Geonet Slope Installation Guide

GEONET

Geonet
1.0 General

1) This guideline covers general installation of geonet in slope applications.
2) Where contradictions occur follow the instructions of the project engineer.

2.0 Handling

1) Unload rolls with equipment that will not damage the geonet.
   a) Use fabric straps, stingerbars or other approved methods for handling.

3.0 Subgrade Preparation

Make sure the slope subgrade is free of sharp rocks or other objects that could damage the geonet.

4.0 Geonet Placement

1) Secure geonet in an anchor trench.
2) Unroll the geonet down the slope while continually keeping it under tension.
3) Care should be taken during installation to prevent damage to the geonet and underlying layers such as a geomembrane.
   a) Take care not to entrap dirt or stones in the geonet.
      i) Dirt may cause clogging of the drainage system.
      ii) Stones may damage underlying geosynthetic layers
   b) Geonets cannot not be welded to geomembranes.
   c) ATV’s may be used to deploy over geosynthetic layers.
      i) Avoid quick stops, starts and turns.
      ii) Keep speeds less than 10 mph.
4) If possible, position the geonet by hand after deployment to minimize wrinkles.
5) In windy conditions use sandbags to weigh down geonet until the cover is placed.
6) Geonet is generally placed in the machine direction (i.e., roll direction down the slope).
   a) Geonet can only be placed in the transverse direction (i.e., roll direction across the slope) in special circumstances:
      i) Where extra layers are required.
      ii) Where slope is less than 10:1.
      iii) These locations will be identified by the design engineer in the project drawings.
7) Use only approved cutters such as a hook blade.

5.0 Overlapping and Joining Geonet

1) Shingle the ends of the geonet down the slope.
2) Overlap and join adjacent geonets according to the following requirements:
   a) Machine direction:
      i) Where extra layers are required.
      ii) Where slope is less than 10:1.
      iii) These locations will be identified by the design engineer in the project drawings.
i) Overlap 3 to 5 inches.
ii) Use ties every 5 feet.

b) Transverse direction:
   i) Overlap 6 to 12 inches.
   ii) Use ties every 1 foot.

c) Use white or yellow plastic cable ties for easy inspection.
   i) Metallic devices are not allowed.
d) If the geonet is a composite with a geotextile attached:
   i) Overlap, sew or weld the geotextile on the top and or bottom across the seam.

3) In corners where overlaps between perpendicular geonet sheets are required:
   a) Place an extra layer of geonet down the slope and on top of the previously installed geonet.

4) When more than one layer of geonet is installed:
   a) Overlaps are staggered and layers tied together per the project engineer's recommendations.

6.0 Place Soil

1) Place cover material with care to avoid damaging the geonet.
2) Make sure the slope subgrade is free of sharp rocks or other objects that could damage the geonet.
3) Minimize any movement of the geonet to eliminate tensile stress on the geonet.

7.0 Repairs

1) In lieu of specific project guidelines, holes or tears in the geonet are repaired by placing a patch overlapping the area a minimum of 2 feet in all directions.
   a) The patch is secured with ties every twelve inches.
2) If the hole or tear is more than 50% of the width of the roll, cut out the damaged area and replace with new piece and join following overlapping guidelines.

8.0 Storage

1) Geonet rolls are wrapped in a UV protective cover.
2) If stored outdoors for a prolonged period, elevate the geonet from the ground and cover with a tarpaulin or opaque plastic.
   a) Contractor must insure rolls are adequately protected from:
      i) Moisture
      ii) Ultraviolet radiation
      iii) Chemicals that are strong acids or bases
      iv) Temperatures in excess of 140°F
      v) Animal destruction

This material is presented for general information only. Always verify the suitability for a specific application with the project engineer. Where contradictions occur, follow the instructions of the project engineer. There is no implied or expressed warranty regarding the installation procedures or the geosynthetic products in this guide. Installation procedure and product choice is the sole responsibility of the contractor and contractor assumes all liability.