

# Tensar® Geogrid

## Installation Guide for Trackbed Applications

Tensar geogrids provide a predictable, cost-effective solution for stabilizing ballast and sub-ballast layers. These features depend on proper installation.

### 1. STORAGE

Store Tensar InterAx geogrid rolls in a manner that prevents excessive mud, wet concrete, epoxy, or other deleterious materials from coming into contact with the geogrid. Store geogrids above  $-20^{\circ}\text{F}$  ( $-29^{\circ}\text{C}$ ) and avoid handling below  $14^{\circ}\text{F}$  ( $-10^{\circ}\text{C}$ ). Tensar geogrids may be stored uncovered for up to six months in direct exposure to sunlight without any loss in certifiable structural properties (contact Tensar if longer exposure is anticipated).



### 2. PREPARING THE SITE

- Clear, grub and excavate (if necessary) to the design subgrade elevation, stripping topsoil, and unsuitable material from the site.
- Smooth grade and compact the soils using appropriate compaction equipment. Grade or crown the surface for positive drainage away from the construction zone.
- Place the rolls of Tensar geogrid in position, cut the roll bands and manually unroll the material over the prepared surface. The prepared surface may be the subgrade, subbase, or base elevation depending on the application. Tensar geogrid can be installed directly on the subgrade and no granular fill needs to be placed first.



**SAFETY** - Appropriate personal protective equipment should always be worn when handling, installing, and cutting Tensar InterAx. This may include hearing and eye protection, protective gloves, and long shirt sleeves and pants.

### 3. PLACING AND OVERLAPPING

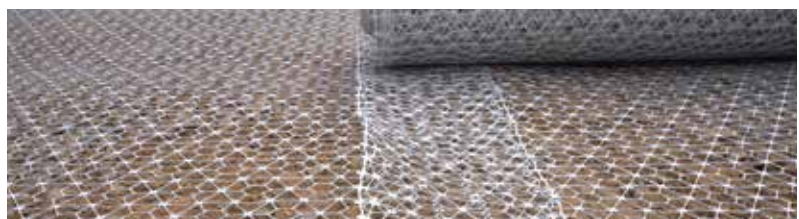
- Unroll the geogrid in the direction of travel so that the roll is parallel with traffic patterns. Adjacent geogrid rolls should be shingled in the intended direction of aggregate spread.



- Cutting may be done with sharp shears, a knife-like implement or handheld power (i.e., "cutoff") saws.



- If a geotextile is required, it should be placed first with the geogrid immediately on top. Alternatively, Tensar FilterGrid™ should be considered to speed installation.
- Overlap requirements depend on the support of the underlying soils. Please reference project documents or contact Tensar for guidance.



## 4. TENSIONING AND PINNING

- Tensar geogrids may be anchored in place to maintain overlaps and alignment over the coverage area.
- Before fully unrolling the geogrid, anchor the beginning of the roll to the underlying surface in the center and at the corners of the roll's edge. This can be done with small piles of aggregate fill or a washer and pin. Large, heavy-gauge staples may also be used by driving them into the subsoil through the apertures of the grid.



- Unroll the geogrid. Align it and pull it taut to remove wrinkles and lay down slack with hand tension, then secure in place. If necessary, geogrid can be repositioned after it has been unrolled. Lift adjacent unrolled sheets at their edges to avoid snagging.

## 5. DUMPING AND SPREADING AGGREGATE FILL

- Generally, at least 4 to 6 inches is required for the initial lift thickness of aggregate fill over Tensar geogrids. However, for very soft conditions, a thicker fill layer and/or lighter construction equipment may be required to prevent excessive rutting and/or bearing capacity failure of the underlying subgrade soils.
- When working with strong subgrades, aggregate fill may be dumped directly onto the geogrid. Standard, highway-legal, rubber-tired trucks (end dumps and belly dumps) may drive over the geogrid at speeds less than 5 mph and dump aggregate fill as they advance, provided construction traffic will not cause significant rutting upon bare subgrade. Turns and sudden stops should be avoided.
- Only operate rubber-tired equipment directly on the geogrid if the underlying subsoil is not prone to rutting under construction traffic.



## 6. COMPACTING

- Standard compaction methods may be used unless soils are very soft. In these cases, static instead of vibratory compaction is prudent, particularly over fine-grained, non-cohesive soils such as silt.



- Compact aggregate fill to project specifications after it has been graded smooth and before it is subject to accumulated traffic. Inadequate compaction will result in surface rutting under wheel loads. This rutting reduces the total effective thickness of the fill and increases stress on the subgrade.

### Special Considerations:

If you have questions regarding special scenarios such as surface rutting, saturated subgrades, or geogrid repairs, call 800-TENSAR-1 or visit [www.TensarCorp.com](http://www.TensarCorp.com).



Watch our short installation video by scanning this code with your phone camera.

