



2009 Installation Guide





Trex Accents® Decking

Trex Accents decking features a natural woodgrain on one side, a smooth contemporary look on the other.

The Trex Advantage

- Low maintenance
- Splinter free
- 25 Year Limited Residential Warranty
- Most preferred colors and finishes
- Most natural look and feel
- Outstanding workability

Trex® Installation Guide

In your hands, you're holding everything you need to begin building with Trex. This guide will take you through all the steps you need to create a beautiful outdoor living space that fits perfectly into your or your client's lifestyle.

Only Trex has been proven in the field for over fifteen years of unparalleled performance. You'll find Trex offers a warm, natural beauty and an inviting comfort that no other product can match. Maybe that's why Trex is asked for by more customers than any other name in the business.

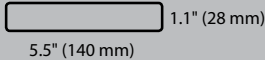
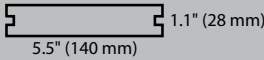
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Product Specifications

USE	PROFILE	PRODUCT LINE	MEASUREMENTS	AVAILABLE COLOR
DECKING & DOCKS	5/4	Accents	8'*, 12', 16', 20' 2.4m**, 3.7m, 4.9m, 6.1m	SD, WG, MB, WB
	5/4	Accents with Groove	12', 16', 20' 3.7m, 4.9m, 6.1m	SD, WG, MB, WB
<div>COLOR KEY</div> <div> SD Saddle WG Winchester Grey MB Madeira WB Woodland Brown </div> <div>** Saddle only</div>				

Product Profiles

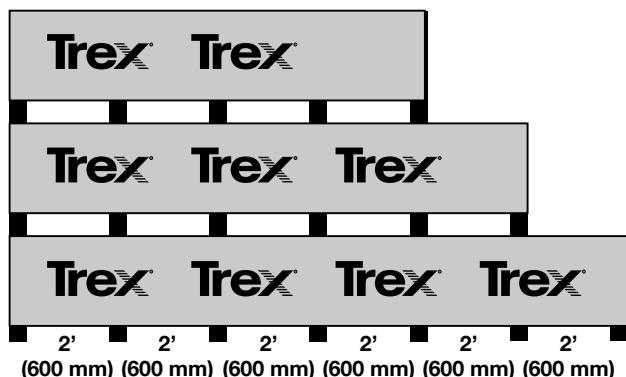
DECKING & DOCKS
<div>5/4 Boards</div> <div>   </div>

Trex® Color Palette

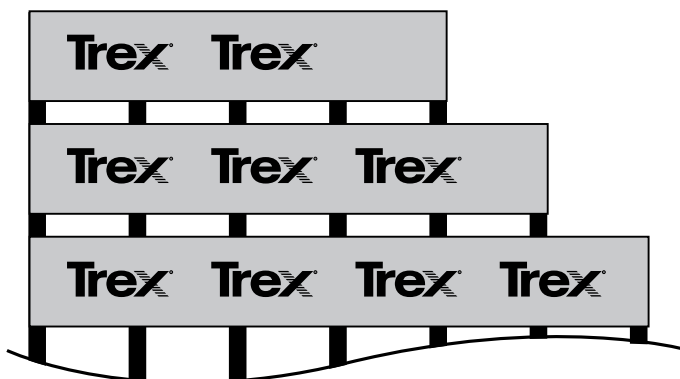
Trex Accents® Color Palette

				Before Weathering
Saddle	Winchester Grey	Madeira	Woodland Brown	
				After Weathering

Visit [trex.com](https://www.trex.com) for more information.



Units of Trex lumber on level ground.



Units of Trex lumber on uneven ground.

Job Site Storage

There are several important things to remember when storing Trex® decking, railing and fencing. Trex decking, railing and fencing must be stored on a flat surface.

