

A. Product Data: Submit manufacturer's product data, including warranty, maintenance and installation instructions, ASTM F1292, F3351, F1951, and F2075 test results, Protect Plus+ certificates of compliance, and samples.

B. Manufacturer Qualifications:

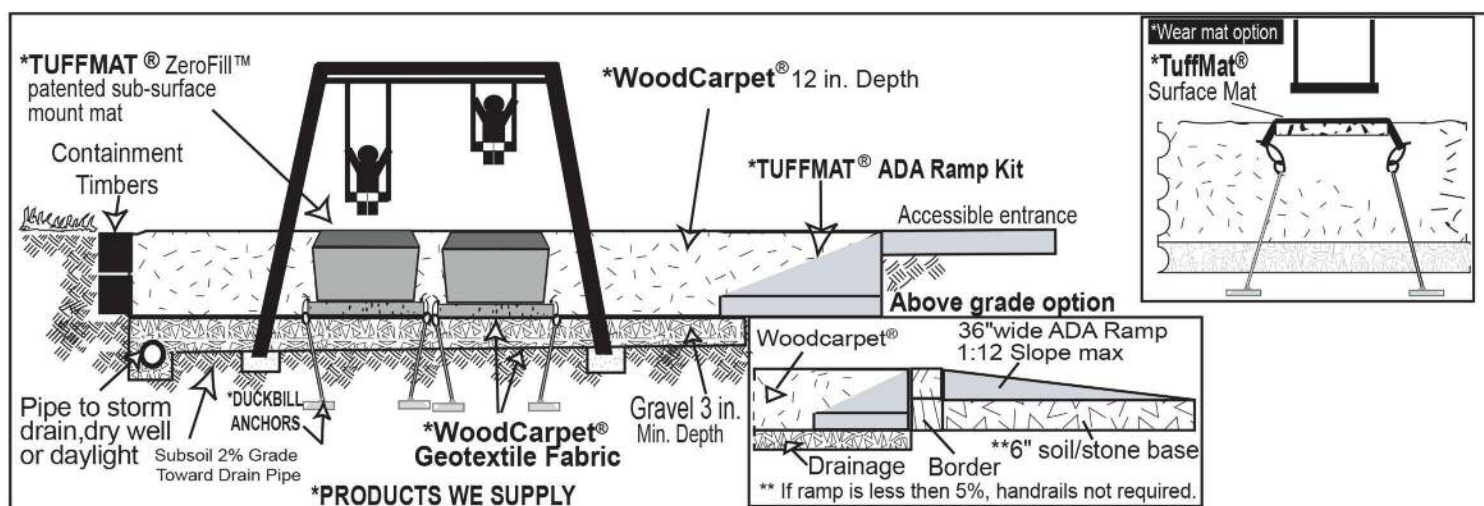
1. Member of International Play Equipment Manufacturer's Association (IPEMA).
2. Total Liability Insurance Coverage: \$11,000,000.
3. Sales Representatives attend National Playground Safety Institute (NPSI) training.

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. Main office: Zeager Bros., Inc., 4000 East Harrisburg Pike, Middletown, PA 17057. Toll Free (800) 346-8524
2. KY office: 1-800-296-9227 . / WY office : 307-220-3972



E. Application: outdoor playground surface using drainage gravel.

F. Critical Height: WoodCarpet® -12" / 12 feet fall protection. 8" / 8 feet fall protection. TuffMat® surface mount mat over 11" WoodCarpet® -12 feet. TuffMat® ZeroFill™ sub-surface mount wear mat - 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 geotextile fabric 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, dry well, or daylight. Install drain pipe add fabric and cover with drainage stone.
6. Spread drainage gravel (1/2 - 1" in. [.127-2.54cm] clean gravel) to a minimum depth of 3 in. (8cm).
7. Install timbers or an alternate containment system above or below grade. Provide for an accessible entrance using ramp assembly for above grade installs. Use TuffMat® Access ramp 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).
8. As described in Step 4, place an additional layer of geotextile fabric on top of the drainage gravel before next step.
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 inches after compaction for play equipment over 4 ft. high. To make WoodCarpet® immediately 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 geotextile fabric and drain materials. Do not operate equipment directly on the geotextile fabric.
- *10. Install TuffMats® in each kick-out area. Zeager has 2 options- TuffMat® ZeroFill sub surface mount & surface mount. See install and anchoring instructions supplied w/ mats. Custom mat sizes available.
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.

H. Notes:

1. Using drainage & wear mats are recommended to achieve as specified by Zeager is required for warranty coverage. Inadequate drainage may hasten decomposition and decrease impact absorption.
2. If not installing using mechanical compactors and wetting procedure described in the previous installation section 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 WoodCarpet maintenance recommendations. See specification 7 for better accessible options using Bonded Woodcarpet system.

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: 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. Protect Plus+ Certification: 12"/12ft. Fall protection. F3351. Check with Zeager for CFH test results per ASTM F1292. Tramp metals, Sieve analysis, Heavy Metals. F2075.
2. Fabric: WoodCarpet® Geotextile Fabric
 - 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

I. Products-cont.

3. TuffMat® Surface-Mount Wear Mat:
 - a. Composition: Base- 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. Finished sizes: 32in.x32in. [slide exit], 32inx62in. [swing], 36in.x48in. [Universal size], 72"x72" [Tire Swing/Spinner], 88"x72" [swing bay], 88"x88"[Large Spinner toys], 144" x 144"[MerryGoRounds, XL spinners], Custom sizes available.
 - e. Weight: 1.5 inches thick = 1.37 pounds per square foot.
 - f. Thickness: 1.55 inches.
 - g. ProtectPlus+ Certification: 1.55" thick mat over 11" of Wood-carpet rated to 12ft. fall protection.
4. TuffMat® Zero-Fill Wear Mats (sub-surface mount)
 - a. Composition: Combination various types of foam.
 - b. Coating: Zeager proprietary coating
 - Hardness ASTM D2240/ 85±5 Shore A
 - Tensile Strength, ASTM412C / 2500± 200 -Psi / 17.2± 1.4 MPa
 - Elongation, ASTM412C/ 300 ± 25%
 - Tear Strength, ASTM 624C 225± 25pli / -39.4 ± 4.4k Nm
 - c. Size : 42"x60"x9"H / finished surface: 30"x48". (Meets ADA guidelines: Sec. 305– clear floor or ground space.) Other sizes: 72"x72"x9"H / Tire swings & spinner toys, 48"x90"x9" / Swing bay area.
 - d. Weight: 35lbs / 14.6 Kg
 - e. Protect Plus+ certification: 9" thickness / 8 foot fall protection.
5. TUFFMAT® Access Ramp kit
 - See particular Zeager Specification for details.