

**DMS - 6240****GEOGRID FOR BASE / EMBANKMENT REINFORCEMENT****EFFECTIVE DATES: MARCH 2000–APRIL 2010.**

**6240.1. Description.** This Specification governs the materials, composition, quality, sampling and testing of synthetic geogrid used for the reinforcement of roadway base or embankment materials. Other uses are in accordance with the governing Specification and the plans. Install geogrid in accordance with the lines and grades shown on the plans. Two grades of geogrid, Types 1 and 2, are specified for different loads.

**6240.2. Units of Measurements.** The values given in parentheses (if provided) are not standard and may not be exact mathematical conversions. Use each system of units separately. Combining values from the two systems may result in nonconformance with the standard.

**6240.3. Sampling and Testing Requirements.** Sample in accordance with Tex-735-I, unless otherwise specified by the Engineer. Perform testing in accordance with Tex-621-J.

**6240.4. Material Requirements.**

**A. General Requirements.** The geogrid should be a synthetic planar structure formed by a regular network of integrally connected polymeric tensile elements with apertures designed to interlock with the surrounding fill material.

The structure should be capable of maintaining dimensional stability during placement and under normal construction traffic.

The geogrid should be resistant to damage during construction, including ultraviolet degradation, and it should have long-term resistance to chemical and biological degradation caused by the materials being reinforced.

**B. Physical Requirements.** The geogrid supplied must meet the requirements listed in Table 1 when sampled and tested in accordance with Tex-621-J.

**Table 1**  
**Geogrid Requirements**

Property	Type 1	Type 2
Aperture Size, mm (in)	25 - 51 (1.0 - 2.0)	25 - 51 (1.0 - 2.0)
Percent Open Area, %	70 minimum	70 minimum
Thickness, mm (in)	0.77 (0.03) minimum	1.27 (0.05) minimum
MD ribs	0.64 (0.025) minimum	1.15 (0.045) minimum
CMD ribs	1.50 (0.06) minimum	2.54 (0.10) minimum
Junctions		
Tensile Modulus @ 2% elongation *, N/m (lb/ft)	204,260 minimum (14,000) minimum	291,000 minimum (20,000) minimum
MD & CMD		
CMD		
Junction Efficiency, % of rib ultimate tensile strength	90 minimum	90 minimum
MD & CMD		
*Determined as a secant modulus without offset allowances.		

MD and CMD do not necessarily refer to the machine (warp) and cross machine (fill) directions in the manufacturing process. They refer, for drawn products, to the more (CMD) or less (MD) highly drawn ribs where the aperture dimensions are unequal.

#### **6240.5. Measurement and Payment.**

- A. Procurement by the State.** Measurement and payment for all materials governed by this Specification should be in accordance with the conditions prescribed in the purchase order awarded by the state.
- B. Contracts.** Measurement and payment for all materials governed by this Specification and utilized in the performance of work specified in the contract should be considered subsidiary to the governing bid item in the contract.

**6240.6. Packaging Requirements.** Package the geogrid in rolls of the length and width specified on the plans, as directed by the engineer, or as specified in the purchase order awarded by the State.

Each roll should be one continuous piece packaged in a suitable sheath, wrapper, or container to protect the geogrid from damage due to ultraviolet light, moisture, and normal storage and handling.

**6240.7. Identification.** Identify each roll with a tag or label securely affixed to the outside of the roll on one end. List the following information on the label:

- unique roll number, serially designated
- manufacturer's lot number or control numbers, if any

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- name of manufacturer
  - brand name of product
  - style or catalog designation of product
  - roll width and length

**6240.8. Basis for Rejection.** Should any individual sample selected at random from 100 rolls, or fraction thereof, fail to meet any specification requirement, then that roll will be rejected. Two additional samples will be taken, one from each of two other rolls selected at random from the same 100-roll lot, or fraction thereof.

If either of the additional samples fails to comply with any portion of the Specification, then the entire quantity of rolls represented by that sample will be rejected.