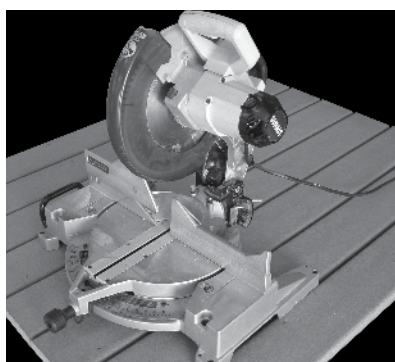
- Trex decking, railing and fencing must be supported with dunnage as placed in bundles.
- When stacking Trex decking, railing and fencing, supports should start at each end of the unit and line up vertically.
- Trex decking, railing and fencing must be supported on a level plane. Adjust support blocks accordingly.
- Do not stack Trex higher than 6 units or 12' (3.6 m) high.
- **Cover material on site until it is to be installed.**

Safety

As with any construction project, you should wear the proper protective clothing and safety equipment. Trex decking and railing is heavier and more flexible than wood. Do not try to lift similar quantities of Trex boards as you would traditional lumber. It is good practice to wear safety glasses, gloves, a dust mask and long sleeves, particularly when cutting in confined spaces.

Tools

Intricate shapes, profiles and patterns are possible with Trex®. For most installments, no special tools are required. For best results, use carbide-tipped blades and router bits.



When using a miter saw, we recommend a 10 - 12" (25 - 30 cm) saw blade with 40 teeth or less.



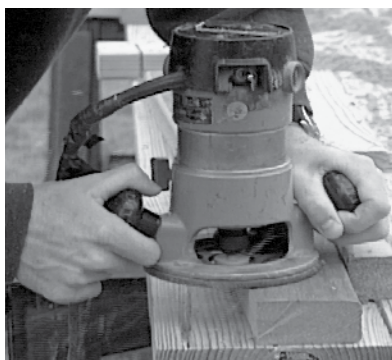
Install Trex recommended fasteners with standard power drills.



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



When drilling, periodically lift the bit out of the hole to remove the shavings.



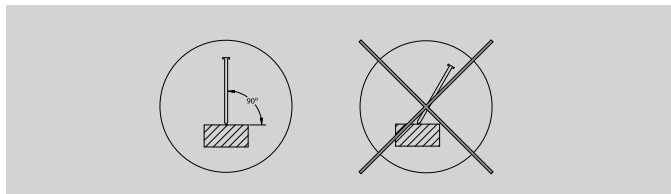
Trex routes beautifully to give extremely crisp edges.

FACT:

- Most colored chalk lines are permanent. **We suggest using baby powder or Irwin strait-line dust off marking chalk available at irwin.com.**
- We do not recommend sanding. Sanding will change the appearance of the surface of the Trex material, **and can void warranty.**

Fasteners

Trex® decking can be assembled with most traditional fastening methods. It is recommended to install all fasteners perpendicular (at a 90 degree angle) to the boards. If screws are not installed at a 90 degree angle, then “dimpling” near the fastener head may result and leave a less than satisfactory appearance.



Other Fasteners

- Standard composite deck screws, trim head screws, ring shank nails and conventional exterior grade deck screws also work. However, screw holes may need some reworking to give a smooth, aesthetic appearance.
- A method to reduce any dimpling that may occur as a result of using these fasteners is to drill a 1/8" (3 mm) deep pilot hole using a drill bit that is the same diameter as the screw head being used. This works well with all screws. However, caution should be used to not countersink more than 1/4" as this will impact the screw's holding power.

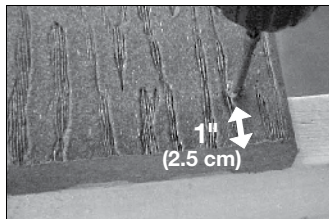
MINIMUM FASTENER SIZE

Profile	Nails		Screws	
	Length	Gauge	Length	No.
5/4 x 6 (28 x 140mm)	3" (7.6 cm)	12	2-1/2" (6.4 cm)	#8, #10

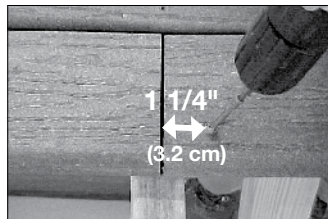
Framing and Fastening Tips

Check your local building codes for restrictions. 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 9.

