Buildings in bushfire-prone areas, Appendix F
- C ASTM D1761: Standard Test Method for Mechanical Fasteners in Wood
- D ASTM D1413: Standard Test Method for Wood Preservatives by Laboratory Soil Block Cultures
- E ASTM D198 -09: Standard Test Method of Static Tests of Lumber in Structural Sizes
- F ASTM D-7031-04: Standard Guide for Evaluating Mechanical and Physical Properties of Wood-Plastic Composite Products
- G ASTM D-7032-04: Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail systems
- H ASTM D 695: Standard Test Method of Compressive Properties of Rigid Plastics
- I ASTM D 696: Standard Test Method for Coefficient of Thermal Linear Expansion of Plastics

1.3 Design/Performance Requirements

A Structural Performance:

- a Deck: Uniform Load: 100 lbf/sq ft. (4788 Pa)
- b Treads of Stairs; Concentrated Load: 35910 Pa (750 lbf/sq. ft) and 3 mm (1/8") with a concentrated load of 1.33 kN (300 lbf) on area of 25.8 sq. cm (4 sq. in.)

B Combustion Characteristics per AS 3959:2009

1.4 Submittals

- A Product Data: Indicate Sizes, profiles, surface style, and performance characteristics.
- B Samples: For each product specified, one sample, minimum size 100 mm (4 inches), representing actual product, color, and finish.

1.5 Delivery, Storage, and Handling

- A Storage and Handling:
 - a Never dump Trex® materials when unloading.
 - b Store on a flat surface or with supports 610 mm (2 feet) on center
 - c Refer to Trex Installation Guide on trex.com for additional guidelines.

1.6 Warranty

- A Residential and Commercial: Limited Residential Warranty against material defects in workmanship and materials, and shall not split, splinter, rot or suffer structural damage from termites or fungal decay. The terms of such warranty shall be twenty-five (25) years from the date of original purchase for a residential purchaser, and ten (10) years from the date of original purchase for a commercial purchaser.
- B Fade and Stain (Trex Transcend® and Trex Enhance®): Trex Company, Inc. warrants to the original end-user purchaser that Trex Transcend decking or porch planks, or Trex Enhance decking under normal residential use and service conditions as follows:
 - a Fade Resistance: The Product shall not fade in color from light and weathering exposure as measure by color change of more than 5 Delta E (CIE) units.
 - b Stain Resistance: The Product shall be resistant to permanent staining resulting in spills of food and beverage items that would typically be present on a residential deck, or mold and mildew naturally occurring in the environment, provided that such substances are removed from the Product with soap and water or mild household cleaners after no more than one (1) week of exposure of the food or beverage to the surface or first appearance of the mold and mildew.

PART 2: PRODUCTS

2.1 Manufacturers

A Contract Documents are based on products by:
Trex Company, Inc.
160 Exeter Dr.
Winchester, VA 22603

B Substitutions: Not permitted under Division 01

2.2 Applications/Scope

A Wood/Plastic Composite Lumber;

a Material Description; Capped composite plank consisting of linear low density polyethylene (LLDPE) and wood flour as the core. A proprietary shell made of cohesive materials is on the top of the board. The product is extruded into sizes and shapes indicated with the following properties;

b Trex Transcend® and Trex Enhance®

- 25 mm x 140 mm
- Lengths – 3.66 m, 4.88 m, and 6.10 m
- Colors;

Transcend – Tree House, Fire Pit, Gravel Path, Lava Rock, Rope Swing, Spiced Rum, Tiki Torch, Vintage Lantern

Enhance – Beach Dune, Clam Shell

- Specific Gravity – 1.05 g/cm³ when tested in accordance to ASTM D -792
- Friction Coefficient when tested in accordance with AS/NZS 4586:2004;

Transcend;

- a Appendix A, Wet pendulum = 28/Y
- b Appendix B, Dry pendulum = 0.45/F – Pass
- c Appendix A, B = Y
- d Appendix C wet barefoot ramp = 31 degrees/C
- e Appendix D oil-wet ramp = 15.1 degrees/R10

Enhance;

- a Appendix A, Wet pendulum = 30/Y
- b Appendix B, Dry pendulum = 0.45/F – Pass
- c Appendix A, B = Y
- d Appendix C wet barefoot ramp = 31 degrees/C
- e Appendix D oil-wet ramp = 17.4 degrees/R10

- Combustion Testing when tested in accordance with AS 3959:2004

Transcend®;

- a Avg heat release = 144.7 kW/m²
- b Max heat release = 437.2 kW/m²

Enhance®;

- a Avg. heat release = 140.6 kW/m²
- b Max heat release = 365.3 kW/m²

- Thermal Expansion Coefficient when tested in accordance with ASTM D 696;

Transcend and Enhance

- a Width – 8.94×10^{-5} cm/cm/C degrees
- b Length – 4.1×10^{-5} cm/cm/C degrees

- Resistance to Fungal Infestation when tested in accordance to ADMD 1413;

Transcend and Enhance = No decay

- Screw Retention when tested in accordance to ASTM D 1761(#8 screws)+;

Transcend and Enhance = 1377.25 N/m

- Flexural Properties when tested in accordance with ASTM D-4761 and ASTM D-198;

- a Modulus of Elasticity (MOE): 412,000 psi (2840.64 Mpa) – Ultimate Value. 200,000 psi (1378.95 Mpa) – Design Value.
- b Tensile Strength – 1562 psi (10.77 Mpa) – Ultimate Value. 500 psi (3.45 Mpa) – Design Value

2.3 Accessories

A Fasteners:

a Concealed Fasteners; Trex Hideaway® Universal Fastener

b Screws; No. 8, 63.5mm stainless steel or high quality coated screws designed for composite decking;

- Approved Trex screws include; Fastenmaster® Trapease® II Composite Screw*, Dexter™ Composite Screw**, DeckFast Cap-Tor® XD, Headcote Cap-Tor XD***, C-Deck Exterior Star Drive Composite Deck Screw****, Phillips II Plus® Pozisquare*****, Fastenmaster Cortex Concealed Fasteners*

*FastenMaster® TrapEase® II and Cortex® are registered trademarks of OMG, Inc. ** Dexter® is a registered trademark of Simpson Strong-Tie Company, Inc. *** DeckFast® Cap-Tor® xd and HeadCote® CapTor® xd are registered trademarks of Starborn Industries Inc. ****C-Deck Exterior Star Drive Composite Deck Screw is a product of Screw Products Inc. *****Phillips II Plus® is a registered trademark of Phillips Fasteners LLC.

PART 3: EXECUTION

3.1 Examination

- A Install according to manufacturer's instructions. See trex.com for the most up-to-date installation instructions.
- B Cut, drill, and rout using carbide tipped blades
- C Pre-drill holes for face screws if less than 25 mm from ends of plank
- D **Do NOT use composite wood material for structural applications.**

3.2 Cleaning

- A Refer to trex.com for the most up-to-date cleaning recommendations.

MATERIAL SAFETY DATA SHEET

MATERIAL SAFETY DATA SHEET

TREX® WOOD-POLYMER LUMBER PRODUCTS

MSDSTWP-01

DATE REVISED: 10/23/13

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TREX ACCENTS® and TREX SELECT® DECKING PRODUCTS
COLORS: Woodland Brown
 Madeira
 Winchester Grey
 Saddle
 Pebble Grey
 TREX TRANSCEND® DECKING PRODUCTS (including Trex Porch Profiles)
 Vintage Lantern
 Gravel Path
 Fire Pit
 Tree House
 Lava Rock
 Spiced Rum
 Rope Swing
 Tiki Torch
 TREX ENHANCE® DECKING PRODUCTS
 Beach Dune
 Clam Shell
 Saddle

SUPPLIER: TREX COMPANY, INC
 245 CAPITOL LANE
 WINCHESTER, VA 22602

PRODUCT AND MSDS INFORMATION: 800-289-8739
EMERGENCY CONTACT: 800-289-8739

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAMES AND SYNONYMS: WOOD FIBER

INGREDIENTS CONSIDERED HAZARDOUS TO HEALTH:

<u>SUBSTANCE NAME</u>	<u>WT.</u>
WOOD FIBER DUST	50-60
CARBON BLACK (1333-86-4)	<1

NOTE: WOOD DUST AND CARBON BLACK ARE CONTAINED IN A POLYETHYLENE MATRIX. Contains used thermoplastics and waste wood. Plastic obtained primarily from reclaimed/recycled grocery bags and stretch film; wood fiber is typically obtained from furniture makers and/or waste pallets. Standard product is approximately 40% - 50% thermoplastic and 50% - 60% wood fiber.

See Section 8 for exposure limits (if applicable).

3. HAZARDS IDENTIFICATION

U.S. OSHA HAZARD COMMUNICATION STANDARD: This product may be used in applications that produce wood dust fibers. According to OSHA 29 CFR 1910.1200, certain wood fibers and carbon black are considered hazardous if the workplace airborne concentration exceeds the OSHA or ACGIH exposure limits (see section 8).

TREX® WOOD-POLYMER LUMBER PRODUCTS – MSDSTWP-01

EFFECTS OF OVEREXPOSURE: Dust can irritate nose, throat and respiratory tract and may cause mechanical irritation in the eyes. Repeated exposures to certain wood dusts can produce allergic skin and respiratory reactions including asthma and rhinitis. Inhalation of certain wood fibers can cause nasal cancer. Carbon black is a possible carcinogen.

EMERGENCY RESPONSE DATA: Brown solid. Exposure to fire can generate toxic fumes. High dust levels may create potential for explosion. DOT ERG No. - NA

4. FIRST AID MEASURES

EYE CONTACT: Flush thoroughly with water. If irritation occurs, call a physician.

SKIN CONTACT: Wash contact areas with soap and water. Launder contaminated clothing before reuse.

INHALATION: If respiratory irritation, cough, shortness of breath, wheezing or chest tightness occurs after exposure to dust, remove from further exposure, seek immediate medical assistance and call for a physician.

