

# INTERNATIONAL ARCHITECTURAL GUIDE



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# INTRODUCTION

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### WHY TREX®

As the world's leading wood-alternative decking manufacturer for more than 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 an ultra 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.



- » 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 vegetablebased 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 woodalternative decking industry to receive an International Code Council Evaluation Service<sup>®</sup> (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



G

## 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.

#### | 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
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- 12 Color Palette
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# **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 early-generation composites, Transcend decking guarantees a fade- and stainresistant finish. And when it comes to beauty, longevity and comfort, Transcend is pure Trex<sup>®</sup>, featuring decking boards and railings that won't rot, warp, crack or splinter. The perfect material for a perfect deck.





Square Edge Board



Grooved Edge Board



SHELL CORE ····

#### UNYIELDING TRANSCEND SHELL

- » Each board is engineered with a high-performance shell that's thicker than competitive offerings for superior weather protection
- » Underside breathes to avoid the surface separation some competitors suffer, ensuring lifelong durability



# **Trex** Enhance®

### REPLACE WOOD WITH WOW

Enhance<sup>®</sup> is our low-maintenance composite that offers all the charm and none of the trouble of real wood. With its high-definition grain pattern, 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?





#### WE'VE GOT THINGS COVERED

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



#### **PROFILES INCLUDE:**

25 mm x 140 mm Square Edge Board



25 mm x 140 mm Grooved Edge Board





### Trex Hideaway® Hidden Fasteners

### INVISIBLE INSTALLATION THAT'S TWICE AS FAST AS SCREWS

Trex Hideaway<sup>®</sup> 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  $\ensuremath{\mathsf{Trex}}^{\ensuremath{\texttt{B}}}$  grooved boards
- » Hideaway clips are also available for installation on aluminum or steel substructures



UNIVERSAL FASTENER glass-filled nylon



**START CLIP** stainless steel





## COLOR PALETTE





## PRODUCT SPECIFICATIONS

DECKING	DESCR	IPTION	ITEM NUMBER	COLORS
25 mm Square Edge Board	25 mm x 140 mm x 30 25 mm x 140 mm x 40 25 mm x 140 mm x 60 25 mm x 140 mm x 30	090 mm Transcend	XX010612TS48 XX010616TS48 XX010620TS48 XX010612ES48	HG, IM, LR, SR, TT, FP, GP, RS, TH, VL
	25 mm x 140 mm x 44 25 mm x 140 mm x 60	870 mm Enhance	XX010616ES48 XX010620ES48	BD, CS, SD
25 mm Grooved Edge Board	25 mm x 140 mm x 30 25 mm x 140 mm x 40 25 mm x 140 mm x 60	870 mm Transcend 090 mm Transcend	XX010612TG48 XX010616TG48 XX010620TG48	HG, IM, LR, SR, TT, FP, GP, RS, TH, VL
	25 mm x 140 mm x 36 25 mm x 140 mm x 44 25 mm x 140 mm x 66	870 mm Enhance	XX010612EG48 XX010616EG48 XX010620EG48	BD, CS, SD
HG Havana Gold XX = COLOR PREFIX: IM Island Mist LR Lava Rock	SR Spiced Run TT Tiki Torch	n FP Fire Pit GP Gravel Pa RS Rope Swi		House BD Beach Dune ge Lantern CS Clam Shell SD Saddle
TREX HIDEAWAY® HIDDEN FASTENI	ING SYSTEM	DESCRI	PTION	ITEM NUMBER
Start Clip (stainless steel)		2.5 clips per linear me start board and finish (36 per bag)		UNIVSTARTCLIP
Universal Fastener (glass-filled nylon)		4.6 m² Box (90 per box)		UNIVCONCLIP
Elevations Universal Connector Clip (glass-filled nylon)		4.6 sq. m Box		ELVUNIVCLIP
Elevations Start Clip (stainless steel)		37.2 sq. m Bag		ELVSTARTCLIP



# TECHNICAL SPECIFICATIONS

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



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

EUROPEAN PHYSICAL & MECHANICAL PROPERTIES					
CRITERION	CRITERION TEST METHOD		TEST EXPLANATION		
Bending Modulus	PrEN 15534-1:2012				
Trex Transcend & Enhance (25.4 mm)	Deflection under load of 500N < / = 2.0 mm	Pass	3-point bend test to determine the amount of flexibility at break that a sample possesses		
Breakage Modulus [psi]	PrEN 15534-1:2012				
Trex Transcend & Enhance (25.4 mm)	F' max > / = 3300 N	Pass	Maximum amount of force in a 3-point bend test that it takes to break a sample		
Determination of Slipperiness	PrEN 15534-1	Angle/Quality Class			
Trex Transcend (25.4 mm)	Average angle of inclination	28/C	Wet-loaded barefooted areas, walking method-ramp test		
Trex Enhance (25.4 mm)	Average angle of inclination	32/C	Wet-loaded barefooted areas, walking method-ramp test		
Fire Resistance Testing	EN ISO 11925-2:2010 & EN ISO 9239-1:2010	Classification			
Trex Transcend (25.4 mm)		Fire Class = Cfl - s1	Classification according to EN 13501-1		
Trex Enhance (25.4 mm)		Fire Class = Efl	Classification according to EN 13501-1		
Creep Behavior	PrEN 15534-1, 7.4.1				
Trex Transcend & Enhance (25.4 mm)		Pass	3-point bend test under constant load of 850 N for 168 hr. Must deflect less than 10 mm		
Falling Mass Impact Resistance	PrEN 15534-4: 2012				
Trex Transcend & Enhance (25.4 mm)		Pass	1000 gram striker falling from 700 mm. Distance between supports for the boards = 200 mm. Must not indent more than > / = 0.5 mm		

