

Installation Guidelines

ShockDrain™

These guidelines provide contractors with a process to install En-Plast ShockDrain 580. Please note: The sequencing of laying the turf and accounting for both weather and sub grade conditions are all critical factors that impact construction quality and efficiency.

Turf installation contractors utilize a multitude of techniques and sequences that cannot be anticipated by these installation guidelines. As such, these guidelines assume that the turf installer will first place all playing surface rolls (often referred to in the trade as “belly of field”) followed by materials that are adjacent and outside of the playing surface boundaries. If the installer elects to sequence the turf and the lower synthetic substrate in a manner that is different than what these guidelines recommend, then many aspects of these guidelines may not be applicable.

To reiterate, these guidelines assume favorable weather conditions exist during the time of installation. However, two conditions that may impact installation quality and efficiency are wind and temperature differential between the material’s upper and lower surfaces. As such, best practices which limit the impact of these conditions must be incorporated into the installation sequencing and management of the project.

Roll Packaging and Labels:

En-Plast ShockDrain material shall be shipped directly from the manufacturer’s factory in rolls and do not require further protection from UV degradation during shipping and storage.

Each En-Plast ShockDrain roll is labeled with the following information:

- Name of Manufacturer
- Product Code
- Product Description
- Roll Number
- Roll Dimension

Unloading and Storage Procedures

All rolls of En-Plast ShockDrain material shall be unloaded with equipment in a manner that will not damage the material in any way.

- Fabric-straps, spreader bars, stinger bars, or other approved equipment shall be used for handling rolls of ShockDrain material.
- Materials should be stored in a flat, dry and well-drained area, free from objects that could damage the materials.
- Materials should be covered with sheeting or tarpaulin to keep them dry and minimize damage.
- The storage area must be as close as possible to the work area to minimize site handling.
- ShockDrain material should not be stacked higher than 2 rolls.

Material Delivery:

Upon the arrival of the materials on-site, QA personnel are required to do an inventory of En-Plast ShockDrain material.

- All En-Plast ShockDrain roll numbers should be logged on the Inventory Check List and cross -referenced with the Bills of Lading .
- Copies of the Inventory Check List and signed Bill of Ladings should be sent to the home office with on-site QA personnel retaining the originals.
- Any visible damage to drainage materials should be noted on the roll and Inventory Check List.

Subgrade Preparation:

Subgrade shall be approved by the design engineer for compaction and planarity before placement of any En- Plast ShockDrain material.

- The Subgrade shall be free of sharp rocks or other such materials that could otherwise cause damage to the En-Plast ShockDrain material.
- En-Plast ShockDrain material can be placed on approved subgrade, approved impervious geomembrane, approved geotextile, approved asphalt or cement base.

Deployment of ShockDrain

All synthetic turf construction guidelines dictate that En-Plast ShockDrain material must be installed on a non-yielding natural sub-grade or installed on a non-yielding engineered sub-base. If the underlying subgrade is loose, the ShockDrain will elongate and conform to the lower subgrade jeopardizing the integrity of the ShockDrain pad.