INGESTION: Not expected to be a problem when ingested. If uncomfortable, seek medical assistance.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Water

Special Fire Fighting Procedures: Use water to keep fire exposed product cool. For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.

Special Protective Equipment: For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Exposure to fire can generate toxic fumes. High dust levels may create potential for explosion. Flash Point C(F): > 370 (698) (Flame Spread Index = 60). Flammable limits - LEL: NA, UEL: N/A.

NFPA Hazard ID: Health: 0, Flammability: 1, Reactivity: 0.

Hazardous Decomposition Products: Smoke, Carbon Monoxide, Acetaldehyde, Formaldehyde, Formic Acid, Acetic Acid.

6. ACCIDENTAL RELEASE MEASURES

Notification Procedures: None

Procedures if Material is Released or Spilled: Where dusty conditions are created as a result of cutting or sawing, wet dust down then sweep or vacuum for disposal. Personnel performing cleanup must use protective equipment.

Environmental Precautions: Not expected to be a problem.

Personal Precautions: See Section 8

7. **HANDLING AND STORAGE**

Handling: TREX® WOOD-POLYMER LUMBER is not intended for load bearing or heavy structural applications. Please consult TREX® Wood-Polymer Lumber’s code listing, NER-508, and company literature for proper usage. TREX® Wood-Polymer Lumber is heavier than most traditional lumber products, proper handling is required to prevent damage or injury. Do not burn in fireplace or use as firewood.

Storage: Do not store in open or unlabelled containers. Store away from strong oxidizing agents or combustible material.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

Ventilation: Use in well ventilated area.

Respiratory Protection: Approved dust respirators must be used for dusty conditions or if breathing of dusts is likely.

Eye Protection: Safety glasses with side shields, or goggles, should be worn to protect against dust particles.

Skin Protection: No special equipment required. Good personal hygiene practices should always be followed.

Substance Name (CAS-No.)	Source	TWA		STEL	
		ppm	mg/m3	ppm	mg/m3
Wood Fiber Dust					
Certified Hardwood	OSHA		5		
Softwood	OSHA		5		
Western Red Cedar	OSHA		2.5		
Softwood	ACGIH		5	10	
Beech/Oak Cert. Hardwood	ACGIH		1		
Carbon Black(1333-86-4)	OSHA		3.5		
	ACGIH		3.5		

Note: Limits shown for guidance only. Follow application regulations.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

Typical physical properties are given below. Consult Product Data Sheet for specific details.

Appearance: Solid

Color: Gray, Red, Brown
Odor: None
Odor Threshold - ppm: NE
pH: N/A
Boiling Point C(F): N/A
Melting Point C(F): > 110 (230)
Flash Point C(F): > 370 (698)
Flammability: NE (Flame Spread Index = 60)
Auto Flammability: 395 (743)
Explosive Properties: N/A
Oxidizing Properties: N/A
Vapor Pressure-mmHg 20C: N/A
Vapor Density: NE
Evaporation Rate: NE
Relative Density, 15/4 C: 0.96
Solubility in Water: Negligible
Partition Coefficient: NE
Viscosity at 40C, cSt: N/A
Viscosity at 100C, cSt: N/A
Pour Point C (F): N/A
Freezing Point C(F): NE
Volatile Organic Compound: NE

N/A = Not Applicable NE = Not Established D = Decomposes

For further technical information, contact your marketing representative.

10. STABILITY AND REACTIVITY

Stability (Thermal, Light, Etc.): Stable.
Conditions to Avoid: Heat and flame. Build up of dusts.
Incompatibility (Materials to avoid): Strong oxidizers.
Hazardous Decomposition Products: Smoke, Carbon Monoxide, Acetaldehyde, Formaldehyde, Formic Acid, Acetic Acid.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL DATA

Acute Toxicology

Oral Toxicity (Rats): Not established.
Dermal Toxicity (Rabbits): Not established.
Inhalation Toxicity (Rats): Not established.
Eye Irritation (Rabbits): Not established.
Skin Irritation (Rabbits): Not established.

Chronic Toxicology (Summary)

IARC has determined that there is sufficient evidence to classify wood fiber as a human carcinogen. IARC has classified carbon black as a possible human carcinogen based on animal data. When wood fiber and carbon black are incorporated into a polymer matrix exposure is virtually eliminated.

12. ECOLOGICAL INFORMATION

Environmental Fate and Effects: Not established.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of waste as normal refuse.

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP)

14. TRANSPORT INFORMATION

USA DOT: Not regulated by USA DOT.

IMO: Not regulated by IMO.

IATA: Not regulated by IATA.

15. REGULATORY INFORMATION

Governmental Inventory Status: All components comply with TSCA.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III: This product contains no "EXTREMELY HAZARDOUS SUBSTANCES."

SARA (311/312) REPORTABLE HAZARD CATEGORIES: CHRONIC

This product contains no chemicals reportable under SARA (313) toxic release program.

The following product ingredients are cited on the lists below:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>List Citations</u>
Wood Fiber Dust		1, 2, 6
Carbon Black	1333-86-4	8

---REGULATORY LISTS SEARCHED---

1 - ACGIH ALL	6 - IARC 1	11 - TSCA 4	17 - CA P65	22 - MI 293
2 - ACGIH AL	7 - IARC 2A	12 - TSCA 5A2	18 - CA RTK	23 - MN RTK
3 - ACGIH A2	8 - IARC 2B	13 - TSCA 5E	19 - FL RTK	24 - NJ RTK
4 - NTP CARC	9 - OSHA CARC	14 - TSCA 6	20 - IL RTK	25 - PA RTK
5 - NTP SUS	10 - OSHA Z	15 - TSCA 12B	21 - LA RTK	26 - RI RTK

CODE KEY: CARC = CARCINOGEN SUS = SUSPECTED CARCINOGEN

USE: COMPOSITE LUMBER PRODUCTS

INGREDIENT	PCT	CAS NUMBER
Wood Fiber	50-60	
Polyethylene	40-50	9002-88-4
Carbon Black	< 1	1333-86-4

5 of 6



For Internal Use Only: MHC: NE NE NE NE NE, MPPEC: A, REQ: TREX® WOOD-POLYMER LUMBER, SAFE USE: G

Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the product. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, republication or retransmission of this document, in whole or in part, is not permitted. TREX® Wood-Polymer Lumber assumes no responsibility for accuracy of information unless the document is the most current available from an official TREX® Wood-Polymer Lumber distribution system. TREX® Wood-Polymer Lumber neither represents nor warrants that the format, content or product formulas contained in this document comply with the laws of any other country except the United States of America.

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ICC-ES SAVE

(RECYCLED CONTENT CERTIFICATION)



Most Widely Accepted and Trusted

ICC-ES VAR Environmental Report

VAR-1011

Reissued June 1, 2013

This report is subject to renewal June 1, 2015.

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A Subsidiary of the International Code Council®

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 53 00—Plastic Decking
Section: 06 63 00—Plastic Railings
REPORT HOLDER:
TREX COMPANY, INC.
 160 EXETER DRIVE
 WINCHESTER, VIRGINIA 22602
 (540) 542-6300
www.Trex.com
EVALUATION SUBJECT:
Trex Transcend™ Decking and Trex Transcend™ Fascia: 1x8 and 1x12
1.0 EVALUATION SCOPE

Compliance with the following evaluation guidelines:

- ICC-ES Environmental Criteria for Determination of Recycled Content of Materials (EC101), dated March 1, 2012.
- ICC-ES Environmental Criteria for Determination of Bio-based Material Content (EC102), dated March 1, 2012.

Compliance eligibility with the applicable sections of the following green building rating systems, standards and codes:

- National Green Building Standard (ICC 700-2008) (see Table 4 for details)
- LEED for Homes 2008 (see Table 5 for details)
- LEED 2009 for New Construction and Major Renovations (see Table 6 for details)
- 2010 California Green Building Standards Code (CALGreen), Title 24, Part 11 (see Table 7 for details)

2.0 USES

Trex® Transcend is used for a variety of exterior applications, including nonstructural trim and deck boards and guardrail assemblies for balconies, porches and exterior walking surfaces.

3.0 DESCRIPTION

Trex® products are wood thermoplastic composite lumber (WTCL) made from a blend of wood and polyethylene. The products are manufactured in a variety of sizes, profiles, textures and colors.

4.0 CONDITIONS
4.1 Code Compliance:

The Trex Transcend™ Decking and Trex Transcend™ Fascia: 1x8 and 1x12 have been evaluated for compliance with the requirements of the International Codes as listed in Table 3 of this report.

4.2 Green Rating Systems, Standards and Code Eligibility:

The information presented in Tables 4 through 7 of this report provides a matrix of areas of evaluation and corresponding limitations and/or additional project-specific requirements, and offers benefits to individuals who are assessing eligibility for credits or points.

The final interpretation of the specific requirements of the respective green building rating system and/or standard rests with the developer of that specific rating system or standard or the AHJ, as applicable.

Compliance for items noted as "Verified Attribute" is subject to any conditions noted in the tables. Decisions on compliance for those items noted as "Eligible for Points" in Tables 4 through 7 rest with the user of this report, and those items are subject to the conditions noted. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. Rating systems or standards often provide supplemental information as guidance.

5.0 BASIS OF EVALUATION

The information in this report, including the "Verified Attribute," is based upon the following supporting documentation:

- 5.1 ICC-ES EC101. [Evaluation applies to ICC 700 Section 604.1; LEED Homes MR Credit 2.2; LEED NC MR Credit 4; CALGreen Section A4.405.3 & A5.504.4].
- 5.2 ICC-ES EC102. [Evaluation applies to ICC 700 Section 606.1(2)].
- 5.3 Evidence of compliance with termite resistance in accordance with Section 4.4 of the ICC-ES Acceptance Criteria for Thermoplastic Composite Wood Products (AC109) or Section 3.9 of the ICC-ES Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails) (AC174). [Evaluation applies to ICC 700 Section 602.8.]

ICC-ES Verification of Attributes Reports are issued under the ICC-ES VAR Environmental Program. These reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.