\* German/Euro lab = "eph"—Entwicklungs—und Pruflabor Holztechnologie GmbH (Dresden, Germany)



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

G	ENERAL PHYSIC	AL & MECHANI	CAL PROPERTIES
CRITERION	TEST METHOD	RESULTS	TEST EXPLANATION
Thermal Expansion Coefficient (Transcend and Enhance)	ASTM D696		
Width		8.94 x 10 - 5 cm/cm/C	Distance a 305 mm sample expands or contracts in the width direction at various temperatures
Length		4.1 x 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 edges of a sample between two (2) 50 mm spheres for a 0.2 mm indentatic
Relative Density [g/cm <sup>3</sup> ] (Transcend and Enhance)	ASTM D792		
		1.05	Mass per unit volume as compared to water (1.00 g/cm³)
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.



## ARCHITECTURAL SPECIFIER

#### COMPOSITE DECKING

#### PART 1: GENERAL

#### 1.1 Section Includes

A Composite Decking

#### 1.2 References

- A prEn 15534 -1:2012 (EN ISO 11925-2 and EN ISO 9239-1): Fire Resistance Test.
- B prEn 15534-1: 2012: Determination of Slipperiness (Wet-loaded Barefooted Areas, Walking Method—Ramp Test)
- C prEN 15534-1:2012: Determination of Modulus of Elasticity in Bending and Bending Strength of Profiles
- D prEN 15534-4: 2012: Falling Mass Impact Resistance
- E ASTM D1761: Standard Test Method for Mechanical Fasteners in Wood
- F ASTM D1413: Standard Test Method for Wood Preservatives by Laboratory Soil Block Cultures
- G ASTM D198 -09: Standard Test Method of Static Tests of Lumber in Structural Sizes
- H ASTM D-7031-04: Standard Guide for Evaluating Mechanical and Physical Properties of Wood-Plastic Composite Products
- ASTM D-7032-04: Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail systems
- J ASTM D 695: Standard Test Method of Compressive Properties of Rigid Plastics
- K ASTM D 696: Standard Test Method for Coefficient of Thermal Linear Expansion of Plastics

#### 1.3 Design/Performance Requirements

- A Structural Performance:
  - a Deflection under load of 500 N </= 2.0 mm (arithmetic mean value) at 406 mm span
  - b Creep behaviour in a 3 point-bending-test under a constant load of 850 N in a defined atmosphere (50 C and 50% RH) for 168 h (at 406 mm) must be </= 10 mm (arithmetic mean value)
  - C Falling mass impact using 1000 g at a height of 700 mm and a span of 200 mm should be </= 0.5 mm



- d Treads of Stairs; Concentrated Load: 35910 Pa (750 lbf/sq. ft) and 3.175 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 prEn 15534 -1:2012 (EN ISO 11925-2 and EN ISO 9239-1): Fire Resistance Test.

#### 1.4 Submittals

- A Product Data: Indicate Sizes, profiles, surface style, and performance characteristics.
- B Samples: For each product specified, one sample, minimum size 101 mm (4 inches), representing actual product, color, and finish.
- 1.5 Delivery, Storage, and Handling
  - A Storage and Handling:
    - a Never dump Trex<sup>®</sup> materials when unloading.
    - b Store on a flat surface or with supports .61 m (2 feet) on center
    - C Refer to Trex Installation Guide at *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<sup>®</sup> and Trex Enhance<sup>®</sup>): 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 fist 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 protective 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—Fire Pit, Gravel Path, Havana Gold, Island Mist, Lava Rock, Rope Swing, Spiced Rum, Tiki Torch, Tree House, Vintage Lantern

Enhance—Beach Dune, Clam Shell, Saddle

- Specific Gravity—1.05 g/cm³ when tested in accordance to ASTM D -792
- Determination of Slipperiness when tested in accordance to prEn 15534-1: 2012 (wet-loaded barefooted areas, walking method—ramp test);

Transcend—Quality class according to DIN 51097 = C

Enhance—Quality class according to DIN 51091 = C

• Fire Resistance Testing when tested in accordance with EN ISO 11925-2 and EN 9239-1 was fulfilled for all variants

Transcend—Fire class based upon EN 13501-1 = C fl—s1

Enhance—Fire class based upon EN 13501-1 = E fl



• Determination of Bending Properties when testing according Annex A of prEN 15534-1: 2012;

Transcend®—Deflection under load of 500N at 406mm span = "Pass"

Enhance®—Deflection under load of 500N at 406mm span = "Pass"

• Determination of Creep Behaviour when tested according to prEN 15534-1: 2012

Transcend—3-point-bend-test under a constant load of 850N at 406mm span = "Pass"

Enhance—3-point-bend-test under a constant load of 850N at 406mm span = "Pass"

• Determination of Falling Mass Impact Resistance in accordance with prEn 15534-1:2012

Transcend—Indentation of </= 0.5 mm using a 1000 g striker falling from 700 mm using a span of 200 mm = "Pass"

Enhance—Indentation of </= 0.5 mm using a 1000 g striker falling from 700 mm using a span of 200 mm = "Pass"

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

Transcend and Enhance

a Width-8.94 x 10-5 cm/cm/C degrees

- b Length-4.1 x 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

#### 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<sup>®</sup> Trapease<sup>®</sup> II Composite Screw<sup>\*</sup>, Dexxter<sup>™</sup> Composite Screw<sup>\*\*</sup>, DeckFast Cap-Tor<sup>®</sup> XD, Headcote Cap-Tor XD<sup>\*\*\*</sup>, C-Deck Exterior Star Drive Composite Deck Screw<sup>\*\*\*\*</sup>, Phillips II Plus<sup>®</sup> Pozisquare<sup>\*\*\*\*\*</sup>, Fastenmaster Cortex Concealed Fasteners<sup>\*</sup>

\*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.