Fastening Tips



At board ends on the deck's edge, screws placed perpendicular at the recommended distance (1"/2.5 cm) from the board edge and side can be installed without board splitting.



Trex does not have a linear grain like wood, and will not split if fasteners are started 1 1/4" (3.2 cm) from the board edges and angled into the joist. 1" (2.5 cm) can be done, but should be pre-drilled first. Pre-drilling will reduce the probability of splitting. Please see page 11 for gapping guidelines.

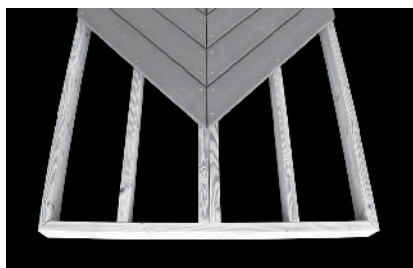


An alternative method for butt joints, where boards meet over a single joist, is to add a 2 x 4 "nailer" board at the butt joint. This allows a screw to be installed at a 90 degree angle.

Note: Fasten board ends with at least two fasteners. Fasten at least one fastener at every joist in a zig-zag pattern.

Special Patterns

When planning a unique pattern, you will need to adjust the framing to support the surface pattern. Please refer to the span and gapping chart on pages 10 and 11. Many decks are designed to take advantage of angles, as shown below.



Herringbone pattern



Tile pattern



Picture Frame pattern

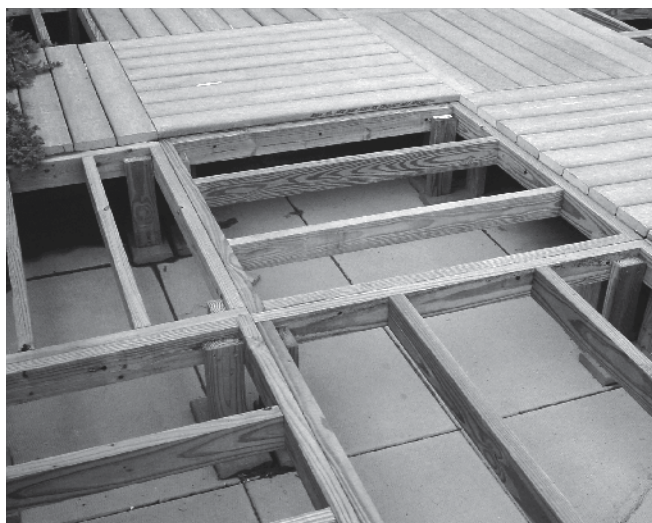
Rooftop and Sleeper Deck Systems

Sleeper Deck Systems

A sleeper system is a buffer between the solid surface and Trex®. 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 good-looking.

Roof deck notes

- Consult your building code authority for proper detail on railing installation to the roof structure.
- If access to the roof is desired, the Trex deck must be built in removable sections or with removable fasteners to allow access to roof.
- The 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.



Sleeper system notes

- Surface below the deck must be pitched for proper drainage.
- ¼ - ½" (6 - 12 mm) gap abutting walls or other fixed objects.
- Gaps between deck boards should be 3/8" (10 mm) minimum on a sleeper system.
- Minimum height of a sleeper joist is 3½" (90 mm).
- Trex, when used with a sleeper system, must be supported below its entire length and the supports must run the direction of the pitch of the roof to facilitate proper drainage.

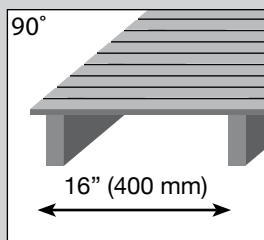
Span Tables

Joist Spanning for Decking

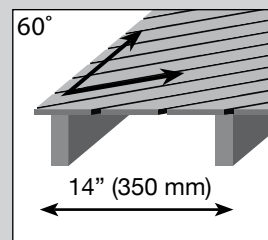
Trex® decking meets all applicable national model building codes. The joists must be spaced on centers according to the chart below. Be sure that all joists are level and plumb. Trex decking must span at least three joists. For load-bearing applications such as hot tubs, planters, etc., consult a local building engineer or inspector for span recommendations. Paint the top of your joists black to minimize the appearance of joists through spaces between boards.