6.0 IDENTIFICATION

Trex products are identified with a stamp noting the manufacturer's name (Trex) and address, the product name, the manufacturing location, the ICC-ES evaluation report number (if applicable), and the name or logo of the

inspection or grading agency. The report subjects are also identified on the product and/or packaging with the VAR Environmental Report number (VAR-1011) and the ICC-ES SAVE Mark, as applicable.

TABLE 1—RECYCLED CONTENT BY WEIGHT SUMMARY

PRODUCT NAME	RECYCLED MATERIALS	% PRE-CONSUMER RECYCLED CONTENT	% POST-CONSUMER RECYCLED CONTENT	% TOTAL RECYCLED CONTENT
Trex Transcend™ Decking	Wood	47.70	0	95.40
Trex Transcend™ Fascia: 1x8 & 1x12	Polyethylene	16.70	31.00	

TABLE 2—BIOBASED MATERIAL CONTENT SUMMARY

PRODUCT	MINIMUM % BIOBASED CONTENT	METHOD OF DETERMINATION
Trex Transcend™ Decking Trex Transcend™ Fascia: 1x8 & 1x12	40%	Calculation

TABLE 3—ICC-ES EVALUATION REPORT NUMBER FOR TREX PRODUCTS

PRODUCT	REPORT NUMBER
Trex Transcend™ Decking Trex Transcend™ Fascia: 1x8 and 1x12	ESR-3168

TABLES 4 THROUGH 7

Section Number	Section Intent	Possible Points	Conditions of Use to Qualify for Points	Trex Transcend™ Decking Trex Transcend™ Fascia: 1x8 & 1x12
TABLE 4—SUMMARY OF AREAS OF ELIGIBILITY WITH THE NATIONAL GREEN BUILDING STANDARD (ICC 700-2008)				
602.8	Termite-resistant materials are used.	6 max	To earn 6 points all structural elements must be termite resistant in areas of heavy termite infestation. 2 or 4 points are available for areas with lower infestation probability.	●
604.1	Use two or more major and/or minor building materials containing recycled content.	2 6 max	2, 4 or 6 points may be earned when products are used with another major building component with recycled content of 25% < 50%; 50% < 75%; ≥ 75%, respectively.	●
606.1(2)	Two types of biobased materials are used, each for more than 1 percent of the project's projected building material cost.	6	To earn 6 points two types of bio-based products must be used and the cost of each must be more than 1% of the projects projected building material cost.	●
903.4.1(3)	The moisture content of lumber is sampled to ensure it does not exceed 19 percent prior to the surface and/or wall cavity exposure.	4	To earn 4 points the moisture content of lumber must be determined to not exceed 19%, such as measuring with a moisture meter, prior to enclosure.	○
TABLE 5—SUMMARY OF AREAS OF ELIGIBILITY WITH USGBC'S LEED FOR HOMES 2008				
MR 2.2	Recycled content.	0.5	To earn 0.5 point use materials with recycled content such that the sum of postconsumer recycled content plus 1/2 the post industrial (preconsumer) content constitutes a minimum total recycled content of 25%.	●
TABLE 6—SUMMARY OF AREAS OF ELIGIBILITY WITH USGBC'S LEED 2009 FOR NEW CONSTRUCTION AND MAJOR RENOVATIONS				
MR4	Recycled content.	1 2 max	To earn 1 point use materials with recycled content such that the sum of postconsumer recycled content plus 1/2 of the preconsumer content constitutes at least 10%, based on the cost, of the total value of the materials in the project. To earn 2 points use 20% or more.	●
TABLE 7—SUMMARY OF AREAS OF ELIGIBILITY WITH 2010 CALIFORNIA GREEN BUILDING STANDARDS CODE				
A4.405.3 A5.405.4	Recycled content.	N/A	Use materials with postconsumer or preconsumer recycled content value for a minimum of 10% of the total value, based on estimated cost of materials on the project.	●
4.505.3	Moisture content of building materials.	N/A	Moisture content of lumber may be measured with an appropriate handheld moisture meter.	○
○	= Eligible for points			
●	= Verified attribute			

N/A = Not applicable (i.e. this is a minimum requirement that is met and points/credits are not applicable).

INSTALLATION

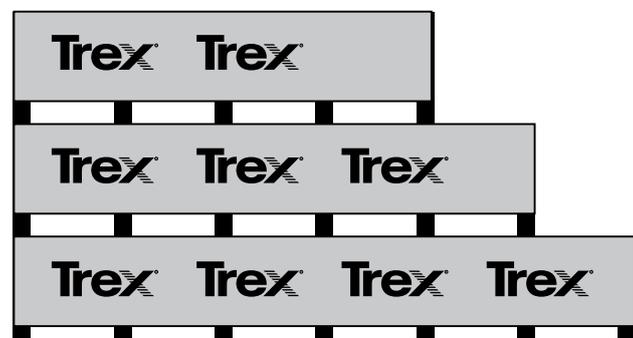
- 32 Job Site Storage & Safety
- 33 Tools
- 34 Fasteners
- 35 Trex Hideaway[®] Hidden Fasteners
- 37 Framing & Fastening Tips and
Special Patterns
- 38 Gapping
- 39 Span Guidelines
- 40 Stairway Assembly
- 41 Rooftop & Sleeper Deck Systems

JOB SITE STORAGE & SAFETY

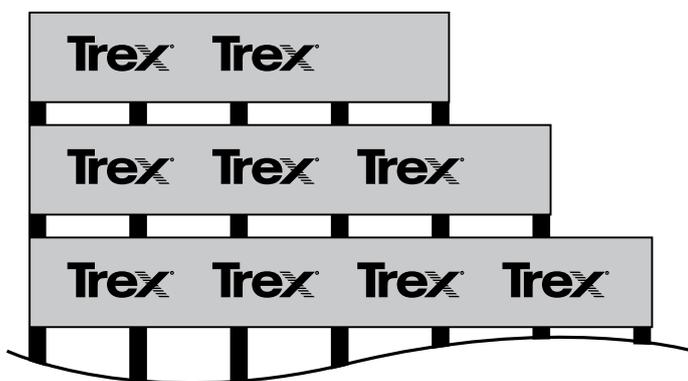
JOB SITE STORAGE

Remember when storing Trex® decking, railing and trim:

- » You must store Trex outdoor-living products on a flat and level surface. Adjust support blocks accordingly.
- » You must support Trex products with dunnage when placing bundles.
- » When stacking Trex products, supports should start at each end and be spaced 508 mm on center. Supports should line up vertically.
- » **DO NOT** stack Trex higher than six bundles (units) or 3048 mm high.
- » **Cover material on site until you are ready to install it.**



Bundles of Trex profiles on level ground.



Bundles of Trex profiles on uneven ground.

SAFETY

When working on any construction project, you should wear protective clothing and safety equipment. Wear safety glasses, gloves, a dust mask and long sleeves, particularly when cutting in confined spaces.

Trex decking and railing are heavier and more flexible than wood. **DO NOT** try to lift the same quantity of Trex boards as you would traditional lumber.

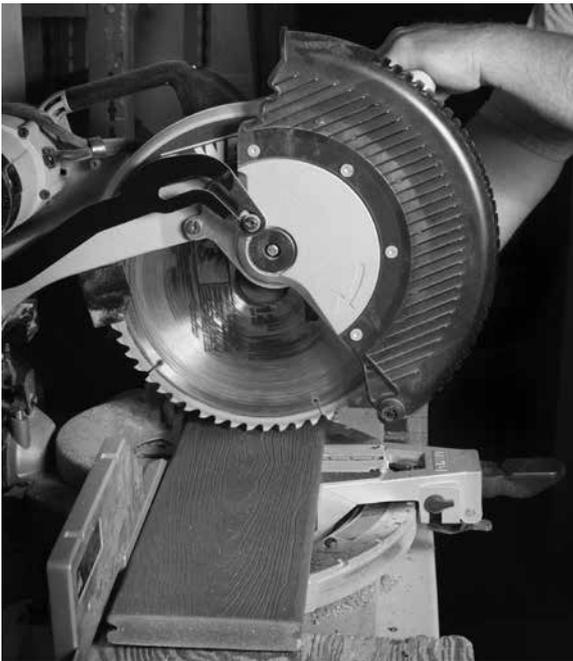
GENERAL TIPS

- » We **DO NOT** recommend sanding. Sanding will change the appearance of the surface of Trex material and **will void the warranty with respect to any condition caused by such sanding.**
- » When drilling large or deep holes, periodically lift the bit out of the hole to remove the shavings.
- » If you want to minimize the appearance of joists through the spaces between boards, paint the top of your joists black.
- » Trex decking and railing is suitable for a wide range of applications. It is not intended for primary structural members such as load bearing columns, joists, stringers, and beams.
- » Construction methods are always improving. Please make sure you have the most up-to-date installation instructions by visiting trex.com.



TOOLS

You can create intricate shapes, profiles, and patterns with Trex®. Most installments require no special tools. For best results, use carbide-tipped blades and router bits. When using a miter saw, we recommend a 254 mm - 305 mm saw blade with 40 teeth or less.



Install Trex recommended fasteners with standard power drills.



Screw and nail guns provide a quick and easy way to fasten Trex.



Trex CustomCurve®

HEATING & BENDING SOLUTION

Trex is the first brand to have a bending solution exclusively for contractors, giving you the ability to create those unique, showpiece decks that are unmistakably Trex.* For more information, visit trexpartners.com.

*Trex Custom Curve® is manufactured and distributed by Curvelt, LLC. Trex® and CustomCurve® are trademarks of, and are used by Curvelt, LLC under a license with Trex Company, Inc.

FASTENERS

RECOMMENDED FASTENERS TO USE WITH TREX®							
	Trex Hideaway® Hidden Fastener	FastenMaster®* TrapEase II Composite Screw	Dexxter®** Composite Screw -6 Lobe Drive Only	DeckFast®*** Cap-Tor® xd / HeadCote® Cap-Tor® xd	C-Deck®*** Exterior Star Drive Composite Deck Screw	Phillips II Plus®***** PoziSquare	Cortex®* Concealed Fasteners
Transcend®	X	X	X	X	X	X	X
Enhance®	X	X	X	X	X	X	X

For best results, we recommend the above fasteners, which work well and provide an attractive appearance. Unless you are toe screwing, you will not have to pre-drill when you use these screws. See *Framing and Fastening Tips*, page 37.

