



ENKA[®] SOLUTIONS

RAILWAY INFRASTRUCTURE
PRODUCT COLLECTION

High Performance Geosynthetics



Enka® Solutions

High performance geosynthetics

The Enka Solutions range of high performance geosynthetics offers multiple solutions for civil engineering and building projects. Thanks to its extensive portfolio of readily available products, Enka Solutions efficiently answers challenges in the fields of erosion control, drainage, soil reinforcement, consolidation and separation and more. A large part of our portfolio is perfectly suited to provide solutions for issues related to railway infrastructure.

Our experienced product specialists throughout the world will quickly understand the needs of your projects and can advise on the best solutions. Enka Solutions geosynthetics are backed by extensive testing and appropriate certifications. All of our products are easy to install.

Enka®-D-Tect

Enka-D-Tect is one of the latest Enka Solutions composite products attaching a metallic element at regular intervals in cross direction to a nonwoven geotextile. Especially developed for railway applications, the geotextile will separate ballast and subgrade, reduce

the pumping effects on railway tracks and reinforce the subbase, whilst the metallic strips facilitate a systematic and nondestructive monitoring of trackbed deformation through the use of electromagnetic detection.

Main application areas

- Railway trackbeds

Enkadrain®

Consistent and excellent long-term performance is a key feature of the Enkadrain drainage mat. Each variant has a drainage core bonded to a synthetic nonwoven geotextile layer or is sandwiched between two such layers. Enkadrain provides solutions for

groundwater issues for civil engineering and building projects both during construction and in service. Special types are developed for use as lost shuttering and for vibration damping, the latter often required in the vicinity of railway constructions in urban areas.

Main application areas

- Road and rail
- Tunnels
- Earth retaining structures
- Bridge abutments
- Vibration reduction
- Lost shuttering
- Basement walls

Enkagrid®

The Enkagrid product range comprises a large portfolio of rigid and flexible geogrids, their common values being the optimum soil-grid interaction delivered for each application in any soil type and their outstanding mechanical long-term durability.

Enkagrid types are uni-axial or bi-axial, manufactured from either laser welded strips or woven coated yarns. When soil reinforcement or stabilization is required, our wide choice of readily available products will meet individual project needs.

Main application areas

- Road and rail
- Embankments
- Piled embankments
- Foundations
- Retaining walls
- Steep slopes
- Block walls

Enkagrid® composites

Enkagrid MAX C is Enka Solutions' highly efficient geogrid/geotextile composite. It combines a rigid biaxial geogrid consisting of laser welded strips with a needlepunched nonwoven into one product by means of stapling. Enkagrid MAX C is available in various strengths.

Enkagrid TRC is our high strength geogrid composite of aramid mesh embedded in a thermally bonded nonwoven. Both composites combine separation, stabilization and filtration in one product.

Main application areas

- Road and rail
- Embankments
- Piled embankments
- Foundations

Enkamat®

Enkamat is a flexible three-dimensional mat for immediate, permanent erosion protection on many different slope types. Its unique structure creates an artificial root structure that prevents soil erosion from steep slopes, river banks and other vulnerable areas.

Enkamat has excellent soil retention, providing the perfect conditions for vegetative root systems to develop. Embedded with soil, it forms an integrated and fully vegetated system to control erosion.

Main application areas

- Road and rail
- Slopes
- Riverbanks
- Steep and/or rocky slopes
- Grip layer on soil covered geomembranes

Enka®-Tex

Enka-Tex is Enka Solutions' complete range of nonwoven and woven geotextiles. The nonwoven geotextiles are needle punched and can be thermally bonded. The Enka-Tex product range is extensive, each type having specific properties of

tensile strength, weight or flow capacity. Enka-Tex is ideal for projects where erosion control, filtration, protection, drainage, stress relief, reinforcement or separation are called for.

Main application areas

- Road and rail
- Embankments
- Tunneling
- Pipeline protection
- Retaining walls

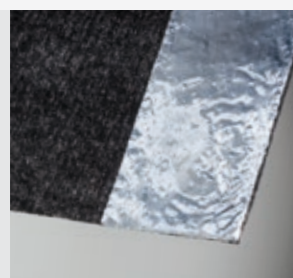
Colbondrain®

When the sub-grade of a construction site is too weak to bear normal construction activity, Colbondrain will speed up consolidation considerably. Colbondrain is a tough and durable prefabricated vertical drain (PVD),

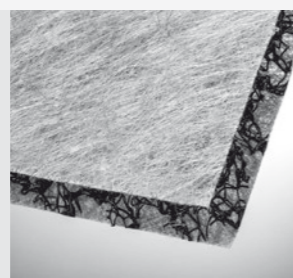
designed to extract pore water from soils to achieve 90% consolidation within six months. Thanks to its high performance Colbondrain is often the chosen PVD for major, technically demanding projects.

Main application areas

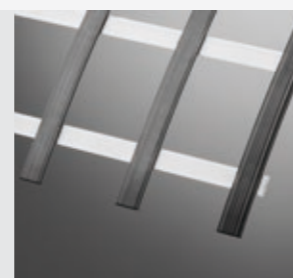
- Soil consolidation



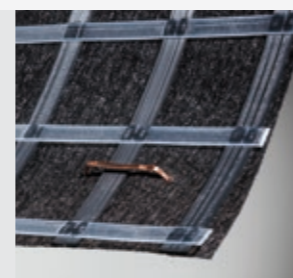
Enka®-D-Tect



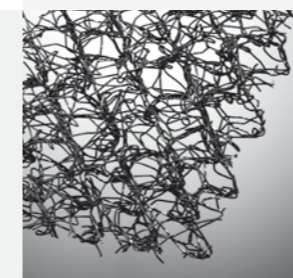
Enkadrain®



Enkagrid®



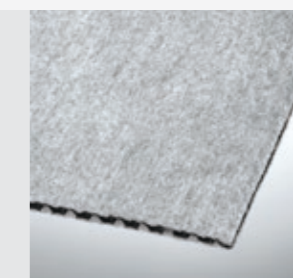
Enkagrid® composite



Enkamat®



Enka®-Tex



Colbondrain®



The Enka Solutions product range is manufactured by Low & Bonar who is a global leader in high performance materials selling in more than 60 countries worldwide and manufacturing in Europe, North America and China. Low & Bonar designs and manufactures components which add value to, and improve the performance of, its customers' products by engineering a wide range of polymers using in-house manufacturing technologies to

create yarn, fibres, geosynthetics, industrial and coated fabrics and composite materials. These materials contribute to a more sustainable world and higher quality of life. Low & Bonar is listed on the London Stock Exchange.

The quality systems of Low & Bonar facilities have been approved to the ISO 9001 Quality Management System Standard. Certificates are available on request.

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