ILLINOIS URBAN MANUAL TECHNICAL COMMITTEE
PRACTICE STANDARD

EROSION CONTROL BLANKET

(sq. ft.)
CODE 830

(Source: USDA – Kane DuPage Soil and Water Conservation District)

DEFINITION

A temporary protective blanket of degradable materials; e.g. straw, wood, coconut, jute, or blend of these materials bound into a mat, usually with a plastic or degradable mesh or netting on one or both sides.

PURPOSE

The purposes of this practice are to protect the soil surface from raindrop impact and overland flow during the establishment of vegetation, and to reduce soil moisture loss due to evaporation.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on exposed slopes and newly seeded areas. These mats are used on slopes that are 1.5:1 or flatter. The most common application for erosion control blankets is on slopes and flat areas where turf will need to be established. For swales, channels, and slopes steeper than 1.5:1 please refer to practice standard TURF REINFORCEMENT MAT 831. A designer should determine blanket type.

CRITERIA

Blanket type should be selected by slope steepness, shear stress, degradation of the blanket, and the duration of time that the blanket will be protecting the soil solely without vegetation. Erosion Control Blankets shall be installed after the seed bed preparation, fertilizing, or liming and seeding is completed. Refer to practice standards TEMPORARY SEEDING 965 and PERMANENT VEGETATION 880.

The blanket shall be in firm contact with the soil. All rocks or soil clods 1.5 inches or larger must be removed prior to installation. Under no circumstance should the blanket be allowed to bridge over surface irregularities. It shall be anchored with the proper number and spacing of wire staples. The staples/pins shall be the proper width and length to meet the performance required.

On slopes and in low flow channels, the blanket shall be unrolled upstream to downstream parallel to the direction of flow. The upstream end of each blanket shall be anchored in a minimum 6-inch deep anchor trench, backfilled, and compacted. These blankets, when laid side by side, shall overlap a minimum of 4 inches. When more than one blanket length is needed, the material shall be shingled at a minimum of 4 inches over the downstream piece as shown in standard drawing EROSION CONTROL BLANKET IL-530. All edges shall be stapled or trenched per manufacturers recommendation or at least as stringent as that stated in standard drawing IUM-530.

CONSIDERATIONS

Different types of Erosion Control Blankets may be needed for each slope on a construction site and these variations should be reflected on the site's development plan. Erosion Control Blanket materials and netting will break down over time. The proper blanket type should be chosen so that it lasts long enough for the grass or other vegetation to become established. For swales and channels and in other areas of concentrated flow or where a permanent blanket is needed for stabilization refer to practice standard TURF REINFORCEMENT MAT 831.

In some cases you may need to avoid accidental wildlife entrapment in environmentally sensitive areas. If so then use an all-natural leno weave netting in place of a plastic net to avoid any potential entrapment. Natural nets do not provide long term reinforcement and shall not be used in areas where reinforcement is needed.

Bio degradable stakes or staples shall be used in areas where kids may play to avoid being cut by metal staples.

PLANS AND SPECIFICATIONS

Plans and specifications for installing Erosion Control Blankets shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose. At a minimum erosion control plans should include the following items:

1. Location of the Erosion Control Blanket
2. Type of blanket
3. Location and cross section of anchor trenches
4. Staple spacing
5. Installation procedures

Standard drawing EROSION CONTROL BLANKET IL-530 may be used as part of the plan sheet. Also, consider adding material specs 800, 801, 802, or 803.

OPERATION AND MAINTENANCE

Inspect all Erosion Control Blankets periodically and after rainstorms to check for damage due to water running under the blanket or if the blankets have been displaced by wind. Also, inspect locations in the flow channels where the blanket terminates and transitions into another BMP (such as riprap) for erosion under the blanket. Any areas where water seeped under the blanket, more staples may be needed per given area or more frequent anchoring trenches installed with better compaction. If significant erosion has occurred under the blanket then grading and reseeding may also be necessary. Any Erosion Control Blankets that have been displaced will need to be re-installed and re-stapled. This may indicate that the wrong type of blanket was chosen. One may need to revisit the site characteristics and then select a different type of Erosion Control Blanket or chose a different practice.

REFERENCES

U.S. Department of Agriculture, Natural Resources Conservation Service Iowa, 2004. Conservation Strategies for Growing Communities

Illinois State Toll Highway Authority

Illinois Department of Transportation

Erosion Control Technology Council (ECTC), Standard Specification for Rolled Erosion Control Products or RECPs Table1."