If any condition occurs which is attributable to the use of non-recommended fasteners, such condition shall not be covered under Trex's Limited Warranty.

*FastenMaster® TrapEase® II and Cortex® are registered trademarks of OMG, Inc.

** Dexxter® is a registered trademark of Simpson Strong-Tie Company, Inc.

*** DeckFast® Cap-Tor® xd and HeadCote® CapTor® xd are registered trademarks of Starborn Industries Inc.

****C-Deck Exterior Star Drive Composite Deck Screw is a product of Screw Products Inc.

*****Phillips II Plus® is a registered trademark of Phillips Fasteners LLC.

MINIMUM FASTENER SIZE		
	SCREWS	
Profile	Length	No.
25 mm x 140 mm	64 mm or 70 mm	#8, #10
35 mm x 140 mm	76 mm	#8, #10

FASTENING TIP FOR TREX TRANSCEND AND TREX ENHANCE

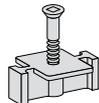
NOTE: When using pneumatic or battery-operated nailers, adjust the pressure so that you only shoot the head of the nail to be flush with the board's cap. **DO NOT** shoot the nail head completely through the cap.

HOW TO INSTALL UNIVERSAL HIDDEN FASTENERS

PARTS

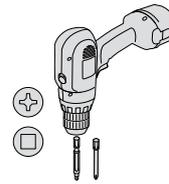


Start clip



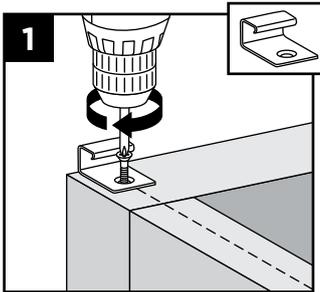
Universal fastener

TOOLS NEEDED

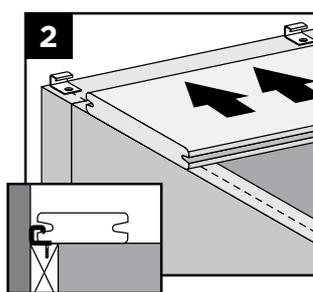


NOTE: Maximum spacing of deck boards using Hideaway system is 406 mm on center. Fasteners provide 6 mm gap when installed correctly.

INSTALLING START CLIPS AND FIRST BOARD



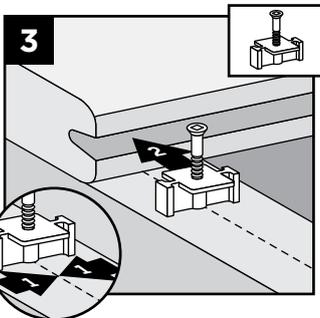
1. Install start clips on edge of ledger board, centered on each joist. Secure clips with screws.



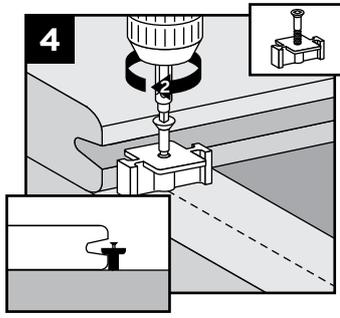
2. Push grooved edge of deck board into start clips.

Important: First board **MUST** be straight and well secured.

INSTALL UNIVERSAL FASTENERS



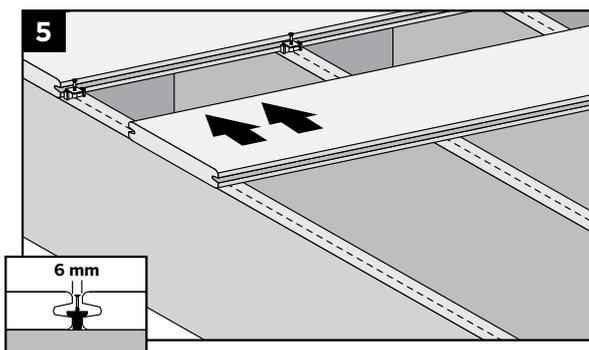
3. Insert fastener into grooved edge of deck board.



4. Align screw hole in fastener with center of joist. Continue along the length of the board at every joist.

NOTE: Screw only half way down. **DO NOT** fully tighten.

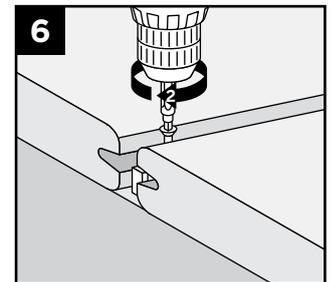
INSTALLING SECOND BOARD



5. Slide second board into place, making sure fasteners fit into groove. Install the next universal fastener on the other side of the second board in the same manner as Steps 3 and 4. **DO NOT** fully tighten the screw.

COMPLETE INSTALLATION

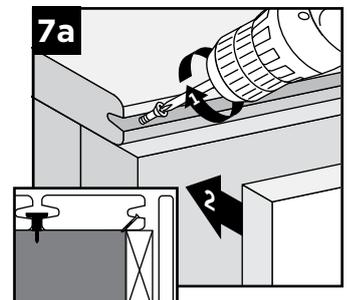
6. Tighten screws on fasteners in first row. Proceed with Steps 3 through 5, tightening down each row after board that follows is in place. Be sure to use a long #1 square bit.



INSTALLING LAST BOARD

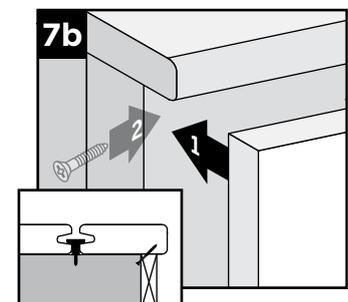
OPTION 1: USING FASCIA BOARD

7a. Pre-drill pilot holes at an angle through grooved edge of deck board into ledger board. Install 64 mm screws through pilot holes to secure. Attach a fascia board flush with deck surface.



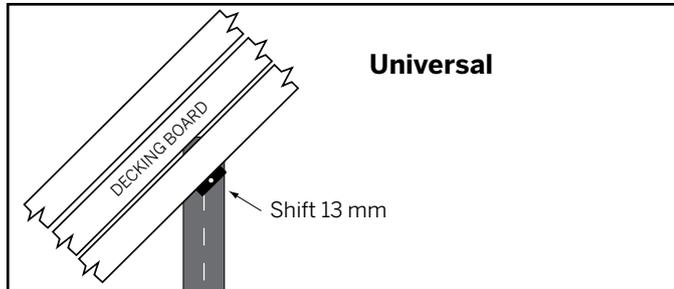
OPTION 2: WITH DECK BOARD OVERHANG

7b. Pre-drill pilot holes at 45° angle from below deck surface through rim joist. Seat last board into fasteners overhanging rim joist. Secure board with 64 mm screws using pilot holes. Position fascia board below overhanging deck board.



TIPS FOR INSTALLING A TREX HIDEAWAY® HIDDEN FASTENING SYSTEM

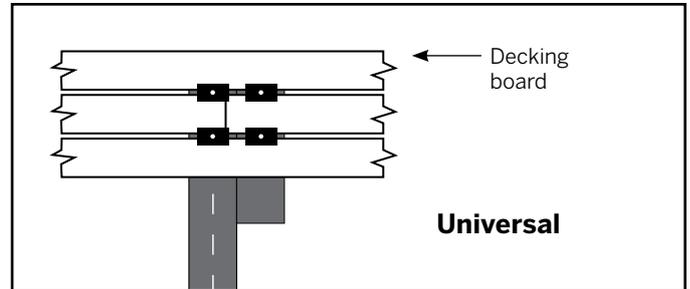
INSTALLING ANGLED DECK BOARDS IN CORNERS



ALWAYS start in corner with a small triangular piece of decking at 45° and work outwards. Install Trex Hideaway fasteners 13 mm off center to keep fastener screws in middle of joists.

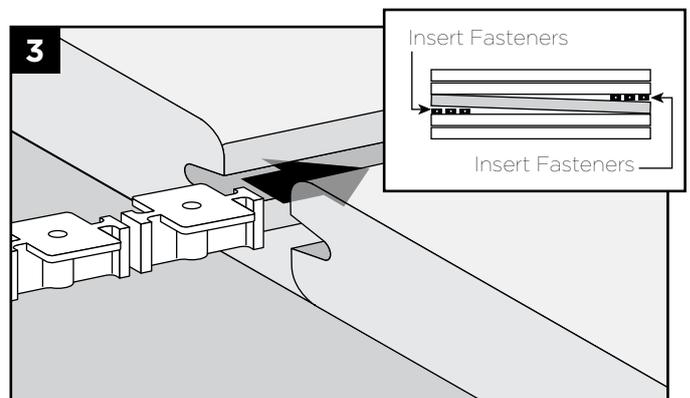
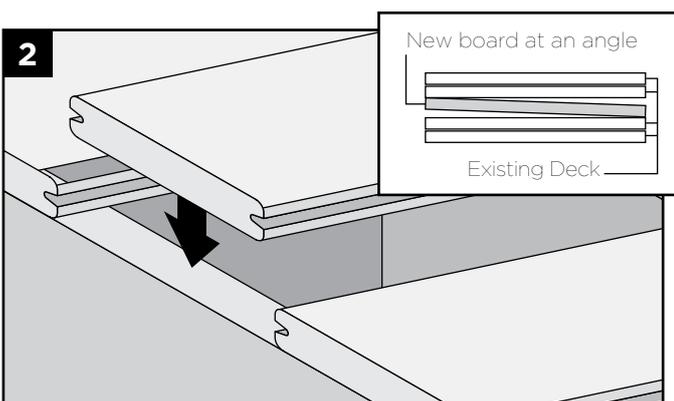
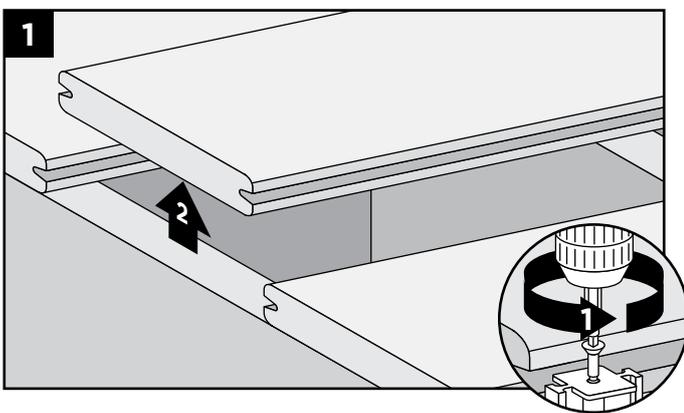


HOW TO BUTT SEAMS



1. Install 254 mm - 305 mm framing boards along joists where seams will butt.
 2. Place additional fasteners on the adjacent board over the joist and framing boards where the seam will be.
 3. Put the first board of the seam in place and secure with fastener.
 4. Butt end of second board to first and secure with fastener.
- NOTE:** Follow end-to-end gapping specifications on page 39.
5. Place second set of fasteners on each side of butt seam for next board.

