



— **GEOTEXTILE** —
INSTALLATION GUIDE

TITAN ENVIRONMENTAL CONTAINMENT

TE-GHS
HIGH-STRENGTH WOVEN GEOTEXTILE



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TE-GHS High Strength Woven Geotextile Installation

Surface Preparation:

- Prepare surfaces to receive geosynthetic reinforcement as indicated in the Plans or as directed by the Engineer.
- Prepare soil foundation soil preparation.
- Verify the correct orientation of geosynthetic reinforcement.



Installation:

- Install geosynthetic reinforcement to heights, locations and extent as indicated or as directed by Engineer.
- Place geosynthetic reinforcement horizontally on compacted backfill.
- Pull geosynthetic reinforcement taut and free of wrinkles prior to placement of soil fill. Secure with staples, pins, sandbags, or fill as required according to fill properties, fill placement procedures, weather conditions, or as directed by Engineer.
- Extend geosynthetic reinforcement to terminate at the slope face.
- Utilize consistent procedures for tensioning geosynthetic reinforcement throughout slope length and height.
- Do not overlap geosynthetic reinforcement in design strength. Place as one continuous piece of material.
- If overlaps are required, install them in accordance with the requirements on the graph in Figure #1.
- Install geosynthetic reinforcement in continuous lengths except at curves where indicated.
- Place reinforced fill material in a maximum of 200-mm (8-in) compacted lifts or as directed by Engineer.
- Pretension geosynthetic reinforcement by hand or remove wrinkles. Apply constant tension to each section until the soil fill has been placed. Place, spread, and compact soil fill to prevent the development of wrinkles and movement of geosynthetic reinforcement.

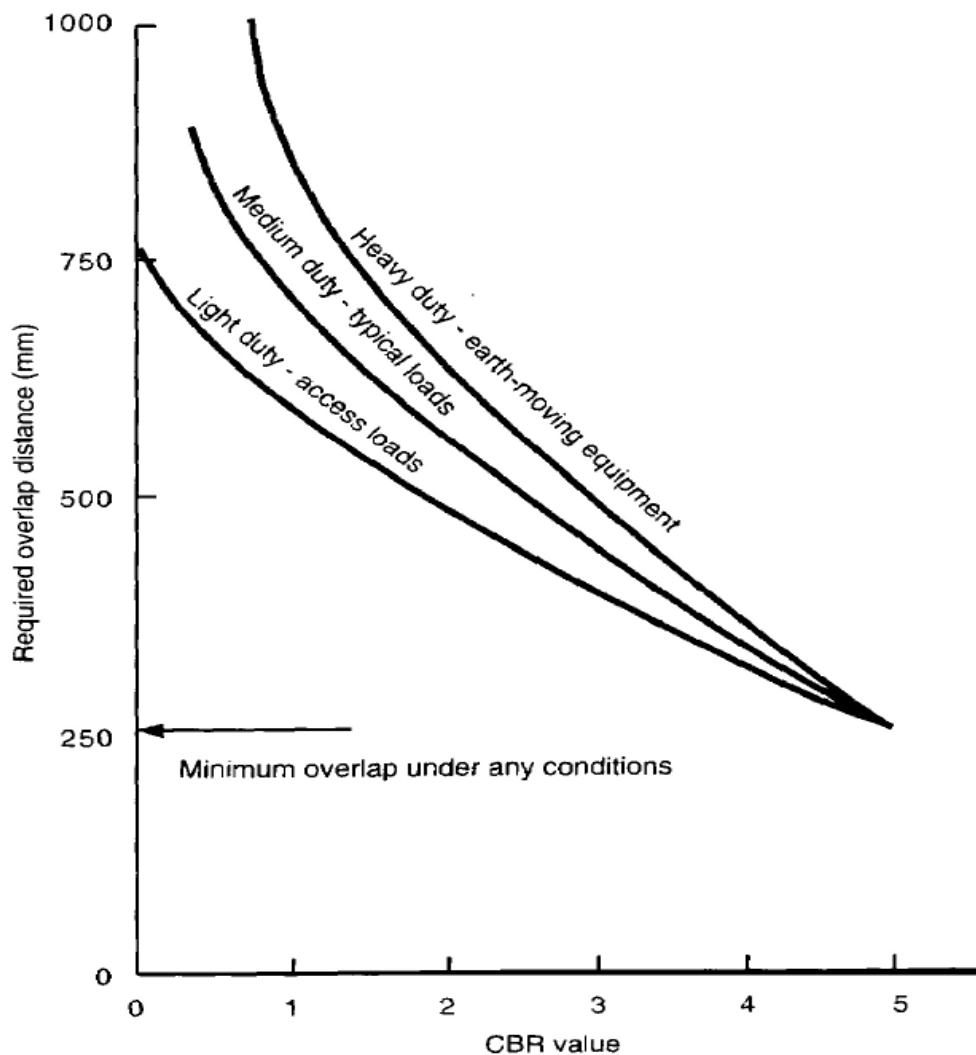
Protection:

- Limit exposure of the geotextile to the elements to 2 days following lay down to prevent damage.
- Do not operate tracked construction equipment directly on geosynthetic reinforcement.
- Place a minimum of 200 mm (8in) of fill prior to operating tracked vehicles over geosynthetic reinforcement.
- Minimize turning of tracked vehicles.
- Rubber-tired equipment may pass over the geosynthetic reinforcement at low speeds of less than 16 km/h (10mph). Avoid sudden braking and sharp turning.
- Provide surface drainage during and after the construction of the wall to minimize water infiltration in the reinforced soil zone.



Figure #1:

Recommended overlap for TE-GHS High Strength Geotextiles used in unpaved roads as a function of unsoaked soil sub-grade CBR value.



Ref: Koerner, Robert M, Designing with Geosynthetics (Fifth Edition, Prentice Hall, 2005)



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Overlap:

- The geotextile is usually laid in the direction of construction traffic; however, specific project dimensions may alter this layout. Geotextile panels should be overlapped both side-to-side and end-to-end, in the direction of aggregate placement. The recommended overlap ranges from 1.5 to 3 feet, depending on subgrade strength. Overlap recommendations are provided in Table 1.

Subgrade CBR Value	Subgrade R-Value (California)	Subgrade Shear Strength (lb/in ²)	Field Estimation of CBR	Recommended Minimum Overlap
< 0.5	-	< 2	-	Sewn seam required
> 0.5 to 1	-	> 2 to 4.5	A person can easily walk on the site	3 ft.
> 1 to 2	> 0 to 10	> 4.5 to 8.5	A low ground pressure bulldozer can access the site without significant rutting	2.5 ft.
> 2	> 10	> 8.5	A D4 bulldozer can access the site without significant rutting	1.5 ft.

Table 1.

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