#### PART 3: EXECUTION

#### 3.1 Examination

- A Install according to manufactures 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

#### $\ensuremath{\mathbb{D}}$ $\ensuremath{\,\text{Do}}$ NOT use Trex 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

Date of issue: 31. 05. 2012 Date of revision: 10. 02. 2014 Version: 3

http://www.msds-europe.com

#### SAFETY DATA SHEET

### IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING 1.1. Product identifier TREX® WOOD-POLYMER PRODUCTS

TREX CONTOUR® DECKING PRODUCTS, Torino Brown, Chateau Grey, Moroccan Red, Honey Brown, Clove Brown, Russet Red, Sand Brown TREX ENHANCE® DECKING PRODUCTS, Beach Dune, Clam Shell, Saddle TREX TRANSCEND® DECKING PRODUCTS, Vintage Lantern, Gravel Path, Fire Pit, Tree House, Lava Rock, Spiced Rum,

TREX TRANSCEND® DECKING PRODUCTS, Vintage Lantern, Gravel Path, Fire Pit, Tree House, Lava Rock, Spiced Rum, Rope Swing, Tiki Torch, Island Mist, Havana Gold

- 1.2. <u>Relevant identified uses of the substance or mixture and uses advised against:</u> Wood-polymer products, for industrial use.
- 1.3 Details of the supplier of the safety data sheet: TREX COMPANY, INC. 245 Capitol Lane Winchester, VA 22602 Tel.: +1 540,542 6300

1.3.1. E-mail: <u>question@trex.com</u>

 1.4.
 Emergency telephone number:
 +1 540 542 6300.

#### 2. HAZARDS IDENTIFICATION

#### 2.1. <u>Classification of the substance or mixture</u>

Classification according to Regulation 1999/45/EC:

#### Not considered as hazardous mixture.

R phrases: -

S phrases: -

2.2. Label elements

#### No labeling required.

#### 2.3. Other hazards

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 carcinogenic.

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Mixture:

			DEACH				Classifi	cation		
Description CAS number: EU number	REACH		Conc.	RE	ACH		CLP			
	number:	number:	iber reg. nr.	ber reg. nr.	number reg. nr.	(%)	Hazard symbol	R phrase	Hazard pict.	Hazard cat.
Carbon black*	1333-86-4	215-609-9	-	< 1	-	-	-	-	-	

\* Substance classified by the manufacturer or substance which has no obligatory classification according to the EU regulations.

Further components: wood fiber dust: 50 - 60 %, polyethylene: 40-50 %.

TREX COMPANY, INC.

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#### **TREX® WOOD-POLYMER PRODUCTS**



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 pellets. Standard product is approximately 40-50% thermoplastic and 50-60% wood fiber.

4.	FIRST AID MEASURES
4.1.	Description of first aid meas

- Description of first aid measures: IN CASE OF INGESTION:
  - Measures:
    - Not expected to be a problem when ingested.
    - If uncomfortable, seek medical assistance.

IN CASE OF INHALATION: Measures:

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

IN CASE OF SKIN CONTACT:

Measures:

Wash contact areas with soap and water.

Launder contaminatd clothing before re-use.

IN CASE OF EYE CONTACT:

Measures:

- Flush thoroughly with water. If irritation occurs, obtain medical help.
- Most important symptoms and effects, both acute and delayed:
- No data available.

4.2.

4.3 Indication of any immediate medical attention and special treatment needed No data available.

#### FIREFIGHTING MEASURES 5.

- 5.1 Extinguishing media:
- 5.1.1 Suitable extinguishing media:
- Water.
- 5.1.2 Unsuitable extinguishing media:
- None known. 52 Special hazards arising from the substance or mixture:
  - Exposure to fire can generate toxic fumes. High dust levels may create potential for explosion.
- Hazardous decomposition products: smoke, carbon monoxide, acetaldehyde, formaldehyde, formic acid, acetic acid.
- 5.3. Advice for firefighters:

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

#### ACCIDENTAL RELEASE MEASURES 6.

- 6.1. Personal precautions, protective equipment and emergency procedures:
- 6.1.1 For non-emergency personnel:
- Keep unprotected people away, allow only well trained experts wearing suitable protective clothing to abide in the field of accident.
- 6.1.2. For emergency responders:
- None known.
- Environmental precautions: 6.2.

Dispose of spillage and waste (product/packaging) in accordance with all applicable environmental laws. Do not allow to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.

- Methods and material for containment and cleaning up: 6.3. When 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.
- 6.4. Reference to other sections: For further and detailed information see section 8 and 13.

#### HANDLING AND STORAGE 7.

7.1. Precautions for safe handling:

Observe conventional hygiene precautions.

Technical measures:

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.

TREX COMPANY, INC.

