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SGSnews

Southern Geosynthetics Supplies Pty Ltd

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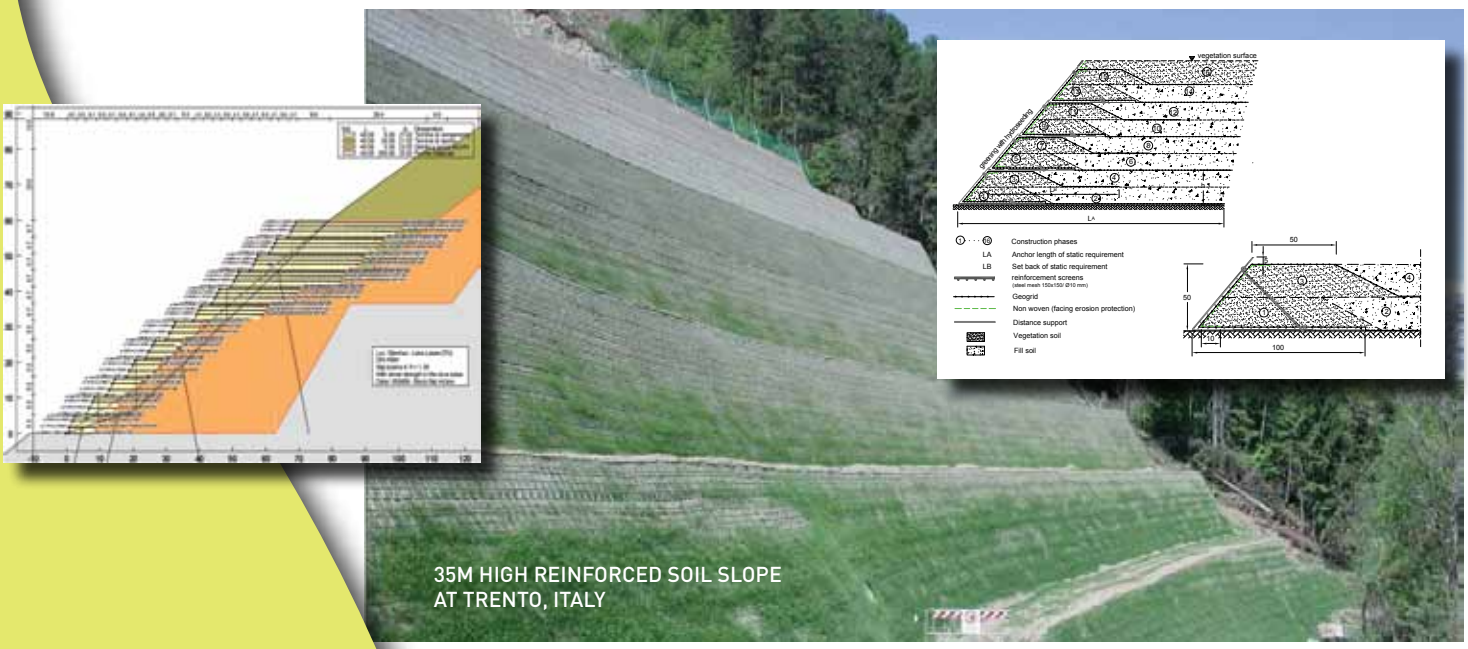
Road Slip Repair



35M HIGH REINFORCED SOIL SLOPE AT TRENTO, ITALY

Inside:

A new method of road slip repair promises to revolutionise the way road authorities tackle this major problem. The recent very wet conditions have created many road slips in our mountainous regions and now Huesker offers a quick, simple, low-cost, repair method. **Fortrac** geogrid is used to form a reinforced soil block and is combined with a bent steel mesh facing panel. The system can be easily vegetated to form an attractive and environmentally friendly "green wall" system. The system allows the re-use of local fill and the facing is completely self-supporting, requiring no additional formwork. There is generally no need to import select rock from quarries as with gabion structures. The speed and cost savings of this system are obvious - bent steel mesh costs only around $35 / sqm of wall face, compared to the high cost of $380 per cubic metre to supply and install gabions.

Huesker's "Green Wall" system is widely used throughout Europe , as you can see from the impressive photos from a major project at Trento, Italy. Huesker offers design support and a wealth of experience in reinforced soil structures. Call SGS today for full technical details.

CONSTRUCTING STEEL MESH FACE WITH **FORTRAC** GEOGRID SOIL REINFORCEMENT

www.geosynthetics.com.au

Volume 9, Issue 1

POLYESTER CF, NW GEOTEXTILE (LEFT) UNRAVELS
POLYPROPYLENE SF, NW (RIGHT) UNCHANGED

Specify the Best!

DUX polypropylene non-woven staple-fibre geotextiles offer a superior choice to other geotextile products available in the Australian market. Why?

