

A. Product Data: Submit manufacturer's product data, including warranty, maintenance and installation instructions, ASTM F1292, F1951, F2075 test results, IPEMA certificates of compliance, and samples.

B. Manufacturer Qualifications:

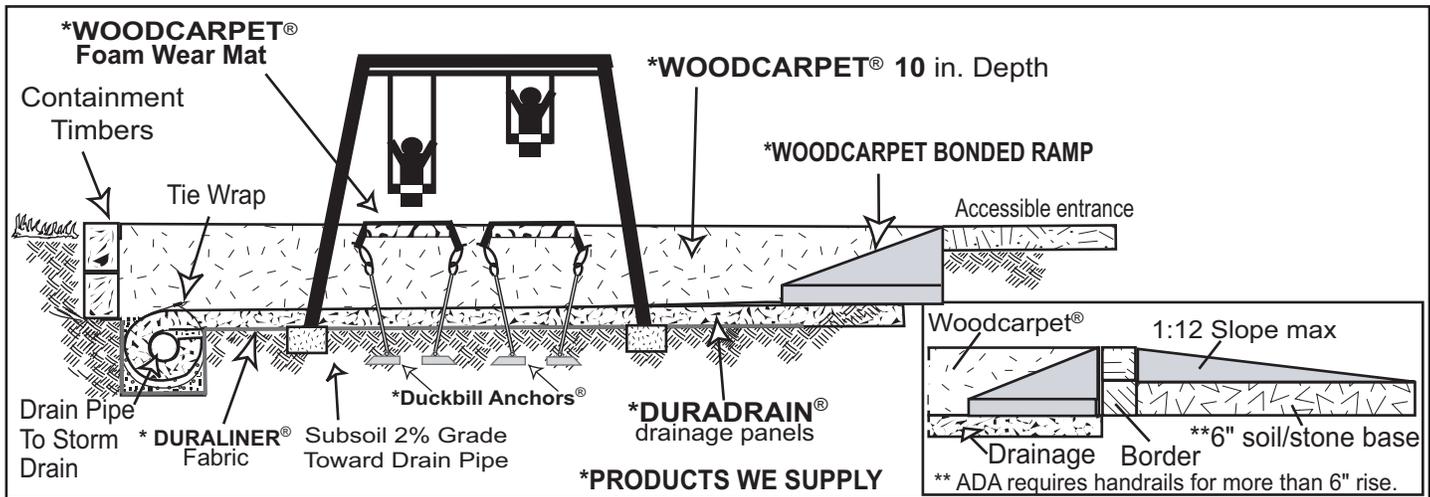
1. Member of International Play Equipment Manufacturer's Association (IPEMA).
2. Total Liability Insurance Coverage: \$11,000,000.
3. Sales Representatives attend National Playground Safety Institute (NPSI) training.

C. Warranty Covers Playground Surfacing for Following Periods:

1. Engineered Wood Fiber Playground Surfacing: 20 years
2. Playground Surfacing Wear Mat: 5 years

D. Manufacturer:

1. Zeager Bros., Inc., 4000 East Harrisburg Pike, Middletown, Pennsylvania 17057. Toll Free (800) 346-8524.
2. Zeager Hardwood Co., 340 Steele Road, Franklin, KY 42134. Toll Free (800) 296-9227.



E. Application: Outdoor playground surface using resilient foam drain.

F. Critical Height: Soil, resilient foam drain and 10 in. of Woodcarpet® provides 12 feet of fall protection. Over hard surface, resilient foam drain and 12 inches provides 12 feet of fall protection (See spec for system 13- outdoor playground area installed over hard surface for more info).

