

2113 - EROSION CONTROL MATERIALS

SECTION 2113

EROSION CONTROL MATERIALS

2113.1 DESCRIPTION

This specification covers erosion control products manufactured from wood, straw or coconut fiber mat, synthetic mat, paper mat, jute mesh or other material that is placed on slopes or ditches for short-term or long-term protection of seeded areas.

2113.2 REQUIREMENTS

- a. Provide prequalified erosion control materials of the class and type specified in the Contract Documents.
- b. Erosion control products are categorized in **TABLE 2113-1 and 2113-2**:

TABLE 2113-1: CLASS 1. "SLOPE PROTECTION		
Type	Uses	Soil Type
Type A	Slopes ≤ 3:1	Clay soils
Type B	Slopes ≤ 3:1	Sandy soils
Type C	Slopes > 3:1	Clay soils
Type D	Slopes > 3:1	Sandy soils

TABLE 2113-2: CLASS 2 FLEXIBLE CHANNEL LINER		
Type	Duration	Shear Stress t_d
Type E	Short-term (≤ 5 years)	up to 2 lbs/sq ft
Type F	Short-term (≤ 5 years)	up to 4 lbs/sq ft
Type G	Long-term (> 5 years)	up to 6 lbs/sq ft
Type H*	Long-term (> 5 years)	up to 8 lbs/sq ft
Type I*	Long-term (> 5 years)	up to 10 lbs/sq ft
Type J*	Long-term (> 5 years)	up to 12 lbs/sq ft

*Use Only 100% synthetic products

- c. **Anchors.** Provide and use anchors as recommended by the erosion control product manufacturer. In the absence of any recommendations by the manufacturer, provide material in **TABLE 2113-3**:

TABLE 2113-3: WIRE, STAPLE AND ANCHORS	
Property	minimum size
Slope Protection	
Wire Diameter	11 gauge
Leg Length (Heavy Soil)	6 inch
Leg Length (Light Soil)	8 inch
Crown Width	1 inch
Flexible Channel Liner - Wire Staple Anchors	
Wire Diameter	8 gauge
Leg Length (Heavy Soil)	10 inch
Leg Length (Light Soil)	14 inch
Crown Width	2 inch

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TABLE 2113-3: WIRE, STAPLE AND ANCHORS	
Property	minimum size
Flexible Channel Liner - Metal Stake Pin Anchors	
Pin Diameter	3/16 inch
Pin Length (Heavy Soil)	10 inch
Pin Length (Light Soil)	14 inch
Steel Washer Diameter	1½ inch, nominal
Flexible Channel Liner - Hardwood Stake Anchors	
Light Soil	1 x 3 x 12 inch
Heavy Soil	1 x 3 x 18 inch

2113.3 TEST METHODS

Erosion Control products will be tested and evaluated by the Texas Department of Transportation and the Texas Transportation Institute following procedures outlined in the Texas DOT Erosion Control Report. Anchors are evaluated on the basis of their performance in the field.

2113.4 PREQUALIFICATION

Prequalification procedures may be obtained by writing to the Texas Department of Transportation, Director of Construction and Maintenance, 125 East 11th Street, Austin, TX 78701-2483. A list of prequalified materials based on the annual Texas DOT Erosion Control Report and field performance within Kansas will be maintained by the KDOT Bureau of Materials and Research. The KDOT prequalified list establishes the acceptable materials to be incorporated into KDOT projects. Products will remain on the KDOT list provided field performance is satisfactory or the manufacturer requests the removal of their own product.

2113.5 BASIS OF ACCEPTANCE

a. Erosion Control Materials.

- (1) Prequalification as required by **subsection 2113.4**.
- (2) Receipt and approval of a Type C certification as specified in **DIVISION 2600**.
- (3) Field observation before or during material installation.

b. Anchors. Field observation before or during installation.