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**TREX® WOOD-POLYMER PRODUCTS** 



http://www.msds-europe.com

 Use in well-ventilated area. Precautions against fire and explosion: No specific prescription.
 7.2. Conditions for safe storage, including any incompatibilities: Technical measures and storage condition: Do not store in open or unlabelled containers. Store away from strong oxidizing agents or combustible material. Follow all instructions on the label. Incompatible materials: strong oxidizers. Packaging material: no specific prescription.
 7.3. Specific end use(s): No specific instructions available.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. Control parameters:

Exposure limit values: -

DNEL		Routes of exposure	Exposure frequency:	Remarks:
Worker	Consumer			
		Dermal	Short term (acute)	
			Long term (repeated)	
		Inhalative	Short term (acute)	
			Long term (repeated)	
		Oral	Short term (acute)	
			Long term (repeated)	

PNEC			Exposure frequency:	Remarks:
Water	Soil	Air		
			Short term (single use)	
			Long term (continuous)	
			Short term (single use)	
			Long term (continuous)	
			Short term (single use)	
			Long term (repeated)	

#### 8.2. Exposure controls:

In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

8.2.1 Appropriate engineering controls

In pursuance of work is proper foresight needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin. Use in well-ventilated area.

- Good personal hygiene practices should always be followed.
- 8.2.2. Individual protection measures, such as personal protective equipment:
  - *I.* Eye/face protection: safety glasses with side shields or goggles should be worn to protect against dust particles.
  - 2. Skin protection:
    - a. Hand protection: no special equipment required.
    - b. Other: no special equipment required.
  - 3. Respiratory protection: approved dust respirators must be used for dusty conditions or if breathing of dusts is likely.
  - 4. Thermal hazard: none known.
- 8.2.3. Environmental exposure controls:
  - No specific prescription.

The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions an expert's advice should be sought out before deciding upon further protective measures.

### PHYSICAL AND CHEMICAL PROPERTIES: 9.1. Information on basic physical and chemical propertie

9.1. <u>In</u>	formation on basic physical and chemical	l properties:		
	Parameter		Test method:	Remarks:
1.	Appearance:	gray, red, brown solid		
2.	Odour:	odourless		
3.	Odour threshold:	no data available.		
4.	pH value:	no data available		
5.	Melting point/ freezing point:	> 110°C		
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Versio	n: 3	
	<ul><li>6. Initial boiling point/boiling range:</li><li>7. Flash point:</li></ul>	no data available > 370°C
	8. Evaporation rate:	no data available
	9. Flammability:	no data available
	10. Upper/lower flammability or explosive	no data available
	limits:	
	11. Vapour pressure:	no data available
	12. Relative density:	0,96
	<ul><li><i>13.</i> Solubility(ies):</li><li><i>14.</i> Partition coefficient: n-octanol/water:</li></ul>	in water: negligible no data available
	15. Self-ignition temperature:	395°C
	16. Degradation temperature:	no data available
	17. Viscosity:	no data available
	18. Explosive properties:	no data available
0.0	19. Oxidizing properties:	no data available
9.2.	<u>Other information:</u> No data available.	
	No data avallable.	
10.	STABILITY AND REACTIVITY	
10.1.	Reactivity	
	None known.	
10.2.	Chemical stability	
10.3.	Stable. Possibility of hazardous reactions:	
10.5.	Hazardous polymerization will not occur.	
10.4.	Conditions to avoid:	
	Heat, flame, build up of dusts.	
10.5.	Incompatible materials:	
10.6.	Strong oxidizers. Hazardous decomposition products:	
10.0.	Smoke, carbon monoxide, acetaldehyde, forma	aldehyde formic acid acetic acid
11.	TOXICOLOGICAL INFORMATION	
11.1.	Information on toxicological effects	
	Acute toxicity: none known.	
	Irritation: none known. Corrosivity: none known.	
	Sensitisation: none known.	
	Repeated dose toxicity: none known.	
	Carcenogenity: none known.	
	Mutagenicity: none known.	
11.1.1.	Reproduction toxicity: none known.	mmaries of the information derived from the test conducted:
11.1.1.	No data available.	minaries of the mormation derived nom the test conducted.
11.1.2.	Relevant toxicological properties of the hazard	lous substances:
	No data available.	
11.1.3.	Information on likely routes of exposure:	
11.1.4	ingestion, inhalation, skin and eye contact.	
11.1.4.	Symptoms related to the physical, chemical an No data available.	a toxicological characteristics:
11.1.5.	Delayed and immediate effects as well as chro	nic effects from short and long-term exposure:
	No data available.	
11.1.6.	Interactive effects:	
	No data available.	
11.1.7.	Absence of specific data:	
11.1.8.	No information. Other information:	
11.1.0.		evidence to classify wood fiber as a human carcinogen. IARC has classified carbon
		on animal data. When wood fiber and carbon black are incorporated into a polymer
	matrix exposure is virtually eliminated.	
12.	ECOLOGICAL INFORMATION	
12.1.	<u>Toxicity:</u> No data available.	
12.2	Porsistance and degradability	

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Persistence and degradability

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12.2.



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No data available.

- 12.3. <u>Bioaccumulation potential:</u> No data available.
- 12.4. <u>Mobility in soil</u>
- No data available.

   12.5.
   Results of PBT and vPvB assessment No data available.
- 12.6. <u>Other adverse effects:</u> No data available.

#### 13. DISPOSAL CONSIDERATIONS

- 13.1. Waste treatment methods:
- Disposal according to the local regulations. 13.1.1. Information regarding the disposal of the product:
- 13.1.1. Information regarding the disposal of the product: Dispose of waste as normal refuse. During the disposal of the product, its residue and its packaging the national and local prescriptions should be observed. The EWC codes indicated below are only recommendations, but they may have to be changed due to special circumstances, in such cases new classification may be needed.
- 13.1.2. Information regarding the disposal of the packaging
- According to the consideration regarding the product.
- 13.1.3. Physical/chemical properties that may affect waste treatment options shall be specified: None known.
- 13.1.4. Sewage disposal: None known.
- 13.1.5. Special precautions for any recommended waste treatment: No data available.

