Improved knowledge and research on **Tensar geogrids** lead to a reduction in the impact on the environment

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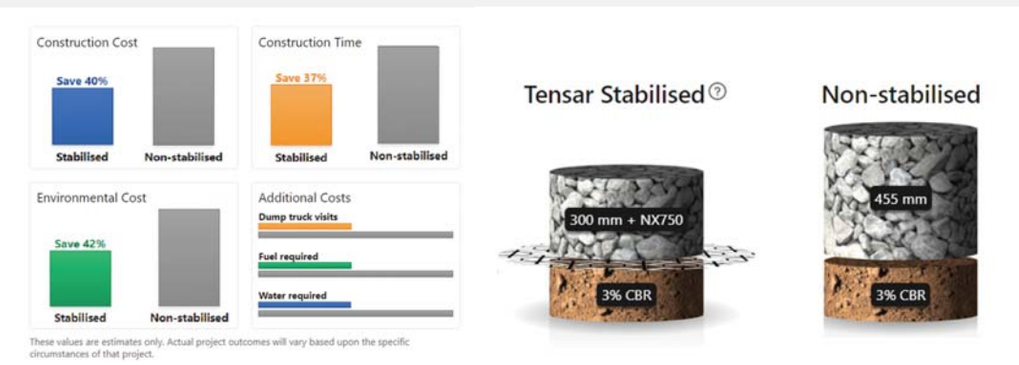
Fuelled by the increasingly clear wishes of clients to build environmentally efficiently, innovative solutions with Tensar geosynthetics are becoming increasingly common. That is precisely why geogrids are bound by rules regarding reliability and risks. In addition to a proven extended design life, aspects like durability, and sustainability are certified.
After five decades of extensive research and our continuing innovations, Tensar now clearly outperforms all prior geogrids with the new Tensar® InterAx®. Whether to reduce construction time, cost, carbon or extend design life, these benefits are quantified in design software Tensar+.

With the change of the most important European sustainability standard EN 15804 + A2, the Dutch determination method “Environmental Cost Indicator”, known as MKI, has also changed. This meant that new Life Cycle Assessments (LCA), additional tests and substantiated reports had to be conducted before July 2022, and Environmental Product Declarations (EPD), changed. All EPD’s, which must be included in the National Environmental Database, or NMD, to determine a valid MKI-score, therefore were renewed to the required complete "A to D".

Applying Tensar® InterAx® broadly results in two improvement factors. First, less granular material used and/or asphalt, which leads to fewer site visits for supply or removal, but also less CO_2 and nitrogen emissions. Secondly, increased service life of trafficked surfaces, and thus reduction of maintenance postpones reconstruction, and the total cost over its entire service life.
When calculating with Tensar® InterAx® in accordance with the current guideline CROW C1001, the amount of granular material can be reduced by up to 60% and the design life of roads can be extended to more than 300%.
This leads directly to the improving MKI scores and increases the chance of awarding a project to contractors. Tensar® InterAx® related improved performance makes the difference even greater compared to the performance of already existing solutions with, among other things, geotextiles, or other solutions such as chemical stabilization.
Although both improvement factors are included in the MKI-score, the biggest gain is in the reduction of thickness with a mechanical stabilized layer (MSL), and therefore the required amount of granular material. Due to this material reduction, the CO_2 footprint decreases heavily, but also excavation, compaction, and transport.

CROW C1001 provides the insight into this “structural contribution” of a geogrid by means of calculations with certified “improvement factors” determined during full-scale research. So, no selectively chosen lab-parameters which are mainly “more” but contribute nothing, nor can be included in a design. Designers can therefore use a CROW C1001 calculation, based on empirical models, to reliably determine pavements for the required service life.

Therefore Tensar introduced Tensar+, a free, cloud-based design software that allows to design with geogrids in a variety of applications and design methods.
Now everybody can quantify or express performance in design life, and thickness reduction while maintaining service life. So indicating reduction of construction costs, time, and carbon, in real-time as parameters change. Furthermore, see the reduced environmental impact of projects.



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