

# **DELAWARE CONSTRUCTION SPECIFICATION**

## **GEOTEXTILE FABRIC, WOVEN AND NONWOVEN CS 63**

### **1. SCOPE**

This work shall consist of furnishing all materials, equipment, and labor necessary for the installation of geotextile fabric under stone fill, preformed concrete blocks, riprap, or similar applications.

### **2. MATERIALS**

Geotextile fabrics, woven and nonwoven, shall conform to the requirements of Delaware Material Specification 222. The class of fabric shall be as shown on the plans.

Prior to installation of any fabric, the contractor shall furnish the landowner a certificate or affidavit that includes the following information:

- a. Name of product and manufacturer
- b. Product description, chemical composition, and a copy of typical laboratory test values.

### **3. SHIPMENT AND STORAGE**

The geotextile fabric shall be supplied in rolls wrapped with a protective covering to keep out mud, dirt, dust, debris, and direct sunlight. The fabric shall be free of defects which measurably alter its physical properties and planned function. Each roll of fabric shall be clearly marked to identify the individual production run.

### **4. PLACEMENT**

The geotextile fabric shall be placed on the approved prepared surface at the locations and in accordance with the details shown on the drawings. The fabric shall be unrolled along the placement area and loosely laid (not stretched) in such a manner that it will conform to the surface irregularities when the stone or other material is placed. No cuts will be permitted in the fabric panel unless otherwise specified. The panel may be folded and overlapped to permit proper placement in the designated areas. The fabric will be rejected at the time of placement if it has defects, rips, holes, flaws,

deterioration or damage that occurred during manufacture, transportation, storage, or installation.

The orientation of the width and length of the fabric panels shall be as shown on the drawings. The fabric length shall be placed parallel to the direction of water flow unless otherwise indicated on the drawings. The overlaps of panels and end roll details shall be as on the drawings. The minimum overlap shall be 18 inches (24 inches for installation under gabions). When specified on the drawings, the seams of the cloth shall be machine sewn with thread of a material meeting the chemical requirements given for plastic yarn. The sheets of fabric shall be sewn together at the factory or another approved location to form panels of specified size.

Securing pins, approved and provided by the fabric manufacturer, shall be placed along the edge of the panel to adequately secure the fabric during placement. At vertical laps, securing pins shall be inserted through both layers along a line through the approximate midpoint of the overlap. At horizontal laps, securing pins shall be inserted through the bottom layer only. Securing pins shall be placed along a line approximately two inches in from the edge of the outer limits of the completed filter fabric area at intervals not greater than 12 feet. Additional pins shall be installed as necessary to prevent any slippage of the fabric, regardless of location. The use of securing pins will be held to the minimum necessary. The fabric may be secured with other methods when specified.

Pins shall be steel or fiberglass formed as a "U", "L", or "T" shape or contain "ears" to prevent total penetration. Steel washers shall be provided on all but the "U" shaped pins.

The geotextile fabric shall not be placed until riprap or other material can be used to cover it within the same working day.

Temporary cover may be used as approved by the Technician. Riprap shall be placed in a manner that prevents damage to the fabric. In no case will riprap be dropped on uncovered fabric from a height greater than three feet.