G. Installation Procedure:

1. Review project plans and verify that playground equipment use zones, clearances, and reach ranges will comply with ASTM F1487 sections 8, 9, and 10, and with CAN/CSA-Z614 sections 14 and 15.
 2. Prepare the site in accordance with the project engineer's directions and project specifications. Ensure that site drainage is routed away from or around the playground area to prevent sand, soil, silt, or other foreign material from contaminating the WOODCARPET®. Grade subsoil to a min. 2% grade toward the drain pipe. Max 7-8% with stable subsurface.
 3. Install playground equipment.
 4. Excavate a minimum 8 in.w. x 8 in.d. (20cm x 20cm) trench along the low end of the area to a storm drain. Line ditch with fabric & install drain pipe.
 5. Install DURALINER® fabric over subsoil before installing the DURADRAIN®.
 6. Install timbers or an alternate containment system above or below grade. Provide for an accessible entrance using ramp assembly for above grade installs. Use Zeager Bonded Woodcarpet ramp kit to provide access into play area to allow for proper access and to maintain an area to meet ADA change in level limitations. (1/4" staight, 1/2" beveled). Zeager Bonded Woodcarpet ramp spec is available upon request.
 7. Install DURADRAIN® panels, fabric side up, over fabric. Panels can be cut using a utility knife or a circular saw.
 8. If additional vandal resistance is desired, at seams use exterior grade construction adhesive to glue foam panels at seams to the adjacent panel.
 9. At the low end of the area, wrap DURADRAIN® around drain pipe using a plastic cable tie to hold it.
 - *10. Spread WOODCARPET® to a minimum depth of 7 in. after compaction for play equipment under 4 ft. high and to a minimum depth of 10 in. after compaction for play equipment over 4 ft. high. To make WOODCARPET® accessible, install WOODCARPET® in 6 in. maximum layers. Rake level, wet, and mechanically compact each layer twice with a flat surface compactor. Change direction 90 degrees on second compaction. Exercise caution to prevent damaging the DURADRAIN® and drain materials if using heavy equipment.
 11. Install a WOODCARPET MAT® (PVC or Foam) in each kick-out area. Zeager recommends installing wear mats on top of WOODCARPET® surface to keep surface accessible. First, position mat for installation and dig a channel around the mat edge down to the base of the WOODCARPET® and slope mat edges down into the channel. If anchoring the mat, install anchors and nylon cable ties to attach the mat to the anchors. Ask Zeager representative for anchor kit when ordering wear mat. Refill the channel with WOODCARPET® and compact. Foam mats must use anchor system to keep in place during use. Anchoring is optional for PVC mats but recommended if vandalism is probable.
 12. Inspect the playground and verify that playground equipment use zones, clearances, and reach ranges comply with ASTM F1487 sections 8, 9, and 10, and with CAN/CSA-Z614 sections 14 and 15.
 13. Rake WOODCARPET® level a second time 2 weeks after installation is finished or as needed thereafter.
- *Installation of wear mats under all swings and other high-use areas is required in the state of California.

H. Notes:

1. Using drainage & wear mats as specified by Zeager is required for warranty coverage. Inadequate drainage may hasten decomposition & decrease impact absorption.
2. If not installing using a plate compactor and wetting procedure that is described in the previous installation information, the surface may not meet accessibility standards & will require as much as 15% less WOODCARPET®.
3. Periodic maintenance should include removing debris, raking and topping off by performing steps 9 and 11. Be sure to keep surfacing up to within 1/4" of the top of border where accessible entrance is to meet ADA standards. See also WOOD-CARPET® maintenance recommendations.

I. Products

1. Engineered Wood Fiber Playground Surfacing: WOODCARPET®

- a. Composition: Woodcarpet contains 100% pre-consumer recovered wood.
- b. Dimensions: Randomly sized wood fibers.
- c. Sieve Analysis, ASTM F2075: Meets criteria.
- d. Hazardous metal, ASTM F2075: Meets criteria.
- e. Tramp metal, ASTM F2075: Meets criteria.
- f. Impact, ASTM F1292-13: 8 inches meets criteria up to 8 ft. fall height and 12 inches meets criteria up to 12 ft. fall height.
- g. Accessibility, ASTM F1951-14: Meets criteria.
- h. Resistance to Flammability, 16 FR Part 1630 Standard for Surface. Flammability of Carpets and Rugs (FFI-70), Modified Procedure. Not Oven Dried: Meets Criteria.
- i. Flammability, 16 CFR 1500.44, Federal Hazardous Substances Act Title 16, Chapter II, Subchapter C for Rigid and Pliable Solids: Did not ignite.
- j. IPEMA Certification: 8"/8ft., 12"/12ft. Fall protection. F1292. Tramp metals, Sieve analysis, Heavy Metals. F2075.

