



RUBBERSIDEWALKS, INC.

SECTION 32 14 00

UNIT PAVING

**TERREWALKS® Non-concrete Open Grid Modular Paving System made of 100%
Recycled Waste Plastic**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. **TERREWALKS®** interconnected (open grid) modular paving system made of 100% recycled engineered waste plastics

1.2 RELATED SECTIONS

- A. Section 03 30 00 - Cast-in-Place Concrete.
- B. Section 31 00 00 – Earthwork.
- C. Section 31 05 19 – Geotextiles.
- D. Section 32 11 00 - Bases Courses.
- E. Section 32 11 16 – Subbase Courses.

1.3 REFERENCES

- A. ADAAG – Americans with Disabilities Act (ADA) Accessibility Guidelines; US Architectural and Transportation Barriers Compliance Board.
- B. ASTM B117: Standard Test Method for Salt Spray.
- C. ASTM C1026: Standard Test Method for Resistance of Freeze – Thaw Cycling.
- D. ASTM C1028: Standard Test Method for Determining the Static Coefficient of Friction.
- E. ASTM D3884: Standard Guide for Abrasion Resistance
- F. ASTM D4762: Standard Guide Testing Compression Tolerance of Polymer Matrix Composite Materials.
- G. ASTM D6944: Standard Test Method for Impact Resistance to Thermal Cycling.
- H. ASTM E162: Standard Test Method for Surface Flammability.
- I. ASTM F355: Shock Absorbing Properties of Play Surfaces.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Selection Samples: For each finish product specified, one set of samples representing manufacturer's range of available product.
- D. Certificate of Compliance: Submit manufacturer's certificate of compliance indicating materials comply with specified requirements.
- E. Manufacturer's Project References:
 - 1. Submit list of successfully completed projects.
 - 2. Include project name and location, name of customer official, or engineer, landscape architect, architect, etc. and type and quantity of surfacing furnished.
- F. Installer's Project References:
 - 1. Submit list of successfully completed projects.
 - 2. Include project name and location, customer official, or engineer, landscape architect, architect, etc., and type and quantity of surfacing installed.
- G. Maintenance Instructions: Submit manufacturer's maintenance and cleaning instructions.
- H. Warranty: Submit manufacturer's standard warranty.

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications:
 - 1. Continuously engaged in manufacturing of surfacing products of similar type to that specified, with a minimum of nine years successful experience based on protocols and precedent with a minimum of 120 projects completed within last 5 years, and specifically 30 TERREWALKS projects within last 2 years.
- B. Installer's Qualifications:
 - 1. Successful experience in installation of interlocking modular pavement.
 - 2. Employ persons trained for installation of surfacing interlocking modular products. (ICPI accredited preferred.)
 - 3. Approved by manufacturer. (Nonqualified installers may be considered if they attend training session or training webinar. Cost of training to be assumed by installer.)

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage:
 - 1. Store materials in accordance with manufacturer's instructions.
- C. Handling: Protect materials during handling and installation to prevent damage.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 WARRANTY

- A. Materials and Workmanship: TERREWALKS shall be warranted for defects in materials and workmanship for ten (10) years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: RUBBERSIDEWALKS, Inc. which is located at: 10061 Talbert Ave. #200, Fountain Valley, CA 92708; Toll Free Tel: 877-774-4326; Tel: 714-064-1400; Fax: 714-964-8600; Email: info@rubbersidewalks.com; Web: www.rubbersidewalks.com.
- B. Substitutions: Not permitted. No equivalent.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.
- D. Applications: Sidewalks, walkways, pathways, plazas, courtyards, roof walkways, malls, shopping centers, etc. all pedestrian pavement applications. TERREWALKS® have not been tested or approved for vertical applications.

