



COMPOSITE DECKING

Part 1 General

1.1 Section Includes

- A. Composite Decking (Trex Transcend and Trex Enhance)

1.2 Related Sections

- A. Section 06-1100 – Wood Framing

1.3 References

- A. ASTM D-7032-04: Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails), ASTM International.
- B. ASTM D-7031-04: Standard Guide for Evaluating Mechanical and Physical Properties of Wood-Plastic Composite Products, ASTM International
- C. ASTM E-84-01: Test Method for Surface Burning Characteristics of Building Materials, ASTM International.
- D. ASTM D 570: Water Absorption of Plastics
- E. ASTM D 1761: Mechanical Fasteners in Wood
- F. ASTM D -1413-99: Test method for Wood Preservatives by Laboratory Soil-block Cultures
- G. ASTM C177: Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus

1.4 Design/Performance Requirements

- A. Structural Performance:
 - a. Deck: Uniform Load – 100lbf/sq.ft.
 - b. Tread of Stairs: Concentrated Load: 750 lf/sq.ft., and 1/8” max. deflection with a concentrated load of 300 lbf on area of 4 sq. in.
- B. Fire-Test Response Characteristics per ASTM E-84.

1.5 Submittals

- A. Product Data Indicate sizes, profiles, surface style, and performance characteristics
- B. Samples: For each product specified, one sample representing actual product color, size, and finish.

1.6 Delivery, Storage, and Handling

- A. Store Trex products on a flat and level surface. Adjust support blocks accordingly
- B. Support Trex bundles on supplied dunnage
- C. When stacking Trex bundles, supports should start at each end and be spaced 2' (0.61m) on center. Supports should align vertically
- D. Do not stack Trex higher than 6 bundles on 12' high
- E. Keep material covered using the provided bundle cover until time of installation.
- F. See [www. Trex.com](http://www.Trex.com) for detailed storage recommendations;
 - a. <http://s7d4.scene7.com/is/content/Trex/Installation%20Guide%202013pdf>

1.7 Warranty

- A. Provide manufactures warranty against rot, decay, splitting, checking, splintering, fungal damage, and termite damage for a period of 25 years for a residential installation and 10 years for a commercial installation. In addition provide the Trex Transcend and Trex Enhance Fade and Stain Warranty against food staining and fading beyond 5 Delta E (CIE units) for a period of 25 years for a residential installation and 10 years for a commercial installation. Specific terms for warranties can be found at; www.Trex.com

Part 2 Products

2.1 Manufacturers

- A. Contract Documents are based on products supplied 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: Composite Decking consisting of recycled Linear Low Density Polyethylene (LLDPE) and recycled wood. The product is extruded into shapes and sizes as follows:
 - i. Trex Transcend and Trex Enhance Decking Boards; 1 x 5.5”.
 - ii. Lengths – 12, 16, and 20 feet
 - iii. Color – To be specified by owner from Trex’ standard list of colors.

b. Physical and Mechanical Properties as follows:

Test	Test Method	Value	
Flame spread	ASTM E 84	60	
Thermal Expansion	ASTM D 1037	1.9 x 10-5 inch/inch/degreeF	
Moisture Absorption	ASTM D 1037	< 1%	
Nail Withdrawal	ASTM D1761	163 lbs/in	
Screw Withdrawal	ASTM D1761	558 lbs/in	
Fungus Resistance	ASTM D1413	Rating - no decay	
Termite Resistance	AWPAE1-72	Rating = 9.6	
		Ultimate (Typical)Values *	Design Values
Compression Parallel	ASTM D198	1588 psi	540 psi
Compression Perpendicular	ASTM D143	1437 psi	540 psi
Bending Strength	ASTM D198	3280 psi	500 psi
Shear Strength	ASTM D143	1761 psi	360 psi
Modulus of Elasticity	ASTM D4761	495,000psi	200,000 psi
Modulus of Rupture	ASTM D4761	3800 psi	1800 psi

* Ultimate strength values are not meant for design analysis. Design values are for temperatures up to 130F (54C)

2.2 Accessories

A. Fasteners:

- a. Trex Universal Hideaway Hidden Fasteners
- b. Screws; See -

<http://s7d4.scene7.com/is/content/Trex/Installation%20Guide%202013pdf>
for the updated recommendations on fasteners.

Part 3 Execution

3.1 Installation

- A. Install according to Trex installation guidelines.
<http://s7d4.scene7.com/is/content/Trex/Installation%20Guide%202013pdf>
- B. Cut, drill, and rout using carbide tipped blades
- C. Do not use composite wood material for structural applications

3.2 Cleaning

- A. Following cleaning recommendations as found in Trex installation guide at;
<http://s7d4.scene7.com/is/content/Trex/Installation%20Guide%202013pdf>