HOW TO REPLACE TREX® BOARDS INSTALLED WITH UNIVERSAL FASTENERS

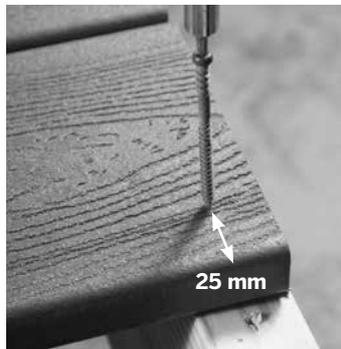


1. Remove screws from fasteners on both sides of board to be replaced and remove board.
 2. Angle new board to place. See inset box (above).
 3. Slide a fastener for each joist into board grooves from both ends of the board.
- NOTE:** You may have to loosen adjacent boards to slide fasteners into position.
4. Position replacement board and secure fasteners on center of each joist.

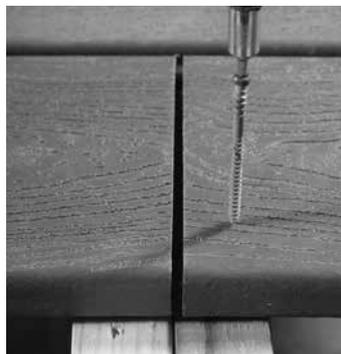
FRAMING & FASTENING TIPS AND SPECIAL PATTERNS

Composite decking is a great alternative to traditional wood decking. When building your deck and railing, it is recommended that code-approved structural material be used as the framing and joists. Trex® cannot be used for structural applications. **DO NOT** attach Trex decking directly to any solid surface or watertight system. See Sleeper Systems on page 42. In most cases, install fasteners at a 90° angle (perpendicular to the board).

At board ends on the deck's edge, you can install screws placed perpendicularly at the recommended distance—at least 25 mm and not more than 100 mm from the board edge and side—without splitting the board.



For butt joints, where boards meet over a single joist, it is to add a 50 mm x 100 mm “nailer” board at the butt joint. This allows you to install a screw at a 90° angle.

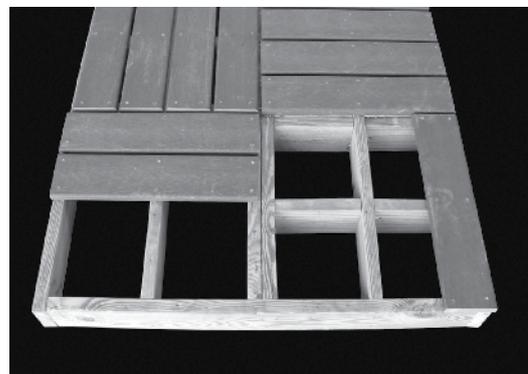


SPECIAL PATTERNS

When planning a unique pattern, you will need to adjust the framing to support the surface pattern. Refer to the span and gapping charts on page 39. Many decks are designed to take advantage of angles, as shown below.



Herringbone Pattern



Tile Pattern



Picture Frame Pattern

FASCIA FASTENING TIPS

- » Trex fascia around the base of a deck must be gapped the same as the decking to allow for air flow.
- » Attach the fascia every 100 mm with three Trex approved screws. Place the top screw 25 mm from the top of the rim joist, the second screw at the rim joist's center, and the third screw 25 mm from the bottom of the rim joist.
- » A construction grade weather resistant adhesive is also recommended to be used as a **SECONDARY** fastener when attaching fascia.

GAPPING

You must gap Trex® decking, both end-to-end and width-to-width. Gapping is necessary for drainage and the slight thermal expansion and contraction of Trex decking boards. Gapping also allows for the shrinkage of the wood joist system.

- » **ALWAYS** follow Trex-recommended gapping guidelines.
- » Maximum allowable perpendicular overhang for Trex is 102 mm.
- » All decks require air circulation to keep them dry and looking good. To improve air flow, leave openings under the decking or increase gapping to 10 mm.

WIDTH-TO-WIDTH GAP	
Above 4.5°C*	6 mm
Below 4.5°C*	10 mm

*Temperature at installation.

END-TO-END/END-TO-WIDTH AND ABUTTING GAP		
	End-to-End/ End-to-Width	Abutting Gap
Above 4.5°C*	3 mm	6 mm
Below 4.5°C*	5 mm	13 mm

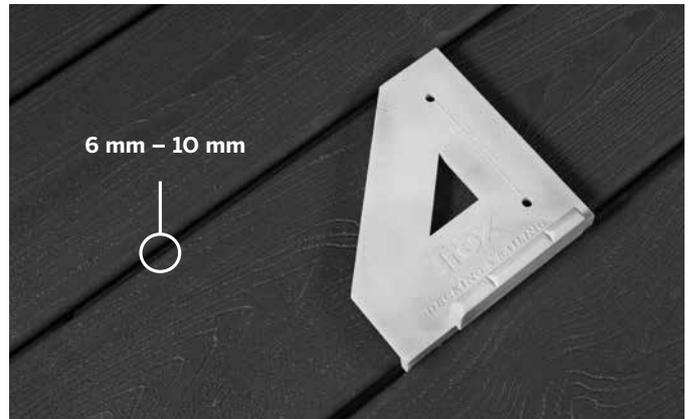
*Temperature at installation.

When you use the recommended hidden fasteners, the placement of the hidden fastener establishes the designated gap size.

When installing fascia, gapping rules must apply.

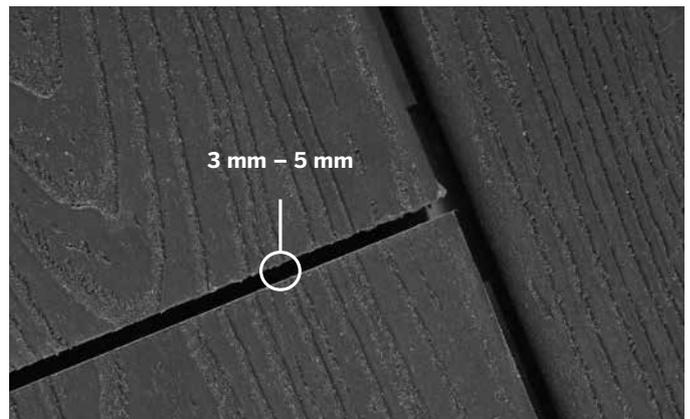
Abutting Solid Objects

When decking is abutting a wall, you must also gap it 6 - 13 mm depending on the temperature at installation. See chart above.



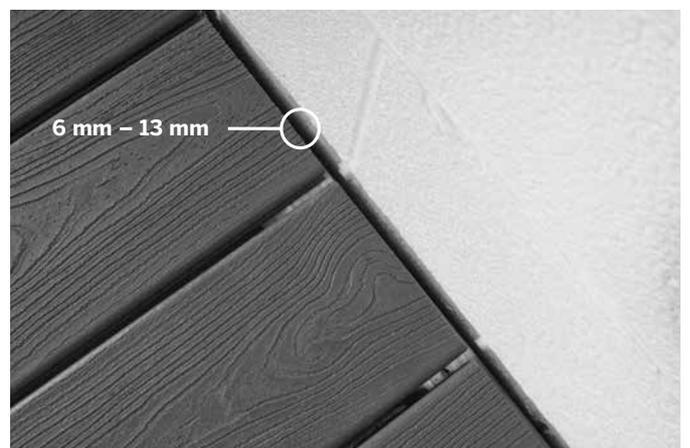
Width-to-Width

The minimum required width-to-width gapping is 6 mm. When installing in temperatures below 4.5°C, Trex recommends 10 mm gapping. For docks and heavily wooded areas, Trex recommends a 10 mm gap as well. No gapping should ever exceed 13 mm.



End-to-End/End-to-Width

Gap Trex decking end-to-end, based upon the temperature at installation. See chart at left.

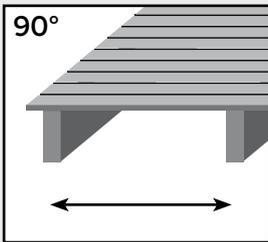


SPAN GUIDELINES

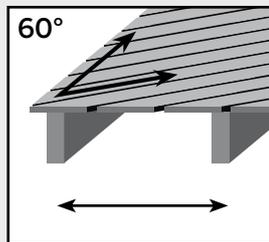
JOIST SPANNING FOR DECKING

The joists must be spaced on center according to the chart below. Be sure that joists are level and plumb. Trex® decking must span at least three joists. For heavy items such as hot tubs, planters, etc., consult a local building engineer or inspector for span recommendations. If you want to minimize the appearance of joists through the spaces between boards, paint the top of your joists black.