2.2 MODULAR INTERCONNECTED PAVER TILES

- A. Product: TERREWALKS are modular interconnected paving tiles.
 - 1. Material: 100% waste plastic (primarily HDPE & LDPE) molded under compression; 2%-4% mineral additives. (No polyurethane, no EPDM.)
 - 2. Size: 2' x 2.5' x 1.875". Tabs extend additional 1.5" per side on all sides. Design allows installation of minimum 4' wide sidewalks.
 - 3. Weight: 7.2 lbs per square foot (36 lbs. per paving tile).
 - 4. Colors:
 - a. Limestone Series (buff colored): Classic (concrete); Cool (very light concrete, highest solar reflectance)
 - b. Granite Series (gray): Medium and Dark gray
 - c. Designer Series: Adobe Red (terra cotta); Coastal Moss (moss)
 - d. As selected by Architect.
 - 5. Under-base: Patented channel design system to facilitate water drainage and accommodate tree root growth.
- B. Material Characteristics:
 - 1. Hardness: Shore A 93.
 - 2. Shock Attenuation: ASTM F355: Shock Absorbing Properties of Play Surfaces. G-max average: 489. Fall significantly less likely than on concrete to cause injury or broken bones. Product is not designed for playground use and is not a playground material.
 - 3. Coefficient of Friction (standard surface): ASTM C 1028: Dry=0.74; Wet=0.62; ASTM E303 Dynamic Slip Resistance CTIOA Pendulum Method; Wet = 60 (36 or higher indicates low slip). OSHA guidelines require that all walking surfaces satisfy a 0.5 Static Coefficient of Friction rating wet and dry. In new construction and alterations, ADA specifies that all walkways be stable, firm and slip resistant.

4. Taber-Abrasion: ASTM D 3884: 1,000g weight load, H-22 (high abrasion) wheels at 12,000 cycles Material loss of 5.06% indicates high wear property.
5. Compression Tolerance: ASTM D 4762: 50,000 5149 PSI Recovered 94%.
6. Salt/Chloride & Magnesium Chloride Exposure: ASTM B117: Product exposed for 24 hours. No change in surface; no stain or residue.
7. Xenon Arc Weathering: 200 hours UV testing. Lighting equivalent to outdoor daylight conditions and temperatures not exceeding 140 degrees Fahrenheit. No change after exposure to sunlight two-year equivalent.
8. Flame Spread: ASTM E 162: Index 131.18 at average temperature of 157.7 C (Surface flammability ANSI Z124.1 and Z124.1 allows Index of 450 or less). If exposed to open, constant fire, pavers are likely to smolder. Lit cigarettes, cigars or matches can burn on paver until they self-extinguish.
9. Porosity: DIN 18035: Average time through 6" interconnected seam zone: 97.5" per hour. Indicates high permeability and water capture with no pooling. Underbase channel systems promotes water capture and immediate drainage.
10. Freeze-Thaw: ASTM C 1026: Product exposed to 15 cycles of freeze-thaw at 0 Degrees. No change. No facial defects. No signs of crazing, chipping, spalling or cracking.
11. Freeze Impact: ASTM D 6944: Product frozen at 0 degrees was subjected to missile impact with no change.
12. Optical Density of Smoke: E662: Average Dm Corrected Flaming: 197 Non-Flaming 120 (450 or less is passing score).
13. LEED Credit: Qualifies for possible 4 LEED credits for recycled content, storm water drainage and heat island effect.
14. Sound: TERREWALKS™ reduces sound of pedestrian or wheeled traffic.
15. ADA Compliance: Low vibration; concrete-to- TERREWALKS transition non-affective; high coefficient of friction both dry and wet; Shore A hardness supports all pedestrian and wheeled traffic, and transition on and off concrete or other hardscape. Product designed for 4 foot minimum width.
16. Modularity: TERREWALKS is a modular system. Pavers are interconnected with patented design and can be opened by professional contractors for tree root maintenance, utilities access, seismic adjustment, relocation, etc.
17. Other: Non-toxic. All components inert solids. No volatile organic compounds. No wet latex content.
18. Thermal Emittance: .83 (Cool only).
19. Solar Reflectance: .402 (Cool only).
20. Solar Reflectance Index: 44.26 (Cool only).

- C. Subbase:
 - 1. ¾" crushed angular rock & ½" crushed aggregate (angular cut)
 - 1. Class 2 Permeable base (with angular fines).
- D. Accessories provided by product manufacturer:
 - 1. Permaloc Spiral Steel Spikes (50 ct./box) or equivalent.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly laid and compacted according to manufacturer's instructions, and inspected by an authority approved by customer.
- B. If substrate preparation is the responsibility of another installer, do not begin installation until substrates have been properly laid and compacted according to manufacturer's instructions, and inspected by an authority approved by customer.
- C. Consulting arborist recommended for tree root inspection. Roots can be left intact up to 1.875" from grade (flush to base of paver) and any tree root trimming should be approved and supervised by a consulting arborist

3.2 PREPARATION

- A. Prepare surfaces in accordance with manufacturer's instructions and protocol.

3.3 INSTALLATION

- A. Install paving system in accordance with manufacturer's instructions at locations indicated on the Drawings.

3.4 CLEANING

- A. Clean surface in accordance with manufacturer's instructions. Cleaning not required.

END OF SECTION