

# GEOSYNTHETICS

TenCate Geosynthetics solutions make the difference



Protective Fabrics  
Outdoor Fabrics  
Advanced Composites  
Advanced Armour

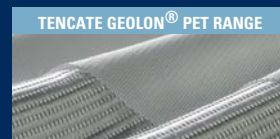
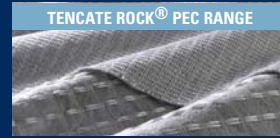
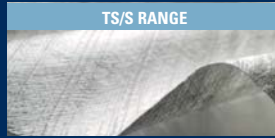
Geosynthetics  
Grass

 **TENCATE**  
materials that make a difference

# A TENCATE SOLUTION FOR EVERY APPLICATION

**Functions:**

- S:** Separation
- F:** Filtration
- P:** Protection
- R:** Reinforcement
- D:** Drainage
- RR:** Road Repair
- EC:** Erosion Control



**APPLICATIONS**

Road and railway structures

Temporary roads

Working platforms, job site access

Road maintenance

Retaining structures

Walls & Slopes

Cavities

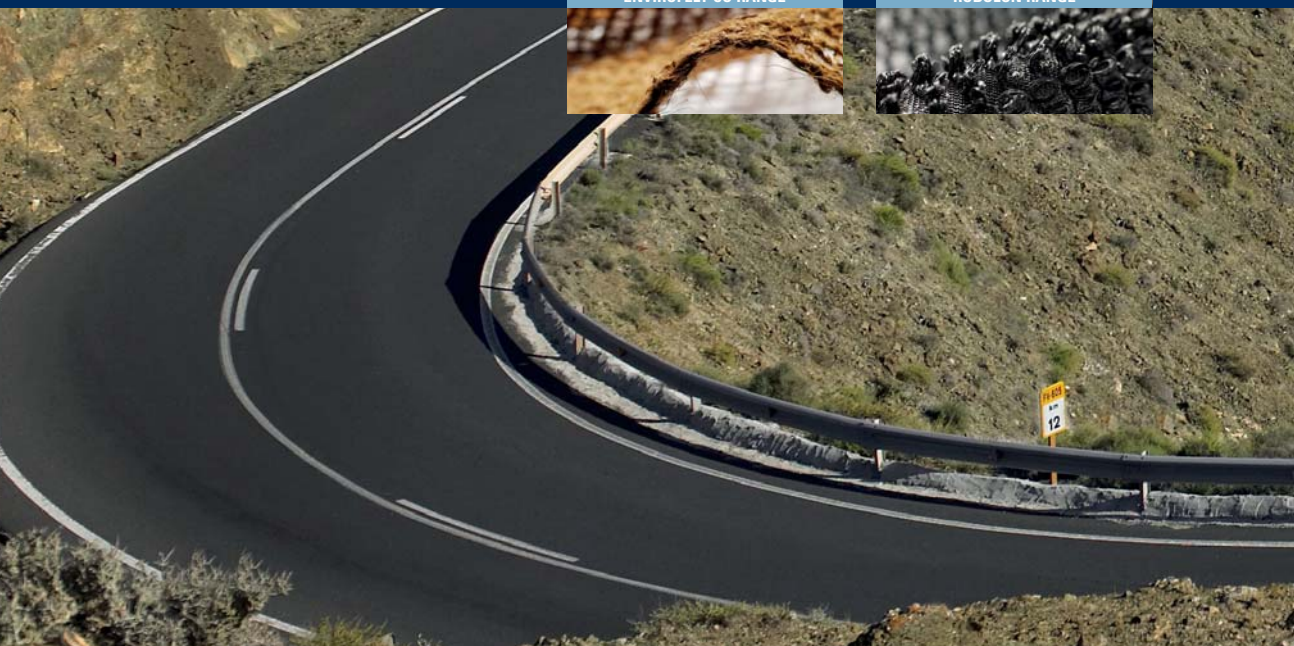
Embankments on soft soil

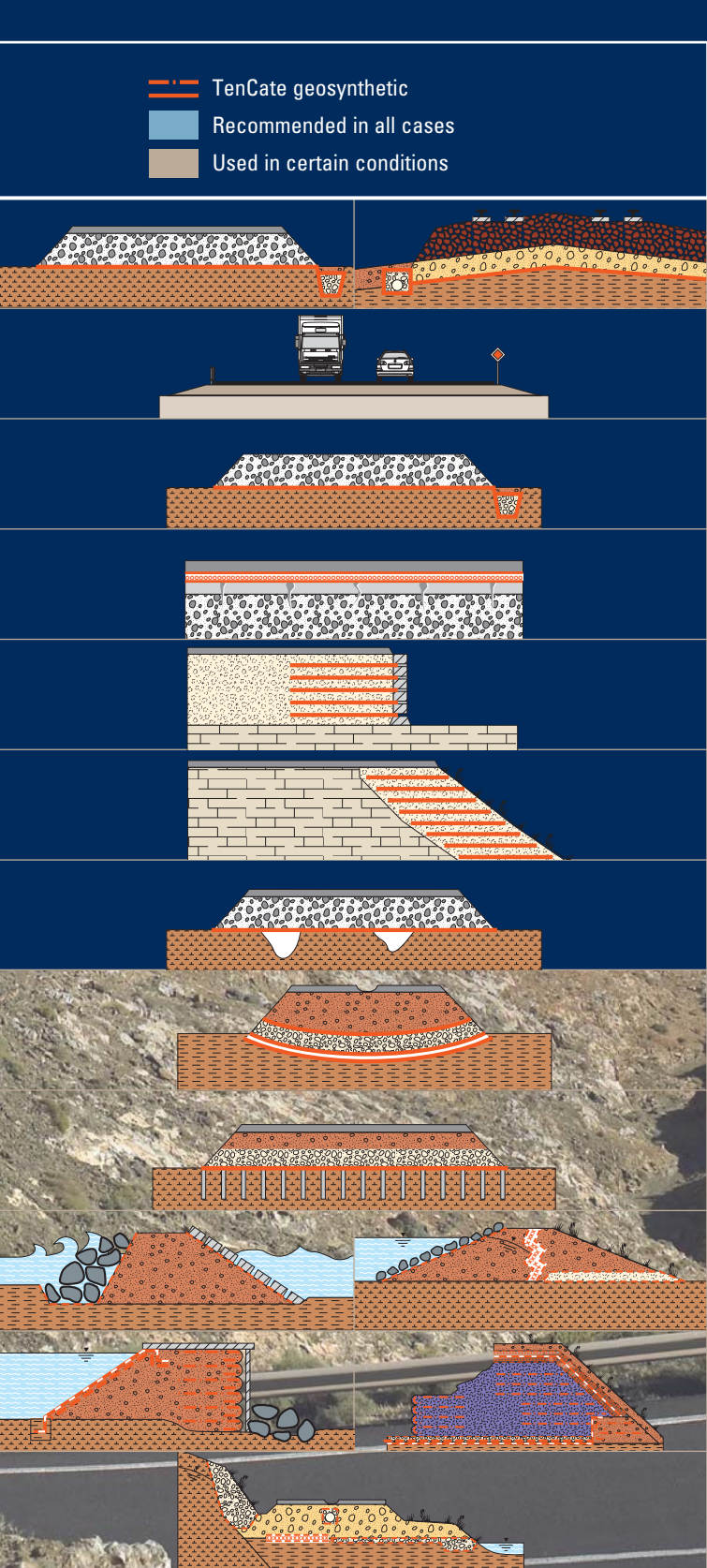
Reinforced embankments on piles

Dams & Hydraulic structures

Basins, Landfills Tunnels

Drainage works





- TenCate geosynthetic
- Recommended in all cases
- Used in certain conditions

TECHNICAL SOLUTIONS - Product ranges											