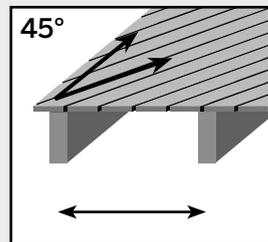
ADJUST JOIST SPANNING TO ACCOMMODATE ANGLED DECKING PATTERNS



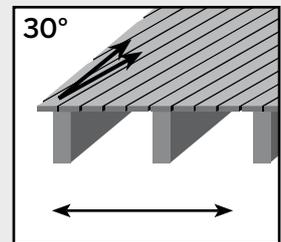
90°
Perpendicular to joists.
See chart below.



60°
At a 60° angle, maximum joist spanning is 51 mm less than listed in the chart below.



45°
At a 45° angle, maximum joist spanning is 102 mm less than listed in the chart below.



30°
At a 30° angle, maximum joist spanning is 1/2 of the distance listed in the chart below.

TREX TRANSCEND DECKING SPAN CHART (On Center)

	Residential Decks, Light Duty Docks, Residential/Day Care Playground		Commercial Decks, Boardwalks and Marinas	
ASTM Load Value*	4560 N/m ²	4788 N/m ²	4788 N/m ²	9576 N/m ²
25 mm Boards	450 mm	406 mm (16 in.)	406 mm	305 mm

* ASTM D4761 three point bend test

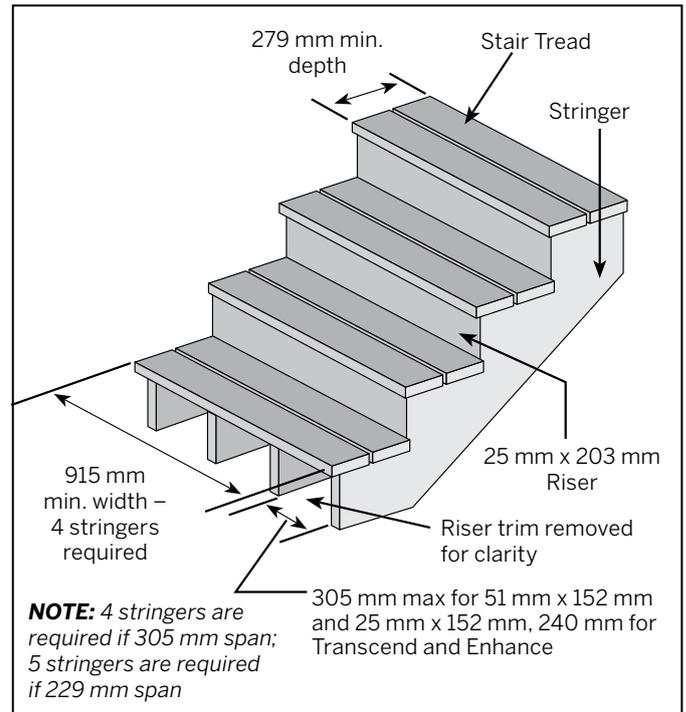
TREX RAILING SPAN CHART

Maximum Railing Span for all Applications (on center of posts)	
Transcend Railing	2438 mm on center

STAIRWAY ASSEMBLY

STAIRWAY DETAIL

- » Fasten stair treads continuously across at least four stringers.
- » See chart (at right) for center-to-center spacing of profiles.
- » Dress the sides of the stringers and risers with Trex® fascia or trim for a finished look.
- » Gapping between Trex boards on stair treads must be 6 mm - 10 mm.
- » The overhang of the stair tread is not to exceed 13 mm.



MAXIMUM SPACING ON CENTER OF JOIST

51 x 152 mm, 25 x 152 mm Boards	305 mm
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HOW TO INSTALL STAIR TREADS

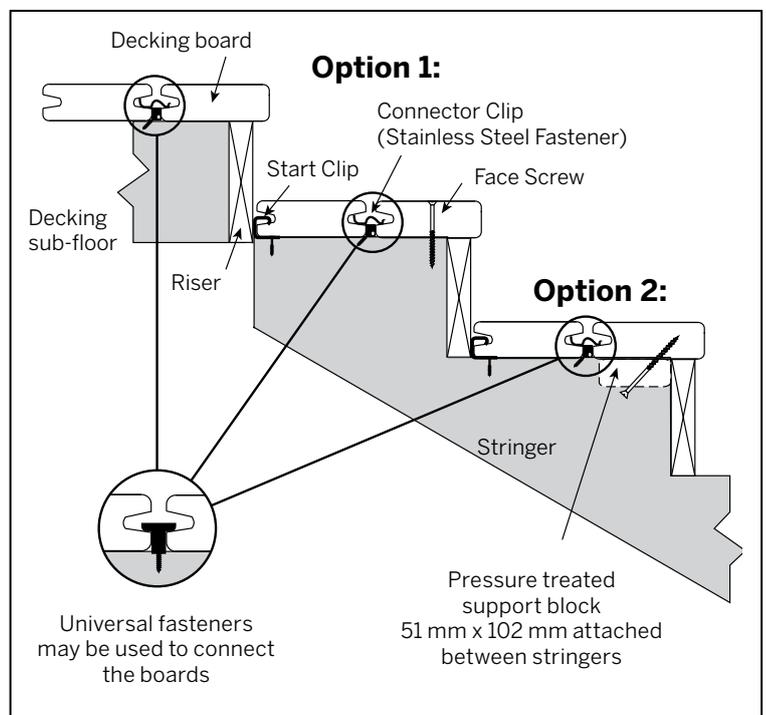
Installation Options:

Option 1: Using Hidden Fastener System

1. Install start clips against riser on each step.
2. Install first board.
3. Install second board.
4. Secure with screws from top of second board into stringer boards.

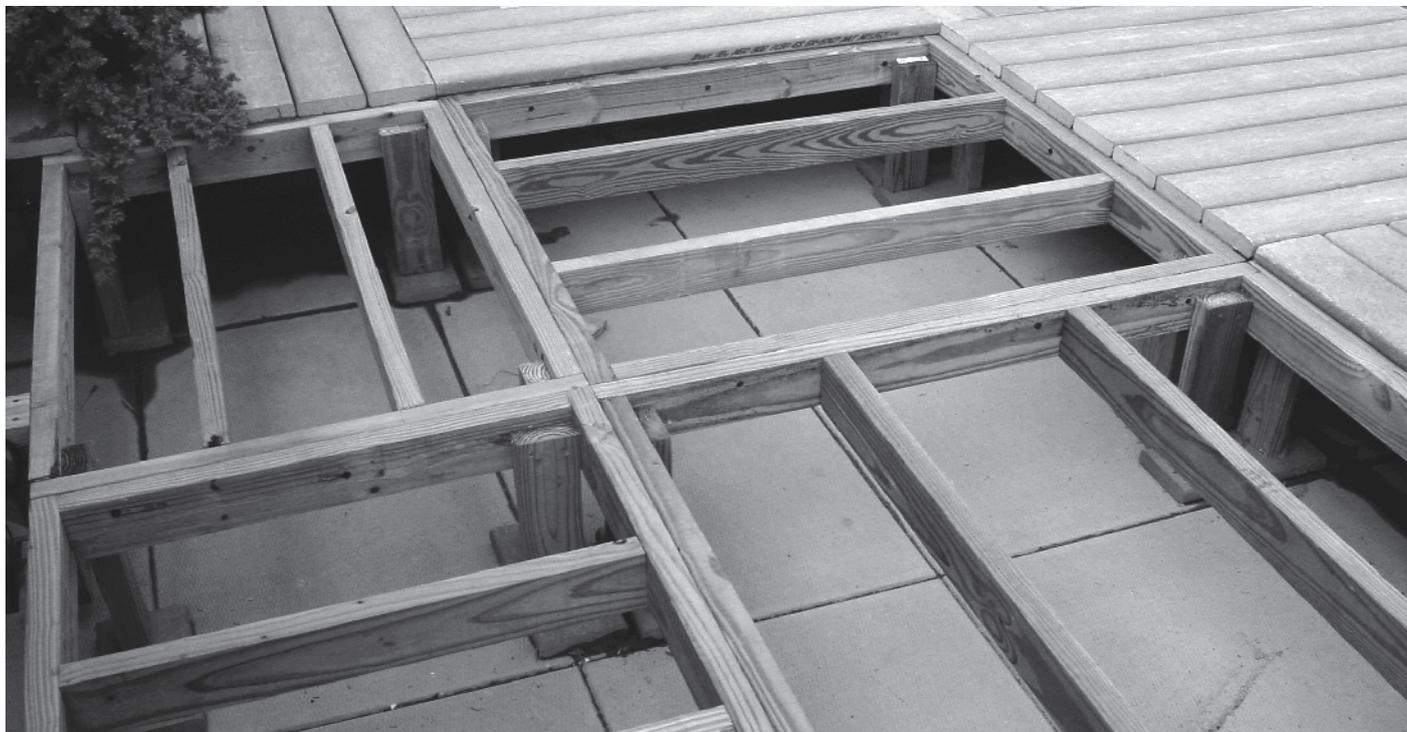
Option 2: Using 51 mm x 102 mm Wood Support Blocks

1. Install start clips against riser on each stair tread.
2. Install first board.
3. Attach 51 mm x 102 mm long wood support blocks between stringers.
4. Pre-drill holes up through blocks.
5. Install second board.
6. Secure with screws from bottom through blocks and into stair treads.



Refer to trex.com for the latest installation instructions.

ROOFTOP & SLEEPER DECK SYSTEMS



SLEEPER DECK SYSTEMS

A sleeper system is a buffer between a solid surface and Trex® decking. Drainage, access, and airflow are critical. Water must be able to flow through and away from the deck. For repairs and removal of debris, joist system access is necessary. Good airflow will keep the decking dry and in good condition.

Trex, when used with a sleeper system, must be supported below its entire length and if used in a roofing application, the supports must run the direction of the pitch of the roof to facilitate proper drainage. In addition, sleeper joists must be attached to the roof structure in a manner that stabilizes the deck frame. Failure to do so may result in a poor structure which will compromise deck performance.