For an MSDS please visit trex.com.

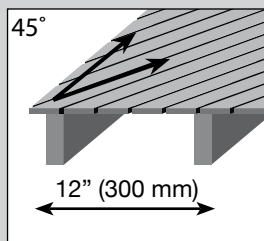
Adjust Joist Spanning to Accommodate Angled Decking Patterns*



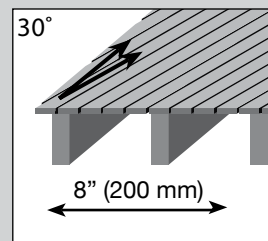
Perpendicular to joists.
See chart below.



At a 60° angle,
maximum joist
spanning is 2" less
than below chart.



At a 45° angle,
maximum joist
spanning is 4" less
than below chart.



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

Trex Decking and Railing Span Chart (on centers)

Decking Loading	Residential Decks, Light Duty Docks, Residential/Daycare Playground	Commercial Decks, Boardwalks & Marinas	
	100psf	100psf	200psf
5/4 Boards	16" (400 mm)	16" (400 mm)	12" (300 mm)

Gapping

Trex® decking must be gapped, both end-to-end and width-to-width. Gapping is necessary to facilitate proper drainage and for the slight thermal expansion and contraction of the Trex decking boards. Another reason for gapping is to account for shrinkage of the wood joist system. Following the proper gapping requirements will ensure that your deck will look great year after year.

- Always follow Trex recommended gapping guidelines.
- Maximum allowable overhang for Trex is 4" (100 mm) perpendicular.
- All decks require air circulation to keep them dry and looking good. Leave openings under the decking or increase gapping to 3/8" (10 mm) to improve air flow.

Fascia

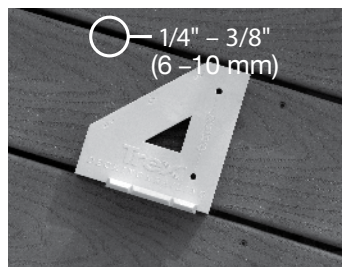
- Trex used as vertical siding or fascia around the base of a deck must be gapped the same as decking to allow for air flow.
- Fascia should be attached every 12" (300 mm) with three Trex-approved screws. The top screw should be placed 1" (2.5 cm) from the top of the rim joist, the second screw in the center of the rim joist and the third screw 1" (2.5 cm) from the bottom of the rim joist.

Width-to-Width Gap	
Below 40° F/5° C*	3/8" (10 mm)
Above 40° F/5° C*	1/4" (6 mm)

*Temperature at installation.

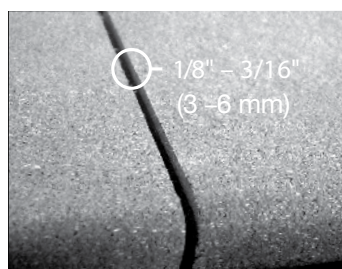
End-to-End & Abutting Gap		
	End-to-End	Abutting
Below 40° F/5° C*	3/16" (5 mm)	1/2" (12 mm)
Above 40° F/5° C*	1/8" (3 mm)	1/4" (6 mm)

*Temperature at installation.



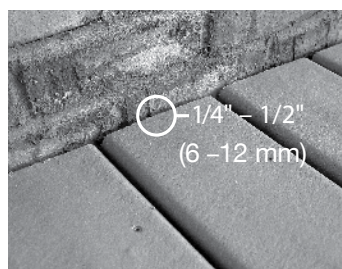
Width-to-width

The minimum required width-to-width gapping is 1/4" (6 mm). When installing in temperatures below 40° F (5° C), 3/8" (10 mm) gapping is recommended. For docks and heavily wooded areas, Trex recommends a 3/8" (10 mm) gap as well. No gapping should ever exceed 12 mm.