TS/S range	F range	P range	TenCate Rock <sup>®</sup> PEC range	TenCate Miragrid <sup>®</sup> GX range	TenCate Geolon <sup>®</sup> PET	TenCate Geolon <sup>®</sup> PP range	TenCate Geolon <sup>®</sup> PE range	DN-DC/ Megadrain ranges	PGM & PGM-G range	Envirofelt CO	Robulon range
S/F			R/S D/F	R		R/S					
S/F			R/S D/F	R	R	R/S					
S/F			R	R	R	R/S					
									RR		
			R/D	R							
			R/D	R						EC	EC
			R/S		R	R					
S/F			R/S F		R	R					
			R		R						
F	F	P/F									EC
		P	R					D		EC	EC
F							F	D			

## SEPARATION, FILTRATION, PROTECTION

- TenCate Polyfelt® TS/TenCate Bidim® S • TenCate Polyfelt® F/TenCate Bidim® F
- TenCate Polyfelt® P/TenCate Bidim® P • TenCate Geolon® PE

TENCATE POLYFELT® TS & TENCATE BIDIM® S RANGES



- **TenCate Polyfelt® TS/TenCate Bidim® S** geotextiles are mechanically bonded continuous-filament nonwovens made from 100% UV-stabilised polypropylene.
- **Benefits:** The mechanical properties of TS/S guarantee extreme resistance to installation damage, excellent hydraulic properties and outstanding long-term performance.
- **Application:** TS/S is especially suited as a separator and filter in subgrade stabilisation and is therefore extensively used in road and railway construction, as well as in all types of drainage systems.