- The Installer shall place the En-Plast ShockDrain material in the proper manner at the elevations and alignment as shown in the construction drawings and as directed by the Engineer.
- En-Plast ShockDrain material shall be handled in such a manner as to ensure that it is not damaged. Care shall be taken to ensure that any underlying layers are not damaged during the placement of En-Plast ShockDrain material.
- Avoid entrapment of stones, mud and other materials during placement that could affect Synthetic Turf surface. Low ground pressure equipment to facilitate deployment over En-Plast ShockDrain materials is accepted as long as the equipment have a ground pressure with less than 6 PSI.
- En-Plast ShockDrain material shall be positioned and rolled across the field, perpendicular to the centerline to ensure maximum drainage efficiency. Rolls should be manufactured to the nailer board.
- In the presence of wind, all En-Plast ShockDrain material shall be weighted with sandbags or an equivalent. Ballast placed during the installation of EnPlast ShockDrain shall remain until replaced with synthetic turf.
- When necessary, the En-Plast ShockDrain shall be positioned by hand after being unrolled to minimize wrinkles.
- Care shall be taken to minimize any slippage of the drainage material and to assure that no extreme tensile stress (i.e. necking or ripping of material) is induced upon the En-Plast ShockDrain material.
- Install En-Plast ShockDrain in-conjunction with the synthetic turf deployment, allowing no more than 25 yards of En-Plast ShockDrain to be exposed ahead of artificial turf. It is important to roll out the En-Plast ShockDrain with the roofed end of the roll on top. After the first roll is deployed and positioned, a second roll is deployed adjacent to the previous roll. The roofed section of the second roll is then connected to the last channel of the first roll to assure a positive connection along the entire length of the roll. Care should be taken to make sure this positive connection is achieved throughout the entire length of the roll.
- Securing the longitudinal joints is required before the turf is installed on the EnPlast ShockDrain material by removing the tape above the pre applied Pressure Sensitive Adhesive (PSA)
- The following methods are also acceptable:
 1. A high temperature self-adhering 1 ½ inch Butyl Rubber Sealant tape.
 2. A one-inch EVA or EVA based hot melt adhesive spot weld every 8 inches along the longitudinal joint with the adhesive filling the space between the hood and the first rib of the adjoining roll. Acceptable adhesives are the Loctite grade 232 Hysol or Loctite grade 1942 Hysol. (www.henkeina.com/loctite - 800-562- 8483)
 3. A tape submitted and approved by the contractor.
- Deploy the first 4 rolls of En-Plast ShockDrain and align them accordingly. En-Plast recommends the first roll of turf to be rolled out by hand to prevent buckling of the pad due to the weight of the roll of turf. Align the first roll of turf. At this point, if using equipment, it is safe to drive directly on the portion of the pad that is covered by the turf. Roll the next panel of turf out on the existing roll of turf and either flip the roll in position or drag the roll across and set in position.
- It is extremely important not to secure the longitudinal joints until the En-Plast ShockDrain material is about to be covered with the turf. This procedure is repeated for the entire installation. This is especially important when installing the belly of the field first. Secure only the portion of the ShockDrain longitudinal joint that is being covered by the turf.
- Since the En-Plast ShockDrain is black, it is very efficient at absorbing radiant energy. The composition of the product has a coefficient of thermal expansion so this radiant energy must be dissipated.

- To protect the exposed edges of the pad from construction damages and extreme radiant energy while the belly of the field is being constructed, En-Plast recommends the En-Plast ShockDrain be rolled back to the edge of the belly until the ShockDrain pad is ready to be covered by the sideline turf. The sideline rolls of turf should be set in place after the belly of the field has been completed.
- Final sizing of the En-Plast ShockDrain shall be performed after the field is completely infilled. Cut the En-Plast ShockDrain just prior to the final fastening of the synthetic turf to the nailer board.

Deployment Option if ShockDrain Used as a Shock Pad or Vertical Drain Only

In the event En-Plast ShockDrain 2 (perforated product) is used as an impact attenuation layer the installer may follow these alternative guidelines:

- Deploy ShockDrain only on the belly of the field starting from the edge of the field and following the deployment method as described in the previous section.
- Deploy ShockDrain on the side line perpendicular to the belly of the field. Installer will then cut the end the pads deployed on the belly on a straight line, sew, glue, tape or simply lay the end to the pad layered longitudinally. If glue is chosen, butt seams shall be glued with 12 inch seaming tape and glue, such as Helmitin Helmicol 3407 or other approved substitute. Adhesive manufacturer's instructions should be followed completely. Butt seams should be followed completely. Butt seams should be ballasted until the adhesive tape is cured. Installer may also use nails in lieu of other connection methods.
- After the first panel is sewed or glued, installer should immediately roll out 3 more rolls and then the 15' wide synthetic turf to cover the ShockDrain pad.
- Roll out the final 2 rolls of ShockDrain and then cover the pad with the 7' synthetic turf roll.

Sand Infill Recommendation

Proper ballast is important to prevent movement of the pad during the initial spreading of the infill. Installer may have an established methodology of in-fill process. However, special precautions must be taken in order to prevent damage to the ShockDrain pad:

- Wherever possible, direction of in-fill spreading process should be parallel to the roll length of the ShockDrain as deployed on the subgrade.
- Use ½ of the loading capacity of the sand hopper over the entire field on the first deployment and run the pulling equipment at slow speed to minimize stress on the ShockDrain.
- If waves over 1 inch are noticed on the turf during the infill process, stop the operation, "lighten" the sand hopper, and reduce the pulling speed of the equipment

Seaming and Repair:

- All butt seams shall be glued with 12 inch seaming tape and glue, such as Helmitin Helmicol 3407 or approved equal. Adhesive manufacturer's instructions should be followed completely. Butt seams should be followed completely. Butt seams should be ballasted until the adhesive is cured.
- Any rips, tears or damage areas on the deployed En-Plast ShockDrain shall be removed and patched by placing a patch sized and seamed with the approved seaming materials.