End-to-end

Trex decking must also be gapped end-to-end, based upon the temperature at installation. See chart at left. For fastening tips, see page 6.



Abutting Solid Objects

Trex decking must also be gapped 1/4-1/2" (6-12 mm) depending upon the temperature at installation when decking is abutting a wall. See chart at left.

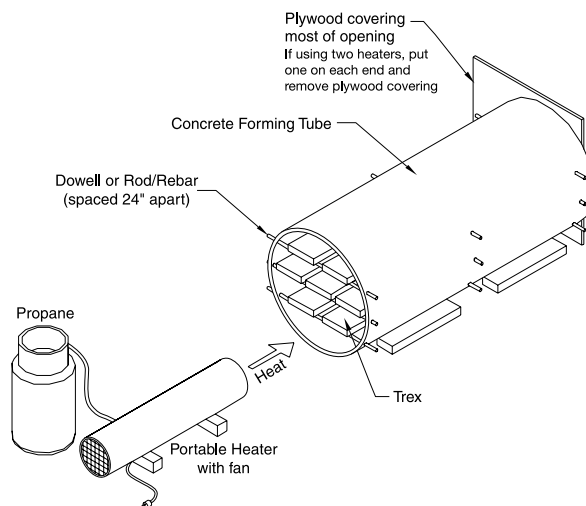
Bending Trex®

Bending Trex Requirements and Recommendations:

- Installing curved profiles will take considerably more time than installing straight profiles.
- Bending Trex profiles is difficult but can be done with care and patience.
- Bending Trex usually requires 2 or 3 people for easier installation.
- Trex profiles have a minimum radius that they can be bent to. See the chart below for additional information regarding this.
- Bending Trex profiles places them under considerable stress. Boards may break. Common causes are as follows:
 - Boards are not hot enough
 - Bending is being done at a rate faster than 1" (25 mm) per second
 - Boards are not being handled properly when removed from heater (boards are very soft when first removed and can break if not handled properly – usually by 2 or more people)
- Heaters of 140,000 BTU or larger are recommended.
- Joist spacing must be reduced by 4" (100 mm) to support curved decking.
- An ambient temperature of 60° F (16° C) is recommended when bending and installing bent Trex profiles.
- When attaching bent Trex profile to joists, attach fasteners (whether standard composite decking screws or hidden fasteners) to inside of curve first, until entire board is fully in place. Then attach remainder of outside fasteners.

Special Notes

- Trex Decking cannot bend at a radius of less than 15' (4.6 m).



Bending Trex Tips and Tricks:

1. Measure the radius that you want to achieve for your decking surface. Remember to refer to chart below for minimum radius for Trex profiles.
2. Build a fixture/jig to these dimensions. Refer to pictures.
3. Once boards are done heating, quickly and carefully place board (one at a time) in the fixture. Refer to pictures.
4. Allow boards to cool entirely within this fixture before attaching to joist decking.
5. Cooling process can be accelerated by using a garden hose to spray boards until they are cool to the touch.
6. When you remove boards from fixture (remove only one at a time), the board will automatically try and start to return to its original shape. Thus it is important to install the board as quickly as possible. Remember to attach fasteners to inside of curve first for entire length of board, then follow with remaining outside fasteners.



Boarding Type	Bending Radius	Method	Board Surface Temp	Difficulty Level
All	25' + (7.6 m +)	Tube & Heater	185° - 200° F (85° - 93° C)	Intermediate
All	20' + (6 m +)	Tube & Heater	185° - 200° F (85° - 93° C)	Intermediate
All	15 - 20' (4.5 - 6 m)	Tube & 2 Heaters	200° - 220° F (93° - 104° C)	Expert

Care and Cleaning Guide

All exterior building materials require cleaning. Periodic cleaning of Trex® Decking and Railing will maintain the beauty of a Trex deck. Trex recommends a basic cleaning to remove dirt and debris at time of installation.