### 14. TRANSPORT INFORMATION

- Not dangerous good in sense of the transport regulations!
- 14.1. UN Number:
- 14.2. <u>UN proper shipping name:</u>
- 14.3. Transport hazard class(es):
- 14.4. Packaging group
- 14.5. Environmental hazard
- 14.6. Special precautions for user
- 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

#### 15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

COMMISSION REGULATION (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures

DIRECTIVE 1999/45/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

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COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

#### 15.2. Chemical safety assessment: -

#### 16. OTHER INFORMATION

Information regarding the revision of the safety data sheet: -

Full text of the abbreviations in the safety data sheet:

DNEL: Derived no effect level. PNEC: Predicted no effect concentration. CMR effects: Carcinogenity, Mutagenicity and reproduction toxicity. PBT: Persistent, bioaccumulative and toxic. n.d.: not defined. n.a.: Not applicable. Data sources: -

Data sources: -Relevant R-Phrases (number and full text) of Section 2 and 3: -

Relevant R-Phrases (number and full text) of Section 2 and 3: -Relevant H-Phrases (number and full text) of Section 2 and 3: -

Training instructions: -

Recommended restrictions on use (non-statutory recommendations by supplier): -

This safety data sheet had been prepared on the basis of information provided by the manufacturer. The information, data and recommendations contained herein are provided in good faith, obtained from reliable sources and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information. The SDS shall be used only as a guide for handling the product; in the course of handling and using the product other considerations may arise or be required. Since the conditions or the handling, the storage and the disposal of this product are beyond the control of the manufacturer, the distributor or the preparer of this SDS, no warranty, expressed or implied, regarding the product described in this SDS shall be created or inferred by any statement in this SDS. No responsibility is assumed regarding the accuracy, completeness or suitability of all or any of the information contained herein or the results to be obtained from the use thereof at the time of use. In no way shall the manufacturer, the distributor or the preparer of the be liable for any claims, losses or damages of third parties, personal injury, property damage, lost profits or any special, direct, indirect, incidental, consequential or exemplary damages resulting from the use of or reliance upon such information. Users are cautioned to determine the appropriateness and applicability of the above information to their particular circumstances and purposes and assume all risk associated with the use of this product. It is the responsibility of the user to fully comply with local, national and international regulations concerning the use of this product.

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#### TREX® WOOD-POLYMER PRODUCTS

27 TECHNICAL SPECIFICATIONS | MATERIAL SAFETY DATA SHEET



### ICC-ES SAVE (RECYCLED CONTENT CERTIFICATION)

### ES ICC EVALUATION SERVICE

#### ICC-ES Evaluation Report

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#### ESR-3168

Reissued January 1, 2014 This report is subject to renewal February 1, 2016.

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES Section: 06 50 00—Structural Plastics Section: 06 53 00—Plastic Decking

#### REPORT HOLDER:

TREX COMPANY, INC. 160 EXETER DRIVE WINCHESTER, VIRGINIA 22602 (540) 542-6300 www.trex.com

EVALUATION SUBJECT:

#### TREX<sup>®</sup> TRANSCEND<sup>™</sup> DECKING

#### 1.0 EVALUATION SCOPE

- Compliance with the following codes:
- 2009 International Building Code<sup>®</sup> (2009 IBC)
- 2009 International Residential Code<sup>®</sup> (2009 IRC)
- 2006 International Building Code<sup>®</sup> (2006 IBC)
- 2006 International Residential Code<sup>®</sup> (2006 IRC)

#### Properties evaluated:

- Structural
- Durability
- Surface-burning characteristics

#### 2.0 USES

Trex<sup>®</sup> Transcend<sup>™</sup> Decking is for use as deck boards for exterior balconies, porches, decks, stair treads and other exterior walking surfaces of Type V-B (IBC) construction, and in structures constructed in accordance with the IRC. Trex<sup>®</sup> Transcend<sup>™</sup> Fascia Board is for use as nonstructural trim components for exterior balconies, porches and decks of Type V-B (IBC) construction, and in structures constructed in accordance with the IRC.

#### 3.0 DESCRIPTION

#### 3.1 General:

Trax<sup>®</sup> Transcend<sup>™</sup> is a wood thermoplastic composite lumber (WTCL) deck board and fascia, with an integrated shell that covers the boards on the top surface and sides. The underside of the boards and fascia is not covered by the integrated shell. The integrated shell consists of a proprietary surface formulation that produces a natural, wood-like grain pattern finish. The deck board and fascia are made from approximately 50 percent wood fiber and 50 percent polyethylene by weight, and are alternatives to

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preservative-treated or naturally durable lumber. Trex<sup>®</sup> Transcend<sup>™</sup> is manufactured by a continuous extrusion process and is available in six colors (gravel path, fire pit, vintage lantern, tree house, spiced rum and lava rock) and two textures. Trex<sup>®</sup> Transcend<sup>™</sup> square deck boards are 5<sup>1</sup>/<sub>2</sub> inches wide and 1 inch thick (140 mm by 25.4 mm). The Trex<sup>®</sup> Transcend<sup>™</sup> grooved-edge boards are 5<sup>1</sup>/<sub>2</sub> inches wide and 1 inch thick (140 mm by 25.4 mm) and have a groove in each face of the 1-inch-thick sides, running the length of the board. The Trex<sup>®</sup> Transcend<sup>™</sup> Fascia has a square edge profile, is <sup>3</sup>/<sub>4</sub> inch thick, and is available in nominally 1-by-8 and 1-by-12 profiles. The Trex Hideaway<sup>®</sup> Hidden Fastener System is designed specifically for the Trex<sup>®</sup> Transcend<sup>™</sup> grooved-edge board and consists of a stainless steel clip or a plastic universal clip and No. 8 by 2-inch (51 mm) stainless steel flathead screws.

