

## TriAx®

### Tensar Geogrids in Cold Climates

#### GEOGRIDS WEATHER ANY EXTREME

Tensar® Geogrids perform well in a number of installation challenges: over weak, wet or compressible subgrades, under heavy loads near shallow utilities, etc. But their performance in extreme cold weather conditions may be the most dramatic.



*Tensar Geogrid can weather freeze-thaw cycles with no adverse effects.*

Unlike chemical stabilization techniques including lime, cement and fly ash, Tensar Geogrids can be readily installed over any subgrade or soil in near-arctic conditions, with no curing time required. In addition, Tensar Geogrids are unaffected by freeze-thaw cycles, posing no challenges to long-term performance. And they provide superior drainage capabilities that ultimately extend pavement surface life.

In contrast, lime stabilization requires a minimum temperature of 40°F, preferably in calm, dry conditions and should never be installed over frozen soil. In freeze-thaw conditions, lime-treated soils can shrink, swell and deteriorate, and remedial efforts to rework the subgrade may not be enough to prevent surface cracking or even premature failure.

#### EASY TO INSTALL - TENSAR GEOGRIDS KEEP YOU ROLLING ALL WINTER LONG

Tensar Geogrids' uniform polypropylene construction does more than withstand the cold. It provides uniform stabilization, presents no environmental hazards, and is always safe and easy to install. Thus, unlike other techniques, no specialized equipment, labor, health/environmental precautions or materials expertise is required.

So why sacrifice performance and productivity over winter and early spring months? Tensar Geogrids have been successfully used in every climatic and surface condition for more than three decades.

#### CASE STUDY: DESAN OILFIELD ACCESS ROAD BRITISH COLUMBIA

**The Challenge:** The natural gas and oil-rich region of Northeast British Columbia lies within the Western Canada Sedimentary Basin. In this region, concentrations of muskeg – bogs composed of decaying vegetation and mosses – are routinely found among the subgrades, making them no match for heavy oilfield equipment. The province's Ministry of Highways encountered such conditions along the proposed route of a 47-mile, gravel-surfaced access road to the developing Desan Oilfields, an area with limited aggregate resources.

**The Solution:** To stabilize the muskeg subgrades, contractors installed 418,600 square yards of Tensar Geogrids, altogether covering more than nine miles of roadway. Road construction took place over brutally cold winter months. Yet despite temperatures plummeting to -40°F, crews installed up to 30,000 square yards of geogrid and fill per day.

"Projects have been built year-round, including construction during the coldest months," remarked John Kerr, P.Eng., Tensar International's Regional Sales Manager.



"Temperatures below -40°F have not presented any complications. In fact, contractors usually encounter more difficulty with fill and equipment at these temperatures. I have not seen any significant failures due to brittle fracture of the geogrid other than minor local damage related to the occasional large frozen lump of fill. Over the last 25 years, I've seen a number of access roads, highways and drill pads built at extremely low temperatures. These projects have been built successfully and have continued to perform over the years," John concluded.

## THE TRIAX GEOGRID ADVANTAGE

TriAx Geogrid enables engineers and contractors to reduce stabilization profiles and save on installation time, materials and expense. With material costs increasing and site conditions more challenging, engineers, contractors, developers and owners are choosing TriAx Geogrid to:

- ▶ Simplify and speed construction
- ▶ Reduce undercutting and overexcavation
- ▶ Reduce aggregate fill thickness
- ▶ Decrease labor and equipment needs
- ▶ Improve durability and increase pavement performance

## EXPERIENCE YOU CAN RELY ON

Tensar International Corporation, the leader in geosynthetic soil stabilization, offers systems for improving structures such as roadways, railyards, construction platforms and parking lots. Our products and technologies, backed by the most thorough quality assurance practices, are at the forefront of the industry. Highly adaptable, cost-effective and installation-friendly, they provide exceptional, long-term performance under the most demanding conditions. Our support services include site evaluation, design consulting and site construction assistance.

For more information on Tensar® TriAx® Geogrid, call **800-TENSAR-1**, visit **[www.tensarcorp.com](http://www.tensarcorp.com)** or email **[info@tensarcorp.com](mailto:info@tensarcorp.com)**.

We are happy to supply you with additional information on our geogrid products, installation guidelines, system specifications, design details, conceptual designs, preliminary cost estimates, case studies, software and much more.



*In the Northpointe Subdivision project, the contractor encountered soft soils during excavation. Due to cold weather, the Village of Plainfield, IL does not allow lime stabilization after October 15th. A TX5 geogrid solution required no undercut to stabilize the subgrade and allowed construction to continue through cold weather conditions.*

Distributed by:

# Tensar®

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