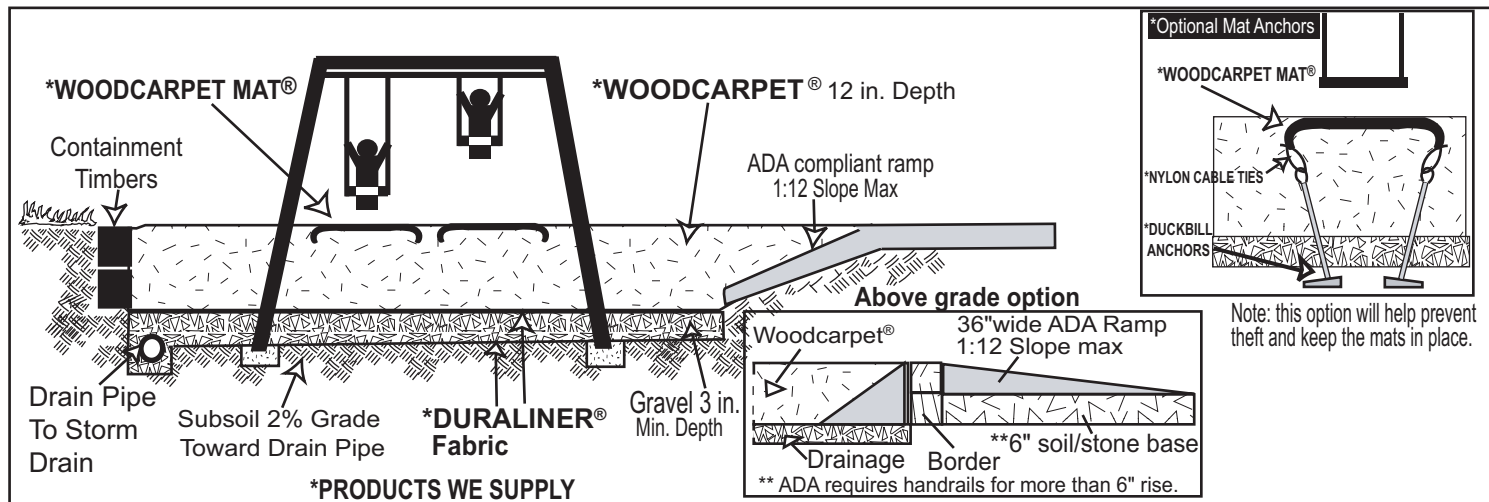


- A. Product Data:** Submit manufacturer's product data, including warranty, maintenance and installation instructions, ASTM F1292, F1951, and F2075 test results, IPEMA certificates of compliance, and samples.
- B. Manufacturer Qualifications:**
1. Member of International Play Equipment Manufacturer's 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: 15 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 drainage gravel.

F. Critical Height: 12" / 12 feet fall protection. 8" / 8 feet fall protection.

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 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 2% grade toward the drain pipe. Max 7-8% with stable subsurface.
 3. Install playground equipment.
 4. Place a layer of DURALINER® on top of the subsoil. Overlap seams 10 in. (25cm), or 5 in. (63cm) if a double bead of exterior grade construction adhesive is applied to the overlap. Place seams parallel to direction of slides and travel of swings when ever possible.
 5. 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. Install drain pipe.
 6. Spread drainage gravel (1/2 - 1" in. [.127-2.54cm] clean gravel) to a minimum depth of 3 in. (8cm). Fill drainage trench.
 7. Install timbers or an alternate containment system above or below grade. Provide for an access ramp up to play surface if above ground (max 7-8%) or down to if play surface is below grade that complies with ADA standards for accessible design. Build up area around entrance to minimize height of ramp. Any ramp larger than 6" rise must have handrails.
 8. As described in Step 4, place an additional layer of DURALINER® on top of the drainage gravel.
 9. Spread WOODCARPET® to a minimum depth of 8 in. after compaction for play equipment under 4 ft. high and to a minimum depth of 12 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 DURALINER® and drain materials. Do not operate equipment directly on the DURALINER®.
 - *10. 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. Do this by digging 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 with system 1. Anchoring is optional for PVC mats but recommended if vandalism is probable.
 11. 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.
 12. Rake and compact WOODCARPET® level. Maintain as needed thereafter. See Zeager maintenance recommendations.
- *Installation of wear mats under all swings and other high-use areas is required in the state of California. PVC mats meet pvc laws in CA.

H. Notes:

1. Using drainage & wear mats as specified by Zeager is required for warranty coverage. Inadequate drainage may hasten decomposition
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 F1292-09: 8 inches meets criteria up to 8 ft. fall height and 12 inches meets criteria up to 12 ft. fall height.
 - g. Accessibility, ASTM F1951-08: 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: Non-woven, needle-punched, UV-treated polypropylene or spunbonded polyester fabric.
- b. Recycled content: 10% post-consumer and 10% or more of pre consumer (post manufacturing).
- c. Size: 5 to 6 feet wide x 250 feet long.
- d. Weight, ASTM D3776: Min. 3.24 ounces per square yard
- e. Grab Tensile Strength: ASTM D4632: min. 81/79 pounds.
- f. Elongation: 59/63%
- g. Mullen Burst Strength, ASTM D3786: min. 130 pounds.
- h. Puncture Resistance, ASTM D4833: min. 45.1 pounds.
- i. Trapezoid Tearing Strength, ASTM D4533: min. 42/71 pounds.
- j. Permittivity, ASTM D4491: min. 2.09 sec-1.
- k. Flow Rate, ASTM D4491: min. 300 gal/ft/min

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: 3/4 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]
 - f. Finished size: 32in.x32in. [slide exit], 32inx62in. [swing]
 - g. Weight: 1.13 inches thick= 1.1 pounds per square foot.
 - h. Thickness: 1.125 inch.
 - i. Impact, ASTM F1292: 1.125 in. thick mat meets criteria up to 3 ft.
 - j. IPEMA Certification: 1" thick mat over 11" of Woodcarpet rated to 12ft. fall protection



Quality, Integrity & Innovation.

To whom this may concern;

Woodcarpet® engineered wood fiber is an economical loose fill surface that meets or exceeds ASTM standards for impact fall safety F1292 as well as particle sieve, tramp metal and hazardous metal safety standards – ASTM F2075.

Every playground contains various fall heights depending on the vertical distance between the highest accessible designated play surface of the equipment and the protective surface below. Having the correct thickness of Woodcarpet is critical to providing a safe surface to protect your child.

Zeager has 2 thicknesses of Woodcarpet® certified – 8” thickness certified for 8ft fall protection and 12” thickness certified for 12ft of fall protection. However, we do not recommend that you install just enough surfacing for the required fall protection because loose fill surfaces such as engineered wood fiber can get kicked out in high traffic areas where protection is critical such as below swings and slide exits.

That is why Zeager recommends 8” of Woodcarpet® for platforms and other play surfaces of equipment below 4ft and 12” of Woodcarpet® for any play surfaces above 4ft. This will allow for ample protection even if some of the Woodcarpet® would get kicked away and the surface has not been maintained at the original thickness.

Zeager has an assortment of products to help maintain your playground surface like Woodcarpet® wear mats and drainage products that add fall protection like Duradrain® foam drainage panels. Ask you Zeager representative for more information and for a maintenance schedule to get the most out of your Woodcarpet® surface.

Jeff Mrakovich
Director of Surfacing Products
Zeager Bros., Inc.
www.zeager.com