#### 3.2 Durability:

When subjected to weathering, insect attack and other decaying elements, the deck board and fascia material are equivalent in durability to preservative-treated or naturally durable lumber. Accordingly, the material is permitted to be used as an alternative to preservative-treated or naturally durable lumber on exterior decks, porches, balconies and stair treads, as applicable. The deck board and fascia have been evaluated for use in ambient air temperatures between -20°F (-29°C) and 125°F (52°C).

#### 3.3 Surface-burning Characteristics:

When tested in accordance with ASTM E 84, Trex<sup>®</sup> Transcend<sup>™</sup> boards have a flame-spread index no greater than 200.

#### 4.0 DESIGN AND INSTALLATION

#### 4.1 Design: Allowable Stresses:

Table 1 lists allowable stress values for the Trex<sup>®</sup> Transcend<sup>™</sup> decking recognized in this report. These values must not be adjusted.

#### 4.2 Installation:

4.2.1 Deck Boards: The deck boards must be installed perpendicular to the supporting construction, which is limited to a maximum spacing as prescribed in Table 2. The deck boards must be spaced at edges and ends in accordance with the manufacturer's published installation instructions.

**4.2.2 Deck Boards Used as Stair Treads:** The deck boards, when used as stair treads, are sufficient to resist the code-prescribed concentrated load of 300 lbf (1.33 kN) when installed at a maximum center-to-center spacing as indicated in Table 3.

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**4.2.3 Deck Board Fasteners:** Trex<sup>®</sup> Transcend<sup>™</sup> grooved-edge boards, when installed with the Trex Hideaway<sup>™</sup> Stainless Steel or Universal Hidden Fastener Systems with No. 8 by 2-inch (51 mm) stainless steel flathead screws, have an uplift rating of 100 psf (4788 Pa) up to a maximum span of 16 inches (406 mm) when installed at each support. Trex<sup>®</sup> Transcend<sup>™</sup> solid boards are to be installed on the ends of the boards with two No. 8 or No. 10 by 2<sup>1</sup>/<sub>2</sub>-inch (63.5 mm) wood screws at each support, at least 1 inch (25.4 mm) from the board end and sides, and at least one No. 8 or No. 10 wood screw at each support alternating each side of the board in a zigzag pattern. The allowable fastener head pull-through capacity for the screws is 349 lbf (1553 N) per fastener. Multiple joists or blocking must be used to provide adequate surface for fastener embedment of board ends.

#### 5.0 CONDITIONS OF USE

The Trex<sup>®</sup> Transcend<sup>™</sup> deck boards described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The Trex<sup>®</sup> Transcend<sup>™</sup> Decking is limited to exterior use as deck boards for balconies, porches, decks and stair treads of Type V-B (IBC) construction and structures constructed in accordance with the IRC.
- 5.2 The Trex<sup>®</sup> Transcend<sup>®</sup> Fascia is limited to exterior use as trim for balconies, porches and decks of Type V-B (IBC) construction and structures constructed in accordance with the IRC.
- 5.3 Installation must comply with this report, the manufacturer's published instructions and the applicable code. When the manufacturer's published installation instructions differ from this report, this report governs.
- 5.4 The use of the Trex Transcend<sup>®</sup> Decking and fascia as a component of a fire-resistance-rated assembly is outside the scope of this report.

- 5.5 The compatibility of the fasteners with the supporting construction, including chemically treated wood, is outside the scope of this report.
- 5.6 The deck boards must be directly fastened to supporting construction. Where required by the code official, engineering calculations and construction documents consistent with this report must be submitted for approval. The calculations must verify that the supporting construction complies with the applicable building code requirements and is adequate to resist the loads imparted upon it from the products and systems discussed in this report. The documents must contain details of the attachment to the supporting structure consistent with the requirements of this report. The documents must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.
- 5.7 The Trex<sup>®</sup> Transcend<sup>™</sup> deck board and fascia is produced in Winchester, Virginia, and Fernley, Nevada, under a quality control program with inspections by ICC-ES.

#### 6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with applicable portions of the ICC-ES Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (AC174), dated July 2010.
- 6.2 Test data in accordance with ASTM D 7031 for bending, compressive stress parallel to longitudinal direction (F<sub>c</sub>), compressive stress perpendicular to longitudinal direction (F<sub>c</sub>⊥) and shear stress (F<sub>v</sub>).

#### 7.0 IDENTIFICATION

The deck board and fascia board described in this report must be identified by a label on the packaging bearing the Trex Company, Inc., name and address, the product name, the name of the inspection agency (ICC-ES) and the evaluation report number (ESR-3168).

#### TABLE 1-ALLOWABLE DESIGN STRESS VALUES FOR TREX TRANSCEND SOLID AND SLOTTED DECKING

PROPERTY	ALLOWABLE DESIGN VALUE (psi)
Flexural stress (F <sub>b</sub> ) <sup>1</sup>	500
Modulus of Elasticity (E) <sup>1</sup>	200,000
Compressive stress parallel to longitudinal direction $(F_{\varepsilon})^2$	540
Compressive stress perpendicular to longitudinal direction $(F_{e^{\perp}})^2$	540
Shear stress (F <sub>v</sub> ) <sup>2</sup>	360

For SI: 1 psi = 6.9 kPa.