Solution	
Dirt and Debris	Clean deck to remove dirt and debris. Soap, hot water and a soft brush is all that is needed.
Chalk Markings	Most colored chalk lines are permanent. For Trex we suggest using either baby powder or white chalk.
Visible Printing	The printing on the side of Trex decking boards are required by building codes. With careful installation, most printings can be hidden. Visible printings can be lightened with acetone.
Water Spots, Leaf Staining & Wood Tannins	Tannin leaching occurs in Trex and all wood-based products naturally. Allow for at least 12 weeks of normal weathering. This process may be hastened through the use of a product containing oxalic or phosphoric acid, commonly known as Deck Brightener. ★
Ice & Snow	Calcium chloride or rock salt, available in many home centers, will melt ice on Trex decking. Rinse off when first practical. Use caution when removing snow or ice with a snow shovel, and never use a metal snow shovel on a Trex deck. A shovel may scratch the deck, which is not covered under warranty.
Scuffs & Abrasions	Scuffs and abrasions can fade or disappear naturally after 12 - 16 weeks of weathering. This can be accelerated with a product containing oxalic or phosphoric acid, also known as Deck Brightener. ★
Rust Stains, Ground-In Dirt & Grime & Pigment staining	Use a cleaning product containing oxalic or phosphoric acid base, also known as Deck Brightener to lighten or remove the rust or dirt. Product may need to sit on stain 10 - 15 minutes before rinsing. ★
Oil & Grease Stains	Rinse the stain with hot water as soon as possible. Use Pour-N-Restore www.pour-n-restore.com as directed for any remaining stain.
Mold	<ul style="list-style-type: none"> Semi-annual (spring and fall) cleaning of your deck is important to prevent the buildup of pollen and other debris that can support the growth of mold. Use conventional deck washes or cleaners that contain sodium hypochlorite (bleach) and detergent (refer to Mold Technical Bulletin on www.trex.com for specific recommendations). ★
Pressure Washer/ Sanding	Trex Company does not recommend the use of a pressure washer or sanding.

**Use of products containing bleach or acid will lighten the surface of Trex. Use in an inconspicuous area to determine if lightening is aesthetically displeasing to you. Neither product will affect the structural integrity of Trex.*

Mold Technical Bulletin

Mold is a lower form of plant life that can settle and grow on any surface, including Trex® decking. Mildew is a form of mold that grows on damp surfaces.

Mold spores are similar to seeds, but cannot be seen until colonies form. Air currents, insects, animals and water transport the spores easily. Due to mold's adaptability and large number of species, it is very hard to control and impossible to totally eliminate. Mold will not affect the structural performance of Trex decking.

In order to form visible colonies, mold needs food, moisture, and temperatures between 5 and 32° C. Trex decking is not a food source for mold, but can collect food in the form of dirt and debris such as the overflow from flowerpots and gutters. Trex decking can also supply moisture if the gaps between deck boards are too small or clogged. Refer to Trex decking Usage Guidelines for gapping instructions.

How to remove Mold from Trex Decking

All exterior building materials require cleaning. Trex is no exception. Periodic cleaning of Trex decking will remove dirt and pollen that can feed mold. If mold colonies appear, clean the deck with a commercial deck wash containing a detergent and sodium hypochlorite, commonly known as bleach. This chemical will remove the mold, but please be aware it will also lighten the wood on the surface. In some cases it will require several treatments with the deck wash to completely remove all mold colonies. Even if the spots are no longer visible, there may still be mold spores on the surface that could re-grow, so periodic cleaning is important.

Limited Residential Warranty

Trex Company, Inc. (hereinafter “Trex”) warrants to the original residential purchaser (“Purchaser”) that, for a period of twenty-five (25) years from the date of original purchase, under normal residential use and service conditions, Trex, products shall be free from material defects in workmanship and materials, and shall not check, split, splinter, rot or suffer structural damage from termites or fungal decay. 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).

For purposes of this warranty, a “residential purchaser” shall refer to an individual residential homeowner.

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.

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.

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 residential use, 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, flake, 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 states 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 also have other rights that vary from state to state.