F RANGE



- **F** filter fabrics are geocomposites, consisting of two layers of mechanically bonded continuous-filament nonwoven made from 100% polypropylene.
- **Benefits:** One filament layer is designed as a filter, the other as a protection layer preventing mechanical damage to the filter. The optimised opening size ensures excellent long-term filter performance. F is particularly suitable in cases where critical soils place high demands on the filter properties of the geotextile, or when high mechanical stresses are expected.
- **Application:** F is used in river-bank and bed protection, coastal protection, land reclamation and dike construction.



### P RANGE



- **P** geotextile protection layers are mechanically bonded continuous-filament nonwovens made from UV stabilised polypropylene.
- **Benefits:** In addition to its high mechanical protection efficiency, P affords excellent chemical and biological resistance. P has good drainage characteristics and is easily installed.
- **Application:** P geotextiles offer long-term protection for geomembranes in landfills, tunnels and reservoirs.

### TENCATE GEOLON® PE RANGE



- **TenCate Geolon® PE** are woven geotextiles made from UV stabilised polyethylene.
- **Benefits:** TenCate Geolon® PE is specially designed for filtration purposes where long term high water flow performance is required. TenCate Geolon® PE can be prefabricated into tailor made panels.
- **Application:** Drainage, erosion protection of riverbanks, shore lines and sea bottoms, as well as soil stabilisation for breakwaters, groynes and dams.

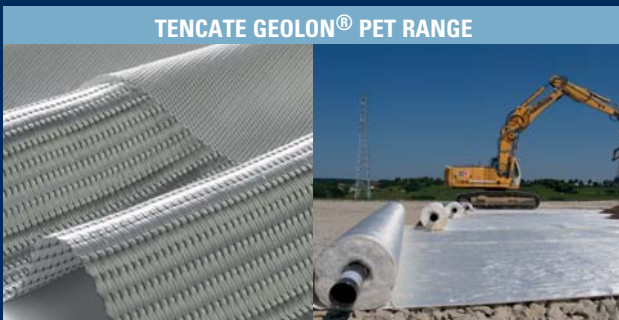


## SOIL REINFORCEMENT

• TenCate Rock® PEC • TenCate Geolon® PP • TenCate Geolon® PET • TenCate Miragrid GX



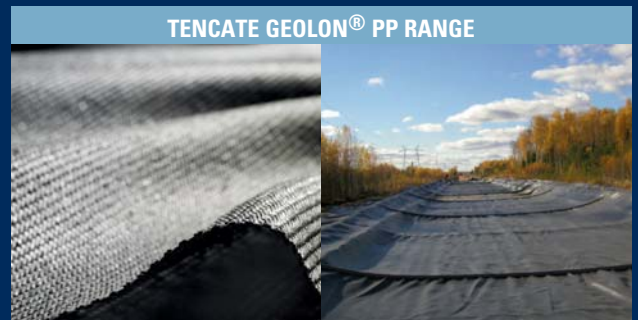
- **TenCate Rock® PEC** is a geocomposite, consisting of continuous filament nonwoven and high tenacity polyester yarns
- **Benefits:** TenCate Rock® PEC is characterised by high tensile strength combined with good in plane permeability. It is mainly used for the reinforcement of cohesive soils, where its drainage function promotes an increase in shear strength. The nonwoven component protects the high tenacity yarns from damage, and its separation function means that TenCate Rock® PEC can be used between fine-grained and coarse-grained soils.
- **Application:** TenCate Rock® PEC is used for reinforced soil structures and for subgrade stabilisation.



- **TenCate Geolon® PET** series are woven geotextiles made from polyester yarns.
- **Benefits:** TenCate Geolon® PET has excellent creep and friction characteristics. These high modulus fabrics are limiting long term deformations in soil structures.
- **Applications:** Embankments on soft soil or over cavities, piled embankment constructions.