<sup>1</sup>Values are based on testing for flatwise bending. <sup>2</sup>Values are based on testing to ASTM D 7031.

#### TABLE 2-DECK BOARD SPAN RATING

DECK BOARD	MAXIMUM SPAN (in.) <sup>1</sup>	ALLOWABLE CAPACITY (Ibf//ft <sup>2</sup> ) <sup>2</sup>
1-by-5.5 solid	24	100
1-by-5.5 grooved-edge	16	100

For SI: 1 inch = 25.4 mm; 1 lb/ft<sup>2</sup> = 47.9 Pa.

<sup>1</sup>Maximum span is measured center-to-center of the supporting construction.

<sup>2</sup>Maximum allowable capacity is adjusted for durability. No further increases are permitted.

#### TABLE 3-MAXIMUM STAIR TREAD SPANS<sup>2</sup>

DECK BOARD	MAXIMUM SPAN (inches) <sup>1</sup>
1-by-5.5 solid	12
1-by-5.5 grooved-edge	12

For SI: 1 inch = 25.4 mm; 1 lb/ft<sup>2</sup> = 47.9 Pa.

Maximum span is measured center-to-center of the supporting construction.

<sup>2</sup>Based on a minimum two-span installation.

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FIGURE 2—FASCIA PROFILE



FIGURE 3-HIDDEN FASTENER PROFILE



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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<sup>™</sup> Decking and Trex Transcend<sup>™</sup> 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 Biobased 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<sup>®</sup> 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

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Trex<sup>®</sup> 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<sup>TM</sup> Decking and Trex Transcend<sup>TM</sup> Fascia: 1x8 and 1x12have 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].
- 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.]

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

#### TABLE 2-BIOBASED MATERIAL CONTENT SUMMARY

PRODUCT	MINIMUM % BIOBASED CONTENT	METHOD OF DETERMINATION
Trex Transcend <sup>™</sup> Decking Trex Transcend <sup>™</sup> 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	<u>ESR-3168</u>	



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TABLES 4 THROUGH 7 Transcend<sup>™</sup> Decking Transcend<sup>™</sup> Fascia: 1x8 & 1x12 Section Possible Section Intent Conditions of Use to Qualify for Points Points Number xex Xex TABLE 4—SUMMARY OF AREAS OF ELIGIBILITY WITH THE NATIONAL GREEN BUILDING STANDARD (ICC 700-2008) To earn 6 points all structural elements must be termite resistant in areas of 602.8 Termite-resistant materials are used. 6 max heavy termite infestation. 2 or 4 points are available for areas with lower ٠ infestation probability. 2, 4 or 6 points may be earned when products are used with another major Use two or more major and/or minor 2 604.1 building materials containing recycled building component with recycled content of 25% < 50%; 50% < 75%; 6 max content ≥ 75%, respectively. Two types of biobased materials are 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 used, each for more than 1 percent of 606.1(2) 6 • the project's projected building material cost. material cost. The moisture content of lumber is sampled to ensure it does not exceed To earn 4 points the moisture content of lumber must be determined to not 903.4.1(3) 4 0 19 percent prior to the surface and/or exceed 19%, such as measuring with a moisture meter, prior to enclosure. wall cavity exposure. TABLE 5-SUMMARY OF AREAS OF ELIGIBILITY WITH USGBC'S LEED FOR HOMES 2008 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) MR 2.2 Recycled content. 0.5 • 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 To earn 1 point use materials with recycled content such that the sum of postconsumer recycled content plus  $\frac{1}{2}$  of the preconsumer content 1 MR4 Recycled content. • 2 max constitutes at east 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 Use materials with postconsumer or preconsumer recycled content value A4.405.3 Recycled content. N/A for a minimum of 10% of the total value, based on estimated cost of • A5.405.4 materials on the project. Moisture content of lumber may be measured with an appropriate handheld 4.505.3 Moisture content of building materials. N/A o moisture meter. = Eligible for points o

Verified attribute

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

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# INSTALLATION

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## JOB SITE STORAGE & SAFETY

Before installing any Trex<sup>®</sup> product, you should review local building codes and regulations, and consult with local building officials, to ensure compliance and 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 .61 m on center. Supports should line up vertically.
- » **DO NOT** stack Trex higher than six bundles (units) or 3.7 m 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<sup>®</sup>. 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 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 *curveitnow.com*.

\*Trex CustomCurve® 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 <sup>®</sup> ** 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 <sup>®</sup> * Concealed Fasteners
Transcend®	x	х	х	х	х	х	х
Enhance®	x	x	x	х	x	х	х

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 predrill when you use these screws. *See Framing and Fastening Tips, page 40.* 

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.

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.



### HOW TO INSTALL UNIVERSAL HIDDEN FASTENERS





**TOOLS NEEDED** 



Start clip Universal fastener

**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

 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<sup>®</sup> 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 41.
- 5. Place second set of fasteners on each side of butt seam for next board.

### HOW TO REPLACE TREX® BOARDS INSTALLED WITH UNIVERSAL FASTENERS



2 New board at an angle Existing Deck



- 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 Bearer Systems on page 44.* 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, 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.



### 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.

### SPECIAL PATTERNS

When planning a unique pattern, you will need to adjust the framing to support the surface pattern. *Refer to the gapping and span charts on page 41 and 42.* Many decks are designed to take advantage of angles, as shown below.