This warranty shall only be applicable and enforceable in the United States of America and Canada.

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For additional Warranty information, please go to trex.com.

Physical and Mechanical Properties

	Test Method	Values
Abrasion Resistance	ASTM D2394	.01 wear/1000 revs.
Hardness	ASTM D143	562 kg (5 kn)
Self Ignition Temperature	ASTM D1929	743°F (395° C)
Flash Ignition Temperature	ASTM D1929	698°F (370° C)
Flame Spread (a) [Fire Defense™]	ASTM E84	80 [40]
Water Absorption (sanded surface) 24 hr. immersion	ASTM D1037	4.3%
Water Absorption (unsanded surface) 24 hr. immersion	ASTM D1037	1.7%
Typical Trex® values for Coefficient of Thermal Expansion/Contraction (36" long samples)		
Thermal	Width	35.2 x 10 ⁻⁶ to 42.7 x 10 ⁻⁶ (inch/inch/°F) 644 x 10 ⁻⁶ to 776 x 10 ⁻⁶ (length/length/C)
	Length	16.1 x 10 ⁻⁶ to 19.2 x 10 ⁻⁶ (inch/inch/°F) 297 x 10 ⁻⁶ to 356 x 10 ⁻⁶ (length/length/C)
Moisture	Typical Trex values for Long Term Water Immersion (36"/91.4 cm long samples) Width ~3%	Typical Trex values for Constant High Humidity (6"/15.2 long samples) ~1%
Nail Withdrawal (c)	ASTM D1761	163 lbs/in (1123.8 kn/m ²)
Screw Withdrawal (c)	ASTM D1761	558 lbs/in (3847 kn/m ²)
Static Coefficient of Friction - Dry (d)	ASTM D2047	0.53/0.55
Static Coefficient of Friction - Dry (d)	ASTM F1679	0.59/0.70
Static Coefficient of Friction - Wet (d)	ASTM F1679	0.70/0.75
Fungus Resistance (White & Brown Rot)	ASTM D1413	rating = No Decay
Termite Resistance (e)	AWPAE1-72	rating = 9.6
Specific Gravity (typical)	ASTM D2395	0.91 to 0.95
		Ultimate (typical) Values Design Values
Compression Parallel (f)(g)	ASTM D198	1806 psi (12452 kn/m ²) 550 psi (3792 kn/m ²)
Compression Perpendicular (f)(h)	ASTM D143	1944 psi (13403 kn/m ²) 625 psi (4309 kn/m ²)
Tensile Strength (f)	ASTM D198	854 psi (5888 kn/m ²) 250 psi (1724 kn/m ²)
Shear Strength (f)	ASTM D143	561 psi (3868 kn/m ²) 200 psi (1379 kn/m ²)
Modulus of Rupture (f)	ASTM D4761	1423 psi (9811 kn/m ²) 250 psi (1724 kn/m ²)
Modulus of Elasticity (f)	ASTM D4761	175,000 psi (1,206,583 kn/m ²) 100,000 psi (689,476 kn/m ²)
Thermal Conductivity	ASTM C177	1.57 BTU-in/hr-ft @85°F (.0023 W/cm/C)
Leachate (I)	TCLP-EPA 1311	pass

Notes:

(a) Corresponding Smoke Developed Index is 285.

(b) Values shown are for reference only. These values should not be used to calculate gapping for Trex.

Follow Trex installation literature for proper width to width and end to end gapping information.

(c) 8d common wire nail. No. 10 wood screw.

(d) ASTM D2047 test conducted on sanded/unsanded unweathered samples with leather surface.

ASTM F1679 test conducted on sanded/unsanded weathered samples with neolite surface.

(e) Material weight loss was 0%.

(f) ultimate strength values are not meant for design analysis. Testing performed on a 2x6 (5 cm x 15 cm) cross section. Design values are for temperatures up to 130 °F (54°C).

(g) Compressive strength parallel to the length.

(h) Compressive strength perpendicular to length.

(i) Leaching was below levels established by EPA for all constituent categories.