- **TenCate Miragrid GX** is a geogrid, made from high tenacity polyester, and has a polymeric coating.
- **Benefits:** GX is characterised by high tenacity strength at low elongation and excellent friction properties opposite coarse-grained soil. It is therefore mainly used for the reinforcement of non cohesive soils.
- **Application:** GX is used in subgrade stabilisation and the construction of roads and railways, for slope reinforcement in landfills, and for retaining structures, including those with facings made from prefabricated concrete blocks.



- **TenCate Geolon® PP** are woven geotextiles made from polypropylene. TenCate Geolon® PP is optionally available with loops and long life additives for under water applications.
- **Benefits:** TenCate Geolon® PP has high tensile strength, very low elongation and excellent chemical resistance. It can be prefabricated into tailor-made panels.
- **Applications:** Soil stabilisation for breakwater and groynes, road and railways.

## EROSION CONTROL

- TenCate Polyfelt® Envirofelt CO • TenCate Geolon® Robulon ranges
- TenCate Polyfelt® DN/DC & Megadrain ranges • TenCate Polyfelt® PGM 14 & PGM-G ranges

### TENCATE POLYFELT® ENVIROFELT CO RANGE



- **TenCate Polyfelt® Envirofelt CO** is a biologically degradable erosion-protection mat made from 100% natural coir.
- **Benefits:** TenCate Polyfelt® Envirofelt CO supports the growth of vegetation on slopes by preventing surface erosion and optimising the micro-climate. Its life expectancy of up to five years ensures protection during the root development phase. Envirofelt CO supports the development of natural vegetation which then fulfills a permanent erosion protection function.
- **Application:** TenCate Polyfelt® Envirofelt CO is used for all kinds of slopes which have to be protected against surface erosion.

### TENCATE GEOLON® ROBULON RANGES



- **TenCate Geolon® Robulon PE, Robulon PP** and **Robulon PET** are high strength geocomposite for slope erosion control purposes. The products are made of a highly durable combination of PP, PE and PET, and has a 3 dimensional structure for optimum soil retention purposes.
- **Benefits:** The high strength woven base layer, featuring inseparable loops for soil, gravel or concrete retention, has a very stable pattern and prevents surface erosion on slopes while allowing vegetation to grow.
- **Application:** TenCate Geolon® Robulon PE is mainly used on green slopes. TenCate Geolon® Robulon PP is mainly used in road basins, canals and riverbanks. TenCate Geolon® Robulon PET is used on landfills covers.

### TENCATE POLYFELT® DN/DC AND MEGADRAIN RANGES



- **TenCate Polyfelt® DC** is a geocomposite consisting of an HDPE geonet and a nonwoven filter on one or on both sides.
- **Benefits:** DC is characterised by low compressibility, and is therefore used in cases where effective drainage under high overburden pressures is required.
- **Application:** DC is used as a drainage element in landfills, retaining walls, basements, tunnels and other sub-surface structures.
- **TenCate Polyfelt® Megadrain** drainage composites are mono-filament geomats from polypropylene, with a filter nonwoven (TS) on one or on both sides.
- **Benefits:** The extremely high voids content of Megadrain guarantees a high water-flow capacity, especially at low overburden pressures. Megadrain is therefore used where high flow rates are required, or in cases of low hydraulic gradient.
- **Application:** Megadrain is mainly used as a horizontal drainage element where surcharge loads are low, such as in flat roofs, playing fields, patios and landfill-cover systems.

### TENCATE POLYFELT® PGM 14 & PGM-G RANGE



- **TenCate Polyfelt® PGM** paving fabrics are mechanically bonded, continuous-filament, polypropylene nonwovens.
- **Benefits:** PGM is economically more effective than conventional road-maintenance methods. Its use retards reflective cracking of repaired asphalt road surfaces by a combination of the functions stress relief, sealing, and uniform bonding between the layers.
- **Application:** PGM is mainly used in applications involving surface dressing or thin wearing courses, and in the maintenance of minor roads.
- **TenCate Polyfelt® PGM-G** is a glass-filament-reinforced geocomposite.
- **Benefits:** PGM-G is ideally suited to the economic local maintenance of any cracked road surface with a stable sub-structure. The combination of PGM – with its sealing and uniform bonding – and the glass-filament reinforcement leads to a tangible reduction in crack formation.
- **Application:** PGM-G is used in layered structures with high horizontal stresses, such as road widening, concrete roads, airport runways or mountain roads widening.

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