Herringbone Pattern



Tile Pattern



Picture Frame Pattern



## GAPPING

You must gap Trex<sup>®</sup> 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.
- » 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*	3mm	6 mm	
Below 4.5 C*	5mm	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<sup>®</sup> 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.

**NOTE:** The ends of deck boards can not overhang joist by more than 10 mm.

### ADJUST JOIST SPANNING TO ACCOMMODATE ANGLED DECKING PATTERNS



Perpendicular to joists. See chart below.



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



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



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

TREX DECKING SPAN CHART (On Center)				
	Residential Decks, Light Duty Docks, Residential/Day Care Playground		Commercial Decks, Boardwalks and Marinas	
Decking Loading	4788 N/m²	4788 N/m²	9576 N/m²	
25 mm Boards	406 mm	406 mm	305 mm	

TREX RAILING SPAN CHART		
Maximum Railing Span for all Applications (on center of posts)		
Transcend Railing	2438.4 mm on center	



## STAIRWAY ASSEMBLY

#### STAIRWAY DETAIL

- » Fasten stair treads continuously across at least four stringers.
- » See chart below for center-to-center spacing of profiles.
- » Dress the sides of the stringers and risers with Trex<sup>®</sup> 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 mm x 152 mm, 25 mm x 152 mm Boards



### 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.

305 mm

43 INSTALLATION | STAIRWAY ASSEMBLY



## BEARER SYSTEMS



#### **BEARER SYSTEMS**

A bearer system is a substructure 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, bearer system access may be necessary.

It is recommended that building code approved structural material be used as the supports.

End to End gapping rules are required when installing Trex Decking. See chart on page 41.

This system should not be allowed to float; it must be attached in a manner that secures the framing/system.

The bearer system must be level and have no uneven undulations. Any uneven areas of the substructure will transfer to the Trex decking, resulting in uneven decking.

Trex, when used with a bearer system, must be supported below its entire length and if using in a roofing application, the supports must run the direction of the pitch of the roof to facilitate proper drainage. Bearer should be placed perpendicular to the deck board orientation.

- » For Commercial applications it is recommended to consult local building code official for specific requirements.
- » If installing decking at angle, decrease spans 100 mm (4") for each of the above. (305 mm/12" for residential and 204 mm/8" for commercial).

For bearer systems where little debris (leaves, sand, dirt) can accumulate either between or under deck boards, a minimum of 38 mm (1.5") height is allowable and Trex Universal Hidden Fasteners can be used. (*Note that Trex recommended composite decking screws are too long when using 38 mm* (1.5") height as this will penetrate through the bearer.) For areas with the potential for debris buildup, a minimum 89 mm (3.5") or greater height is recommended to allow the debris to be removed along with the use of either Trex Universal Hidden fasteners or Trex recommended screws.

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

Any deviation from these recommendations could result in the voiding of the Trex warranty.



# CARE & OWNERSHIP

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   Trex Contour<sup>®</sup> and Trex<sup>®</sup> Fascia
   Limited Fade & Stain Warranty



## TREX TRANSCEND® AND TREX ENHANCE® CARE AND CLEANING GUIDE

All exterior building materials require cleaning. Generally, soap and water is all that is required to clean Transcend and Enhance products. For further 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	Most colored chalks are permanent and may discolor the surface. Use only chalk lines that contain chalk that can be easily removed or washed off.	
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. <b>The surface must be cleaned within</b> <b>seven days to maintain the stain warranty.</b> 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.	
A pressure washer with <b>no greater</b> than 3100 psi** that has a fan attachmen and soap dispenser may be used to remove dirt, concrete dust, or other types of dirt. Spray deck with soap, then follow with gently scrubbing each deck board Washer Washer bristle brush. Spray/rinse each individual deck board using a fan tip no close the decking surface. <b>RINSE THOROUGHLY.</b> If dirty water from cleaning is left will cause a film to remain on the decking surface.		
Maintaining Transcend Railing	NEVER use acetone or other solvents on Trex Transcend railing to maintain the beauty of the surface. For color transfer issues (from attachment of baluster spacer), use Mr. Clean <sup>®</sup> Magic Eraser <sup>®</sup> Original or Magic Eraser <sup>®</sup> Extra Power to help remove this.*** For small surface scratches, marks, or scuffs, use Dupli-Color Scratch Seal <sup>™</sup> Clear Sealer Pen. *****	

\*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.

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### TREX<sup>®</sup> 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), the term of the warranty for the LED lights and housing for Trex<sup>®</sup> DeckLighting<sup>™</sup> shall be seven (7) years, the term of the warranty for the LED lights and housing for Trex<sup>®</sup> LandscapeLighting<sup>™</sup> shall be five (5) years, and the term of the warranty for the dimmer, timer and transformer for both shall be three (3) years, in each case provided that a Trex transformer is used (with no warranty on any components if a Trex transformer is not 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<sup>®</sup> aluminum railing and TrexTrim<sup>™</sup> (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 U. S. A.

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.

Some nations do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may haveotherrightswhichvaryfromnationtonation. Consumershave legal rights under applicable national legislation governing the sale of consumer goods. This warranty does not affect those rights.

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### TREX TRANSCEND<sup>®</sup>, TREX ENHANCE<sup>®</sup>, TREX CONTOUR<sup>®</sup> AND TREX<sup>®</sup> 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 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, barbeque 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 useitems, 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 sharpedged 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<sup>®</sup> 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 U. S. A. 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 refore 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%

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