In areas of application where a sleeper system is required that would not be susceptible to excessive debris buildup (examples would include covered areas such as balconies, porches, etc.), a minimum height of 38 mm for pressure-treated joists as well as a minimum 6 mm gap between Trex decking would be acceptable. These areas would still have to be designed to allow for proper drainage and hidden fasteners would be acceptable. However, if access to the structure under the decking is required, it would be recommended to use either the Universal Fastener (plastic)

or 51 mm composite decking screws. A 6 mm to 13 mm gap is still required when abutting walls or other fixed objects.

In all other areas where there could be excessive water buildup along with debris buildup, Trex would still recommend a minimum height of 89 mm for pressure-treated joists, as well as a gap of 10 mm. For this application, hidden fasteners would not be recommended and standard 76 mm composite screws would be used.

ALWAYS consult your local building code authority for proper details on roof and railing installation to the roof structure if required.

ROOFTOP DECK TIPS

- » If you want to access the roof, you must build the Trex deck in removable sections or with removable fasteners.
- » You must attach the sleeper joists to the roof structure so that they stabilize the deck frame. Failure to do so may result in a poor structure which will compromise deck performance.

CARE & OWNERSHIP

- 43 Care & Cleaning Guide
- 44 Trex[®] Limited Warranty
- 45 Trex Transcend[®], Trex Enhance[®],
Trex Contour[®] and Trex Fascia
Limited Fade & Stain Warranty

CARE & CLEANING GUIDE FOR TREX® HIGH-PERFORMANCE COMPOSITE DECKING

All exterior building materials require cleaning. Generally, soap and water is all that is required to clean Trex Transcend® and Enhance® products. For additional information, see below.

PROBLEM	SOLUTION
Dirt and Debris	The affected area should be sprayed off with a hose to remove surface debris. Use warm soapy water and a soft bristle brush to remove dirt and debris from the embossing pattern.
Chalk Lines	High performance chalk lines may discolor the surface. Use only Irwin Strait-Line®* Dust-Off Marking Chalk (purple), available at Irwin.com
Tannins Due to Debris	Remove all debris from the deck using a hose or broom. Once the deck surface is dry, apply a Deck Brightener** to the deck as directed by the manufacturer. Deck Brighteners contain oxalic acid, which will also remove tannins.
Ice and Snow	A plastic shovel may be used to remove snow from the deck. Use calcium chloride or rock salt to melt the snow and ice from the deck surface.
Oil, Grease and Food	All food spills should be removed as soon as possible. The surface must be cleaned within seven days to maintain the stain warranty. To remove, spray off with a hose and use warm, soapy water and a soft bristle brush to remove spills from the embossing pattern.
Mold and Mildew	If debris such as pollen and dirt is allowed to remain on the deck surface, mold can feed on the biofilm. Using a hose and warm, soapy water with a soft bristle brush is recommended to remove the food source and mold.
Using a Pressure Washer (Concrete, Stucco or Ground-in Construction Dirt)	A pressure washer with no greater than 3100 psi*** that has a fan attachment/adjustment and soap dispenser may be used to remove dirt, concrete dust, or other types of construction dirt. Spray deck with soap, then follow by gently scrubbing each deck board with a soft bristle brush. Spray/rinse each individual deck board using a fan tip no closer than 8" from the decking surface. RINSE THOROUGHLY. If dirty water from cleaning is left to dry, this will cause a film to remain on the decking surface.
Maintaining Transcend and Select Railing	NEVER use acetone or other solvents on Trex Transcend or Select railing to maintain the beauty of the surface. For color transfer issues (from attachment of baluster spacer), use Mr. Clean® Magic Eraser® Original or Magic Eraser® Extra Power to help remove this.**** For small surface scratches, marks, or scuffs, use Dupli-Color Scratch Seal™ Clear Sealer Pen. *****

*Strait-Line® is a registered trademark of Irwin Industrial Tool Company. **Use of products containing bleach or acid will lighten the surface of Trex. Use in an inconspicuous area to determine whether you like the effect. Neither product will affect the structural integrity of Trex. *** Use of a pressure washer greater than 3100 psi could damage the boards and void the warranty. ****Mr. Clean® and Magic Eraser® are registered trademarks of The Procter and Gamble Company. *****Scratch Seal™ Clear Sealer Pen is a registered trademark of Dupli-Color® Products Company.

TREX® LIMITED WARRANTY

Trex Company, Inc. (hereinafter "Trex") warrants to the original purchaser ("Purchaser") that, for the period of time set forth in the following sentence, under normal use and service conditions, Trex® products shall be free from material defects in workmanship and materials, and shall not split, splinter, rot or suffer structural damage from termites or fungal decay. The term of such warranty shall be twenty-five (25) years from the date of original purchase for a residential application, and ten (10) years from the date of original purchase for a commercial application. If a defect occurs within the warranty period, Purchaser shall notify Trex in writing and, upon confirmation by an authorized Trex representative of the defect, Trex's sole responsibility shall be, at its option, to either replace the defective item or refund the portion of the purchase price paid by Purchaser for such defective item (not including the cost of its initial installation).

Notwithstanding the foregoing, (a) with respect to Trex® DeckLighting™, the term of the warranty for the LED lights and housing shall be seven (7) years, the term of the warranty for the dimmer, timer and transformer shall be three (3) years, in each case provided that a Trex transformer is used, and any other parts or accessories shall not be warranted, (b) with respect to hardware for the Trex Surroundings® gate (gate frame, hinges and screws), the term of the warranty shall be five (5) years, (c) with respect to Trex Decorative Balusters, the term of the warranty covering the paint coating shall be ten (10) years, and shall be prorated in the following manner: 100% replacement for the first five (5) years; and 50% replacement for the next five (5) years, and (d) this warranty shall not apply to Trex Elevations® steel deck framing, Trex Reveal® aluminum railing and TrexTrim™ (which each have separate warranties).

For purposes of this warranty, a "residential application" shall refer to an installation of the Product on an individual residence, and a "commercial application" shall refer to any installation of the Product other than on an individual residence.

THIS WARRANTY SHALL NOT COVER AND TREX SHALL NOT BE RESPONSIBLE FOR COSTS AND EXPENSES INCURRED WITH RESPECT TO THE REMOVAL OF DEFECTIVE TREX PRODUCTS OR THE INSTALLATION OF REPLACEMENT MATERIALS, INCLUDING BUT NOT LIMITED TO LABOR AND FREIGHT.

With respect to a residential application, this warranty may be transferred one (1) time, within the five (5) year period beginning from the date of original purchase by the Purchaser, to a subsequent buyer of the property upon which the Trex products were originally installed. With respect to a commercial application, this warranty is freely transferable to subsequent buyers of the property upon which the Trex products were originally installed.

To make a claim under this limited warranty, Purchaser, or the transferee, shall send to Trex, within the warranty period referred to

above, a description of the claimed defect and proof of purchase, to the following address:

Trex Company, Inc.
Customer Relations
160 Exeter Drive
Winchester, VA 22603-8605

Trex does not warrant against and is not responsible for, and no implied warranty shall be deemed to cover, any condition attributable to: (1) improper installation of Trex products and/or failure to abide by Trex's installation guidelines, including but not limited to improper gapping; (2) use of Trex products beyond normal use and service conditions, or in an application not recommended by Trex's guidelines and local building codes; (3) movement, distortion, collapse or settling of the ground or the supporting structure on which Trex products are installed; (4) any act of God (such as flooding, hurricane, earthquake, lightning, etc.), environmental condition (such as air pollution, mold, mildew, etc.), staining from foreign substances (such as dirt, grease, oil, etc.), or normal weathering (defined as exposure to sunlight, weather and atmosphere which will cause any colored surface to gradually fade, chalk, or accumulate dirt or stains); (5) variations or changes in color of Trex products; (6) improper handling, storage, abuse or neglect of Trex products by Purchaser, the transferee or third parties; or (7) ordinary wear and tear.

No person or entity is authorized by Trex to make and Trex shall not be bound by any statement or representation as to the quality or performance of Trex products other than as contained in this warranty. This warranty may not be altered or amended except in a written instrument signed by Trex and Purchaser.

UNDER NO CIRCUMSTANCES WILL TREX BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER SUCH DAMAGES ARE SOUGHT IN CONTRACT, IN TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE AND STRICT LIABILITY) OR OTHERWISE, AND TREX'S LIABILITY WITH RESPECT TO DEFECTIVE PRODUCTS SHALL IN NO EVENT EXCEED THE REPLACEMENT OF SUCH PRODUCTS OR REFUND OF THE PURCHASE PRICE, AS DESCRIBED ABOVE.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. The benefits under this Warranty are in addition to other rights and remedies under a law in relation to the goods to which this warranty relates.

This warranty shall only be applicable and enforceable in Australia.

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TREX TRANSCEND®, TREX ENHANCE®, TREX CONTOUR® AND TREX® FASCIA LIMITED FADE & STAIN WARRANTY

For the term set forth below, Trex Company, Inc. (hereinafter "Trex") warrants to the original end-user purchaser (the "Purchaser") that Trex Transcend® decking, porch or fascia, Trex Enhance® decking or fascia, Trex Contour® decking or fascia, or Trex Fascia, as the case may be (the "Product") will perform, under normal use and service conditions, as follows:

Term of Warranty: The term of this warranty shall begin on the date of original purchase, and shall end (1) twenty-five (25) years thereafter for a residential application of the Product, and (2) ten (10) years thereafter for a commercial application of the Product.

Residential/Commercial Application: For purposes of this warranty, a "residential application" shall refer to an installation of the Product on an individual residence, and a "commercial application" shall refer to any installation of the Product other than on an individual residence.

Fade Resistance: The Product shall not fade in color from light and weathering exposure as measured by color change of more than 5 Delta E (CIE) units.

The Product is designed to resist fading. No material is fade proof when exposed to years of UV exposure and the elements. The Product is designed to resist fading, and will not in any event fade by more than 5 Delta E (CIE) units.

