

**DURA-TUFF NURSERY FLOOR INSTALLATION INSTRUCTIONS**  
**ALL WARRANTIES ARE VOID IF INSTRUCTIONS ARE NOT FOLLOWED**

**IMPORTANT INFORMATION YOU NEED TO KNOW BEFORE INSTALLATION BEGINS:**

- The flooring should be at room temperature (72° F / 22° C) or final operating temperature for 24 hours before installation and kept there after installation. Installation in cold or cool weather will cause the plastic floor to contract, like most building materials. When the facility is later brought up to operating temperature the product will expand putting undue stress on the flooring and the support structure. To help eliminate any potential problems with expansion and contraction we recommend expansion joints for both the width and the length of the building. Please see attached expansion and contraction sheet for additional directions for installing expansion joints.
- Manufacturer recommends storing product away from exposure to the sun, as its U.V. rays and other general weather conditions will diminish the life of the product. Exposure to outside weather elements voids all warranties.
- A temporary covering should be installed over the floor, such as plywood, while the final stages of construction are being completed. The flooring is not designed to withstand the weight of some construction equipment that may be used and damage may occur, which voids all floor warranties.
- Don't install floor staggered or offset.
- We recommend using continuous fiberglass beam when possible. Example: Room is 20 ft. wide with a support wall at 10 ft., use 20 ft. long beams instead of two 10 ft. beams. If you have to use multiple beams end to end make sure to mount the beam mounting plates at the end of each beam to the concrete. Make sure flooring is at final operating temperature or room temperature before anchoring the beam mounting plates to the concrete.
- Only store fiberglass beams lying flat to prevent warping.
- Never mount gatepost or penning directly to the floor. Always mount gatepost and penning to the beam or a stabilizer bar underneath the beam (see mounting options page).
- When using fiberglass beams it is important to make sure your J bolts are not hooked at an angle. If the angle is too severe the pressure will cause the fiberglass beam to buckle. Use two J bolts to hook from both sides of the beam to apply even pressure, or use a U-bolt to apply even pressure.
- We suggest gate and penning mounting plates be 9" long by 3" wide. This will reduce the chance that the floor will sag when a plate ends up between support beams.
- Dura-Tuff flooring installs easily and quickly. The 18"x24" and 24"x24" floor can be started with either side. Place the side of the floor with three long support tabs for the 12"x24" floor next to the beginning wall. You can start in any corner and you can build either way – one row at a time. You cannot start in more than one corner at a time and build towards the center.
- Manufacturer strongly recommends the use of Safety Harness/Support Equipment whenever personnel are over a deep pit (4' deep or deeper), as structural failure could result in a significant injury or loss of life. For this reason we do not recommend our system for pit areas over 5' in depth.

**NOTE: A rubber mallet is recommended when installing Dura-Tuff plastic flooring; do not use a steel hammer.**

**STEP #1.**

- Position beams across the pit. 12" apart for the 12"x24" floor, 18" apart for the 18"x24" floor and 24" for the 24"x24" floor.
- When using fiberglass beam, install plastic beam mounting plate on each end or wherever the beam comes in contact with the concrete.

- Make sure the mounting plates are flush with the end of the beam or pushed all the way on the beam if you are using the closed end beam mounting plates.
- Beam must have a minimum of a 2" ledge to rest on. **Southwest Agri-Plastic's does not recommend mounting the beam mounting plates unless the beams are on top of the walkway or if using multiple beams end to end.** If you are installing it on top of a walkway you must use our closed end beam mounting plates and mount them to the concrete to prevent the beam from moving back and forth. **Make sure the floor is installed on the beam before you secure the beam to the concrete.**

### **STEP #2.**

- Place first floor in a corner and hook it over the beams with three long support tabs next to the beginning wall for the 12"x24" floor.
- The 18"x24" floor and 24"x24" can be started with either side.

### **STEP #3.**

- Place the next floor on the beams.
- For 24"x24", 18"x24" and 12"x24", lift one end up and push the floor so the two hooks (male end) fit snugly into the two slots (female end), this locks them securely in place.
- Make sure there are no gaps on the ends of the floor, if necessary use a rubber mallet to eliminate any gaps before installing the next piece of flooring.
- Always make sure the floor is completely down on the beam. This is especially important with fiberglass beams because they deflect more than steel beams.

### **STEP #4.**

- The floor in the second row is placed on the beam and snapped firmly into place.
- Continue until floor is completed.

**NOTE: If it is necessary to use our leg support system make sure to mount the base to the concrete pit. We do not recommend the use of our leg support system if the pit is deeper than 36 inches. Flooring system not for use on pit areas when beam/floor clear spans to or above 10 ft. with 12"x24" and 18"x24" design or 9 ft. with 24"x24" design.**

## **DURA-TUFF INSTALLATION INSTRUCTIONS WHEN CUT PIECES ARE NECESSARY**

- When the flooring clear spans an uneven width, i.e. 7' or 9', you can start with the cut piece at the alleyway or if your back walls are not even you can finish with the cut piece.
- If the length of the flooring area is not an even measurement, i.e. 26'8" or 27'9", the Dura-Tuff flooring can be cut with a table saw to fit any area.
- The floor can also be grooved underneath with a table saw, 1/4" wide x 3/4" deep for 12"x24". For the 18"x24" & 24"x24" the depth of the groove depends on how much of the width of the floor is cut off. Just make sure the depth matches the depth of the support tabs on the side you did not cut off. This will allow the floor to fit flush against the wall and over the beams.