2. Fabric: DURALINER®

- a. Composition: nonwoven filter fabric of staple fibers that is formed into a random network, needle punched and heat-set for dimensional stability.
- b. Recycled content: N/A
- c. Size: 5 feet wide x 300 feet long. / 1.5 m wide x 91.4 m Long
- d. Weight, ASTM D5261 Min. 3.5 ounces per square yard
- e. Grab Tensile Strength: ASTM D4632 0.45 kN / 57 lbs
- f. Grab Tensile Elongation " " 50%
- g. CBR Puncture: ASTM D6241 .064kN/ 145 lbs
- h. UV Resistance: ASTM D4355 70% @500 hrs
- i. Trapezoidal Tear : ASTM D4533 0.13kN / 29 lbs
- j. Permittivity ASTM D4491 2.20 sec
- k. Water Flow Rate: " " 6112 lpm/m 150 gpm/ft
- l. Apparent Opening size ASTM D4751-0300 mm/50 US Std Sieve

3. Resilient Foam Drain: Duradrain

- a. Composition: Closed-cell, cross-linked, polyethylene foam.
- b. Recycled content: 100% pre-consumer recovered foam.
- c. Top surface: Covered with polyester spun bound fabric.
- d. Size: 48" x 72" in.
- e. Weight: 89 ounces per square yard.
- f. Thickness: 1.375"
- g. Density: 86 ounces per cubic foot.
- h. Transmissivity, ASTM D4716: 3.65E-003 m² / sec.
- i. Flow Rate, ASTM D2434: + 38 gallons/ minute per sq. ft.
- k. Impact, ASTM F1292: Alone meets criteria up to 2½ feet.
- l. IPEMA Certified: Under 10 inches of Woodcarpet, rated to 12ft.

I. Products-cont.

3. Playground Surfacing Wear Mat: pvc WOODCARPET MAT®
 - a. Composition: Polyvinylchloride (PVC). Meets CPSIA Federal Act for Lead and Phthalate acceptable levels.
 - b. Recycled Content: 60 % Preconsumer recovered pvc.
 - c. Drain Holes: 3/8 inch diameter holes, one per 10 square inches.
 - d. Size: 42 in. x 42 in. [slide exit], 42 in. x 78 in. [swing], 78 in. x 78 in. [tire swing, vertical spinner], 78 in. x 90 in. [swing bay], 156 in. OD x 73.5 in. ID [merry go round, supernova], 67.5 in. OD [supernova].
 - e. Weight: 3.0 pounds per square foot.
 - f. Thickness: ¾ inches.
 - g. Impact, ASTM F1292: Over 11.25 inches of Woodcarpet, meets criteria up to 12 feet.
 - h. IPEMA Certification: Over 11.25 inches of Woodcarpet, rated to 12 feet.
4. Playground Surfacing Wear Mat: foam WOODCARPET MAT®.
 - a. Composition: Closed-cell, cross-linked, polyethylene foam.
 - b. Recycled content: 100% pre-consumer recovered foam.
 - c. Top surface: Covered with layer of heavy duty vinyl.
 - d. Drain holes: 3/8 diameter holes, one per square foot.
 - e. Size: 44 in. x 44 in. [slide exit]-44 in. x 74 in. [swing], 86"x86" [tire swing], 102"x86"[swing bay]
 - f. Finished sizes: 32in.x32in. [slide exit], 32inx62in. [swing], 72"x72" [Tire Swing], 88"x72" [swing bay]
 - g. Weight: 1.13 inches thick= 1.1 pounds per square foot.
 - h. Thickness: 1.25 inch.
 - j. IPEMA Certification: 1" thick mat over 11" of Woodcarpet rated to 12ft. fall protection.
5. WOODCARPET® Bonded Ramp kit
See Zeager Specification for details.