



SKAPS INDUSTRIES

GEONETS & GEOCOMPOSITES: **HANDLING, STORAGE AND INSTALLATION** **MANUAL**



INTRODUCTION:

Geonets and Geocomposites provide solutions to various drainage problems. As with any synthetic product, the quality assurance and quality control does not stop once the product is shipped from the factory. Whether the product has been specified for vertical wall hydrostatic relief or horizontal flow zones for landfill cells/closure and roadways, care in handling and installation is critical to the future functioning of the product.

TRANSNET™ is manufactured utilizing high quality HDPE resin and lamination of high strength to weight ratio nonwoven geotextiles. The lamination process is completed at the same location where the geonet is manufactured, minimizing additional handling and allowing for supply of custom lengths. TRANSNET™ can have one side or both sides laminated in order to meet the design specification.

MANUFACTURING:

TRANSNET™ is manufactured utilizing state-of-the-art counter rotating dies and the highest quality resin. TRANSNET™ is manufactured with the addition of carbon black to stabilize against degradation from UV exposure.

PACKAGING:

Upon completion of the lamination process, the geocomposite will be wrapped in an opaque wrap to prevent exposure to UV and for protection from the weather, dust, etc. In the event only TRANSNET™ is required, shipping in a wrapper is not necessary.

Each roll will be tagged so that the following information is available at all times from the manufacturer:

- Manufacturer's Name
- Product Identification
- Roll Number
- Roll Weight
- Roll Dimensions

SHIPPING:

Geocomposite rolls will be shipped in original packaging. In the event the packaging is damaged during shipment, repairs should be made to ensure protection against UV and weather. Care should be used during the off-loading to ensure that the machinery used does not penetrate packaging.



STORAGE:

Storage of the rolls prior to installation should be in an area where they are not in standing water. For storage longer than 30 days, rolls should be elevated off the ground with tires, pallets or 2x4's to prevent water from saturating the bottom row. The stack should then be covered with a material that will give additional protection from the elements. Should the product be exposed to excessive dust, the product should be washed prior to installation.

SITE PREPARATION:

The design engineer will determine how and where the geocomposite is to be utilized. With any application, care should be used in placing geonet or geocomposite so that it is not damaged by stones or other protrusions that may compromise the functionality of the product.

PLACEMENT:

- Geocomposite installation will commence after the geomembrane/ substratum has been installed/ constructed, tested and approved by the Engineer. The underlying surface (geomembrane and/or soil) shall be cleaned and free of excessive dirt and debris. Where underlying surface is soil, care should be taken to prevent puncture of geotextile portion of the geocomposite from rocks and stones. Precautions shall also be taken to prevent damage to underlying geosynthetic layers during placement of the geonet/geocomposite.
- The geocomposite roll should be installed with the machine (intended flow) direction parallel to the slope. If necessary, the geocomposite shall be positioned by hand after being unrolled to minimize wrinkles.
- To prevent movement during installation, all geocomposite shall be weighted with sandbags or the equivalent. Such sandbags shall be installed during placement and shall remain until replaced with cover material. Sandbags should be on hand at all times and placed on edges not seamed to prevent uplift from the wind.
- For slope applications, the rolls should be placed in a trench so that pull out or slippage is prevented. The rolls should be rolled from top to bottom and hand tightened to remove any wrinkles. The trench should be in accordance with the Design Engineer's requirements.
- Each continuous panel of geocomposite shall be extended through the bottom of the anchor trenches, transition areas, and/or pipe drain collection trenches prior to collection pipe or gravel placement. There are to be no end panel seams in these transition areas, only side to side panel (seams oriented perpendicular to pipe trench) seams.



- The geocomposite maybe temporarily anchored with sand bags within anchor trenches and transition areas. Anchor trench compacting equipment shall not come into direct contact with the geocomposite.
- Metal ties or hog rings are not to be used. Welding of the TRASNET to HDPE liner or any other geomembrane is not recommended.

SEAMS AND OVERLAP:

Each component of the geocomposite (geotextile(s) and geonet) shall be secured or seamed to the like component at overlaps.

A. Geonet Component

- Adjacent edges of geonet along the side length (parallel to machine (flow) direction) of the geocomposite panels should be overlapped a minimum of 4-inches or as recommended by the Engineer, see Figure 1. These overlaps shall be joined by tying the geonet cores together with white or yellow plastic fasteners or polymeric braid. These ties shall be spaced at a maximum of every 5 feet along the roll length.
- Adjoining geocomposite rolls (end to end) along the roll width shall be shingled down in the direction of the slope, with the geonet portion of the top geocomposite overlapping the geonet portion of the bottom geocomposite a minimum of 12 inches or as recommended by the Engineer across the roll width, see Figure 2. Geonet shall be tied every 12 inches across the roll width and every 6 inches in the anchor trench or as specified by the CQA Engineer or the Design Engineer.

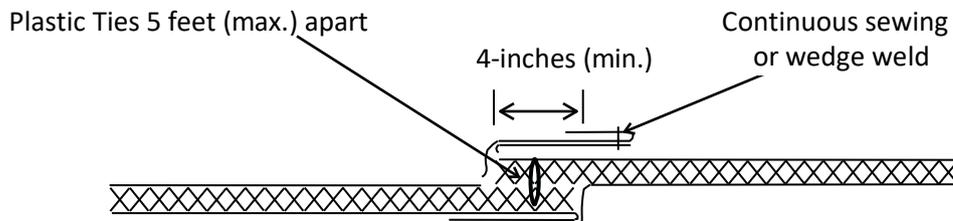


Figure 1: Overlap Along Roll Length (Machine Direction)

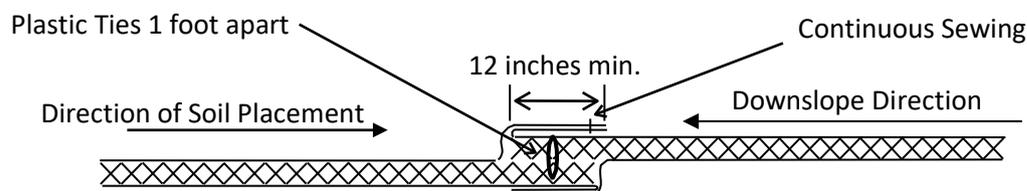


Figure 2: Overlap Along Roll Width

B. Geotextile Component

- The bottom layer of geotextile (if any) shall be overlapped, unless the Engineer specifies differently.
- The top layers of geotextiles shall be sewn together, or may be heat bonded as per engineer's direction. Geotextiles shall be overlapped a minimum of 1 inch prior to seaming or heat bonding, if heat bonding is to be used, care must be taken to avoid burn through of the geotextile. It is important that the geotextiles be joined continuously to the adjacent and adjoining rolls as to prevent any unwanted particles from entering into the geonet core.

END OF SECTION