**\*\*\*\*\*SEE WEBSITE FOR SPANISH INSTALLATION INSTRUCTIONS\*\*\*\*\***

**\*VER SITIO WEB PARA INSTRUCCIONES DE INSTALACIÓN ESPAÑOLAS\***

## **DURA-TUFF FARROWING FLOOR INSTALLATION INSTRUCTIONS**

### **IMPORTANT INFORMATION YOU NEED TO KNOW BEFORE INSTALLATION BEGINS:**

- After installation is complete make sure you do not bolt the crates directly to the floor. You should bolt the crate to a stabilizer bar that is placed under the two beams directly under the cast iron floor (see mounting options page for more info). If your crates do not mount through the floor we recommend bolting the cast iron to a stabilizer bar (see mounting options page), this will prevent the cast iron from possibly moving.

**Note: If you are installing the flooring on top of the concrete walkway or alleyway you will need to make sure you mount the beam mounting plates to the concrete. The flooring must be installed on the beams before you mount the beams. If you don't secure the beams to the concrete the beam may move off the edge causing the flooring to collapse.**

#### **STEP #1.**

- Installation of the plastic flooring for the creep area of the farrowing floor is the same as installing the plastic flooring for the nursery floor, see steps 1-4 under nursery floor installation.
- Install the first row of plastic creep area. Start with 18"x24" piece at the front of the crate.
- For a standard 5'x7' crate you will need 4 18"x24" and 4 18"x18" plastic floors for the creep areas. For the sow area you will need 2 24"x42" flat cast or 2 24"x24" and 2 24"x18" raised cast iron floors.

#### **STEP #2.**

- With the interlocking cast system, you will use a total of 4 pieces. The sizes will depend on the length of the crate. For example a 7 ft. crate would require 2 24"x42" flat cast or 2 24"x24" pieces and 2 24"x18" raised cast.
- Lay the fiberglass beam approximately 24" from the creep area floor and begin installing the interlocking cast.
- Start with the 24"x42" flat cast or 24"x24" raised cast pieces at the front of the crate.

#### **STEP #3.**

- If you have our old style cast iron floor with the holes on each end bolt all the pieces together using a stainless steel 1/4"x1-1/2" hex head bolt with flat washer and nylock nut. Do not over tighten. Over tightening will cause cast iron to crack and could result in part failure.

#### **STEP #4.**

- Install your next row of plastic flooring and repeat the above steps.

**\*\*\*\*Southwest Agri-Plastics, Inc. strongly recommends the use of its fiberglass beam with its Dura-Tuff flooring system; Metal rails have shown the ability to rust in short period of time. This causes the metal rail to deteriorate and expand which can consequentially damage the plastic flooring which voids all warranties. \*\*\*\***

**Fiberglass beams have +/-1/4" tolerance on beams cut to length.**

**IF YOU HAVE ANY QUESTIONS PLEASE CALL US AT 800-288-9748  
OR 972-735-8866.**

**Date: 2-15-2008**

## **EXPANSION AND CONTRACTION DIRECTIONS:**

1. Always try to bring the flooring as close to final operating temperature as possible when doing the installation. This will make the flooring panels expand to the sizes that they will eventually reach when the barn is operation. If this is not possible you must allow for expansion by installing expansion joints.
2. Expansion or contraction of polypropylene will be approximately 0.00075 inches per foot per degree Fahrenheit. For example if you have a nursery building measuring 100 ft. long x 40 ft. wide it will expand about 2-1/4 inches in length and about 29/32 inches in width if the building increases from 80°F to 110°F. The correct approach is to allow expansion room in the form of expansion joints for both lengthwise and widthwise growth due to excessive temperature changes. Expansion joints should be placed on both ends and the middle of the lengths of the total floor. There should also be an expansion joint on both sides of the width of the flooring. Please look at the diagram provided. An expansion joint is recommended for every 50 ft. of flooring.
3. Remember that polypropylene, like all building materials, will expand and contract with temperature variances. It is always better to have some expansion room in a flooring installation than an absolutely snug fit without any space for product expansion. For any questions or help in figuring the necessary expansion joints call us at 1-800-288-9748 toll free in North America.

**FLOORING AREA = 100FT LONG X 40FT WIDE**

**EXPANTION JOINT CALCULATION = 21/4 INCHES OVER 100FT LENGTH  
29/23 INCHES OVER 40FT LENGTH**

- A = EXPANTION JOINT APPROX 3/4 INCH**
- B = EXPANTION JOINT APPROX 3/4 INCH**
- C = EXPANTION JOINT APPROX 3/4 INCH**
- D = EXPANTION JOINT APPROX 7/16 INCH**
- E = EXPANTION JOINT APPROX 7/16 INCH**