Stain Resistance: The Product shall be resistant to permanent staining resulting from spills of food and beverage items including ketchup, mustard, salad oils, tea, wine, coffee, fruit punch, barbecue sauce, grease, sodas and other food and beverage related items that would typically be present on a residential deck, or mold and mildew naturally occurring in the environment, provided that such substances are removed from the Product with soap and water or mild household cleaners after no more than one (1) week of exposure of the food or beverage to the surface or first appearance of the mold and mildew.

Notwithstanding the foregoing, Trex does not warrant that the Product is stain-proof, and does not warrant stain resistance resulting from spilled or otherwise applied food and beverage substances which are not properly cleaned as provided above within one (1) week of exposure. In addition, materials not covered in the stain resistant warranty include abrasive compounds of acidic or basic pH, paints or stains, strong solvents, metallic rust or other abnormal deck use items, and non-food and non-beverage substances, including but not limited to, biocides, fungicides, plant food, or bactericides. Mold and mildew can settle and grow on any outdoor surface, including this Product. You should periodically clean your deck to remove dirt and pollen that can feed mold and mildew. This warranty does not cover mold and mildew which is not properly cleaned as provided above within one (1) week of first appearance.

Standard Trex Company Limited Warranty: This warranty is in addition to the standard Trex Company Limited Warranty that applies to all Trex products.

Transferability: With respect to a residential application, this warranty may be transferred one (1) time, within the five (5) year period beginning from the date of original purchase by the Purchaser, to a subsequent buyer of the property upon which the Trex products were originally installed. With respect to a commercial application, this warranty is freely transferable to subsequent buyers of the property upon which the Trex products were originally installed.

EXCLUSIONS FROM WARRANTY COVERAGE:

Exposure to Heat: Direct or indirect contact with extreme heat sources (over 275 degrees) may cause fading and may damage the surface of the Product, and any effects of such exposure are expressly excluded from coverage under this warranty.

Surface Damage: Never use metal shovels or sharp-edged tools to remove snow and ice on the surface of the Product. If the surface of the Product is damaged or punctured, this warranty will be voided.

Paint or Other Materials Applied to the Product: If paint or other coating materials are applied to the Product, this warranty will be voided.

Railing: This warranty does not cover Trex Transcend® railing components.

Other Exclusions: This warranty shall not cover any condition attributable to: (1) improper installation of the Product and/or failure to abide by Trex's installation guidelines, including but not limited to improper gapping; (2) use of the Product beyond normal use or service conditions, or in an application not recommended by Trex's guidelines and local building codes; (3) movement, distortion, collapse or settling of the ground or the supporting structure on which the Product is installed; (4) any act of God (such as flooding, hurricane, earthquake, lightning, etc.); (5) improper handling, storage, abuse or neglect of the Product by Purchaser, the transferee or third parties; (6) any fading or staining not on the walking surface of the Product (i.e., the underside or the ends of the Product); or (7) ordinary wear and tear.

Procedure for Making a Claim under this Warranty

In order to make a claim under this warranty, Purchaser must do the following:

1. If the Purchaser is making a claim relating to the warranty on stain resistance, Purchaser must do as follows:

(a) Purchaser must try to clean the affected area of the deck by using the cleaning procedures described above within one (1) week of exposure of the food or beverage to the Product or first appearance of the mold and mildew.

(b) If the affected area remains reasonably unsatisfactory after Purchaser has tried these cleaning procedures, then Purchaser must have the affected area of the deck professionally cleaned at Purchaser's expense.

(c) If the affected area remains reasonably unsatisfactory after the professional cleaning, Purchaser may make a claim under this warranty, provided that such claim is made within thirty (30) days after the professional cleaning.

2. To make a claim under this limited warranty, Purchaser, or the transferee, shall send to Trex, within the warranty period referred to above, a description and photographs of the affected area of the Product, proof of purchase, and if the claim relates to the warranty on stain resistance, proof of compliance with paragraph 1. above, to the following address:

Trex Company, Inc.
Customer Relations
160 Exeter Drive
Winchester, VA 22603-8605

If Purchaser has any questions, Trex's telephone number in the United States is 00-11-1-800-289-8739.

3. Upon confirmation by an authorized Trex representative of a valid claim hereunder, Trex's sole responsibility shall be, at its option, to either replace the affected item or refund the portion of the purchase price paid by Purchaser for such affected item (not including the cost of its initial installation). Replacement material will be provided that is as close as possible in color, design and quality as the replaced material, but Trex does not guarantee an exact match as colors and design may change.

4. If a valid warranty claim hereunder is made during years eleven (11) through twenty-five (25) after the original purchase for a residential application, recovery will be prorated. If Trex is providing replacement materials, it may elect to replace the percentage listed below of boards otherwise meeting the requirements for a claim, or if it is refunding the purchase price, it may elect to refund the percentage listed below of the purchase price of boards otherwise meeting the requirements for a claim.

YEAR OF WARRANTY CLAIM	PERCENTAGE RECOVERY
11	80%
12	80%
13	80%
14	60%
15	60%
16	60%
17	40%
18	40%
19	40%
20	20%
21	20%
22	20%
23	10%
24	10%
25	10%

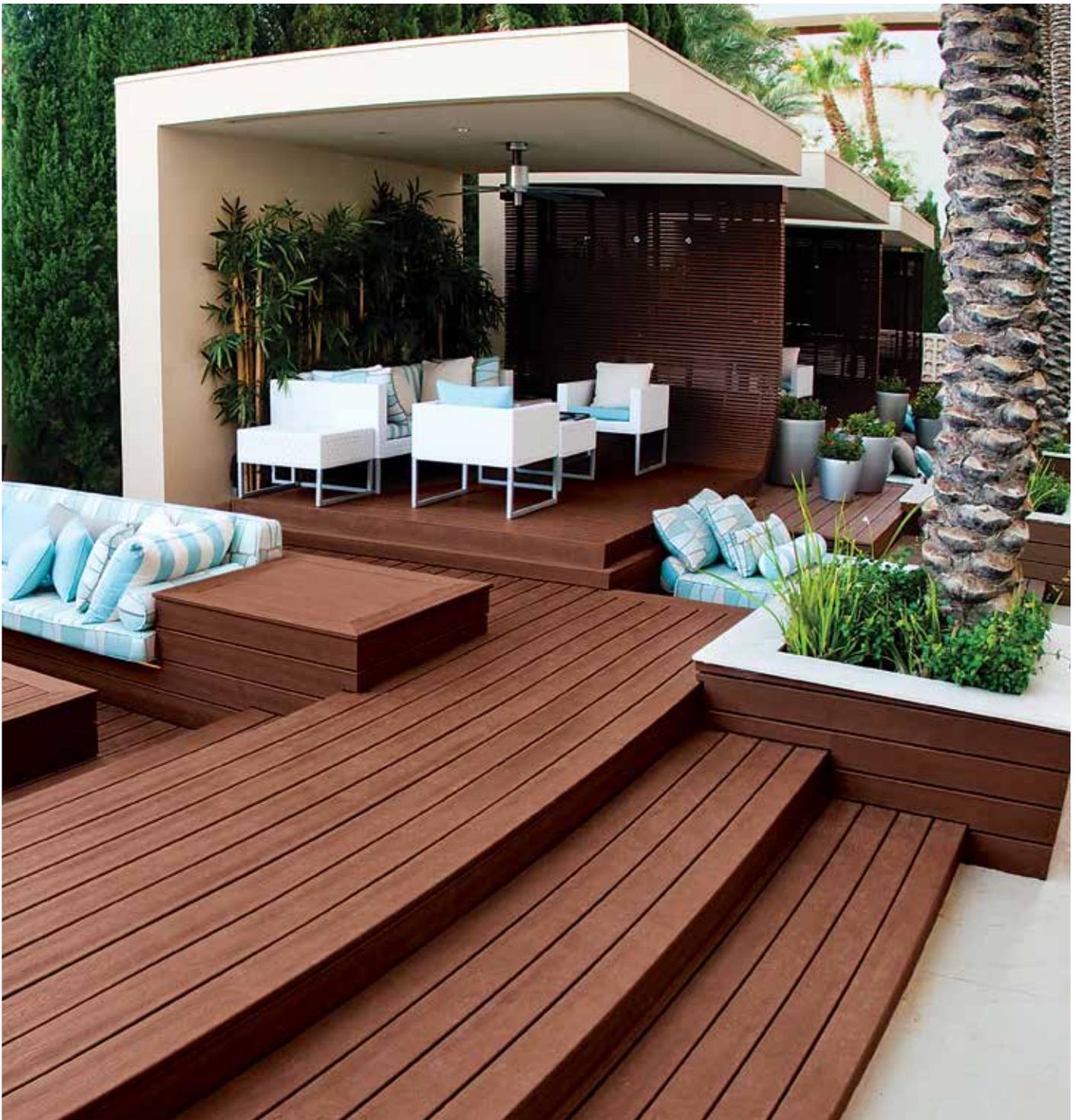
5. THIS WARRANTY SHALL NOT COVER AND TREX SHALL NOT BE RESPONSIBLE FOR COSTS AND EXPENSES INCURRED WITH RESPECT TO THE REMOVAL OF AFFECTED PRODUCT OR THE INSTALLATION OF REPLACEMENT MATERIALS, INCLUDING BUT NOT LIMITED TO LABOR AND FREIGHT.

UNDER NO CIRCUMSTANCES WILL TREX BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER SUCH DAMAGES ARE SOUGHT IN CONTRACT, IN TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE AND STRICT LIABILITY) OR OTHERWISE, AND TREX'S LIABILITY WITH RESPECT TO PRODUCTS SHALL IN NO EVENT EXCEED THE REPLACEMENT OF SUCH PRODUCTS OR REFUND OF THE PURCHASE PRICE, AS DESCRIBED ABOVE.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. The benefits under this Warranty are in addition to other rights and remedies under a law in relation to the goods to which this warranty relates.

This warranty shall only be applicable and enforceable in Australia.

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