



SECTION 06 73 00

COMPOSITE DECKING AND RAILING SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Composite decking.
- B. Composite railing system.

1.2 RELATED SECTIONS

- A. Section 01 11 00 Rough Carpentry
- B. Section 06 20 00 Finish Carpentry
- C. Section 06 81 00 Composite Railing

1.3 REFERENCES

A. ASTM International (ASTM)

- 1) ASTM D-7032-04: Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail systems (Guards or Handrails), ASTM International.
- 2) ASTM D-7031-04: Standard Guide for Evaluating Mechanical and Physical Properties of Wood-Plastic Composite Products, ASTM International.
- 3) ASTM E-228: Standard Test Method for Linear Thermal Expansion of Solid Materials with a Push -Rod Dilatometer.

B. DESIGN / PERFORMANCE REQUIREMENTS/TEST RESULTS

- 1) Structural Performance:
 - a) Deck: Uniform Load: 100 lbf/sq. ft.
 - b) Treads of Stairs: Concentrated Load: 750 lbf/sq. ft., and 1/8" max deflection with a concentrated load of 300 lbf on area of 4 sq. in
- 2) Fire-Test-Response Characteristics per ASTM E-84:
 - a) Flame Spread Index when tested in accordance with ASTM E-84: 100
 - b) Smoke Development Index when tested in accordance with ASTM E-84: 165
- 3) Specific Gravity: 1.2 g/cm³ when tested in accordance with ASTM D-792

- 4) Flexural Properties when tested in accordance with ASTM D-6109:
 - a) Modulus of Elasticity (MOE)
 - i. -20°F - 620,000 psi
 - ii. Ambient - 406,000 psi
 - iii. 125°F - 181,000 psi
 - b) Modulus of Rupture (MOR)
 - i. -20°F - 4,041 psi
 - ii. Ambient - 2,782 psi
 - iii. 125°F - 181,000 psi
- 5) Hardness when tested in accordance with ASTM D-143: 225 lbs (web) 678 lbs (flange)
- 6) Water Absorption when tested in accordance with ASTM D-1037: 1.0% mass
- 7) Self-Ignition Temperature when tested in accordance with ASTM D- 1929, 806° F
- 8) Static Coefficient of Friction Leather when tested in accordance with ASTM D-2047:
Dry: 0.51 - 0.55 Wet: 0.85 – 0.90 \ did not slip
- 9) Coefficient of Linear Thermal Expansion when tested in accordance with ASTM E228:
 3.58×10^{-5} in/in/°F
- 10) Fungus Resistance when tested in accordance with ASTM D-1413:
White rot: zero effect Brown rot: zero effect
- 11) Termite Resistance when tested in accordance with ASTM D-3345: No attack (Block rating 10)

1.4 SUBMITTALS

- A. Product Data: Indicate sizes, profiles, surface style, and performance characteristics.
- B. Samples: For each product specified, one sample, minimum size 5.25 inches long, representing actual product, color, and finish.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Storage and Handling:
 - 1) Do not dump Green Bay Decking materials when unloading.
 - 2) Store on a flat and level surface with supports every 48in. Cover with a non-translucent material.
 - 3) Never stack decking more than four skids high.
 - 4) Please refer to installation instructions for additional guidelines on each product at:
<http://www.greenbaydecking.com/installation-and-care/>

1.6 WARRANTY

Warranty: Limited Warranty against splintering, splitting, rot, decay, or termite damage for a period of 25 years beginning from date of purchase under normal conditions of use and exposure. Please refer to complete warranties at: <http://www.greenbaydecking.com/warranty-information/>

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Green Bay Decking, LLC. 1518 S. Broadway, Green Bay, WI 54304.
- B. Substitutions: Not Permitted under Division 01.

2.2 COMPOSITE DECKING

Material Description: Composite plank consisting of high density polyethylene (HDPE), recovered cellulose, and rice hulls. Each of the product lines are extruded into sizes and shapes described below:

A. Composite Decking - Geodeck

- 1) Tongue and Groove (T&G), 1.25in x 5.5in (5.75in overall width)
- 2) Traditional (S4S), 1.25in x 5.5in
*Both offered in 12ft, 16ft, and 20ft
- 3) Color: Cedar, Driftwood, Mahogany, and Walnut
- 4) Surface texture: Brushed one side
- 5) Fastening: T&G through tongue at 55-60deg angle
S4S through face or an approved hidden fastener system

B. Composite Decking - Terrain Deck

- 1) Tongue and Groove (T&G), 1.25in x 5.5in (5.75in overall width)
- 2) Traditional (S4S), 1.25in x 5.5in
*Both offered in 12ft, 16ft, and 20ft
- 3) Color: Copper Canyon and Rustic Red
- 4) Surface texture: Brushed one side with wood grain
- 5) Fastening: T&G through tongue at 55-60deg angle
S4S through face or an approved hidden fastener system

C. Composite Decking - GeoDeck Classic

- 1) Tongue and Groove (T&G), 1.25in x 5.5in (5.75in overall width)
- 2) Traditional (S4S), 1.25in x 5.5in
- 3) Heavy Duty Commercial, 1.5in x 8.1in
*T&G and S4S offered in 12ft, 16ft, and 20ft
*HD Commercial offered in 16ft and 20ft
- 4) Color: Cedar, Driftwood, Mahogany, and Walnut
- 5) Surface texture: Brushed two sides
- 6) Fastening: T&G through tongue at 55-60deg angle
S4S through face or an approved hidden fastener system

D. Composite Decking - DuxxBak Water Shedding Decking

- 1) 1.25in x 5.75in (7.3in overall width)
*Offered in 12ft, 16ft, and 20ft
- 2) Color: Cedar, Driftwood, Mahogany, Walnut, Copper Canyon, and Rustic Red
- 3) Surface texture: Brushed one side and brushed one side with wood grain
- 4) Fastening: Through fastening wing at 55-60 deg angle

2.3 ACCESSORIES

A. Fasteners:

- 1) GeoDeck, TerrainDeck, and GeoDeck Classic
 - a) Do Not Use “Composite Screws” or Screws with “Reverse Threads”
 - b) Screws: #7,#8,#9 x 2.25 inch or longer “Trim head” stainless steel or high quality coated composite deck screws. Fastener recommendations found at: <http://www.greenbaydecking.com/technical-information/>
 - c) 8d x 2.5 inch or longer stainless steel or high quality coated ring shank “siding” nails
 - d) Traditional (S4S) plank can be installed with approved hidden fastener system found at: <http://www.greenbaydecking.com/technical-information/>
- 2) DuxxBak Decking
 - a) Do Not Use “Composite Screws” or Screws with “Reverse Threads”
 - b) Screws: #7, #8, #9 x 1.25 inch or longer “Trim head” stainless steel or high quality coated composite deck screws. Fastener recommendations found at: <http://www.greenbaydecking.com/technical-information/>

PART 3 EXECUTION

3.1 EXAMINATION

- A. Install products according to Green Bay Decking Installation Guides found at: <http://www.greenbaydecking.com/installation-and-care/>
- B. Cut, drill, and rout using carbide tipped blades.
- C. Do not use composite wood material for structural applications.

3.2 CLEANING

Follow instructions for Care & Cleaning tips found at:
<http://www.greenbaydecking.com/installation-and-care/>

END OF SECTION