Chemical Resistance

1. Polypropylene (PP) is chemically inert, while other polymers such as polyester (PET) have poor chemical stability. Ie PP is more resistance to more chemical environments than PET[1].
2. PP is virtually unaffected by lime, PET is severely affected (OCEMA findings)
3. Alkaline conditions negatively affect PET, PP is unaffected.
4. PET has much higher water absorption than PP. Sometimes, due to moisture gain, PET tends to break down by hydrolysis[2].

Now in wider 5m rolls!

Abrasion Resistance

1. PP has higher abrasion resistance than PET
2. R&D lab simulated rail-track stabilisation conditions, and actual field performance data[3], have proven that PP fabrics have greater abrasion resistance than PET fabrics of twice the mass.
3. Washing machine test – test candidate fabrics in a washing machine for a few cycles and see for yourself how DUX holds together whilst other fabrics unravel. This simple test can be used to simulate dynamic loading conditions such as occurs with wave action in marine environments.

Specific Gravity

1. PP has a specific gravity (SG) of 0.91, PET has a SG of 1.38 (as compared to the standard of 1.0 for water). Result is that for the same weight fiber PP material provides 50% more bulk (more solids) than equivalent weight PET fabrics.
2. Therefore, low SG for PP means more cushion, more cover, greater thickness under a load, better permeability under a load, and better protection (for liners) with PP vs PET.

If you are serious about specifying the best Geotextile for your project , put us to the test - please ask for the testing to back up our claim that **DUX non-woven polypropylene staple-fibre** geotextiles are your best choice.

1. Hayse, Y et.al "Effect of High Alkalinity Levels on Geotextiles. Part 1, Ca (OH²) solutions" Geotextiles & Geomembranes, V5, No.4, 1987 pp261-282
2. Cowland. J.W. "Durability of Polyester and Polypropylene Geotextiles Buried in a Tropical Environment for 14 years", 6th Int. Conf. on Geosynthetics, pp669-674, 1998
3. Raymond,G."Geotextiles for Railroad Bed Rehabilitation" Proc. 2nd Intl. Conf.Geotextiles, St.Paul, MN IFAI, 1982 pp479.484
4. Alexander.W.S. "Abrasion Properties of Geotextiles Subject to Dynamic Loading", 6th Int.Conf. on Geosynthetics, pp1161-1163, 1998

Sports field construction with DUX Geotextile

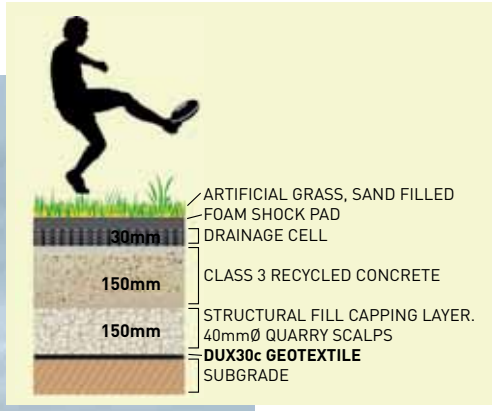
Geotextiles are an important component of modern sport field construction. The key benefits of using a non-woven Geotextile are well known – the Geotextile separates the drainage aggregate from the subgrade, ensuring the drainage aggregate stays clean and free draining for the life of the field. In soft soil conditions **DUX** geotextiles strengthen the subgrade. **DUX** polypropylene non-woven geotextiles are also hydrophilic[1], (meaning **DUX** has no surface tension resistance to the passage of water) so there is no build up of water head required to force drainage through the Geotextile. Polypropylene is not effected by alkaline environments so is ideal for use around lime stabilised subgrades, unlike polyester geotextiles which can be significantly degraded in an alkaline environment.

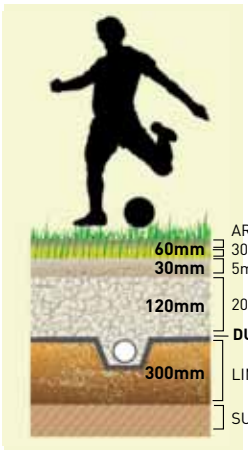
Recently ABS used 11,000sqm of **DUX 23c** at the John Ilhan Memorial soccer field at Westmeadows. The project was won by ABS as a D&C and they proposed an artificial grass playing surface overlying a specially designed free-draining aggregate base. This playing surface achieved FIFA one star rating.

At the new Point Cook Reserve contractor TEAM Sports used some 25,000sqm of **DUX 30c** to construct a dual AFL and cricket artificial grass sports field. TEAM Sports have developed a unique proprietary system for artificial grass sport field construction using a foam shock pad and plastic drainage cell. This is the first such field to achieve playing accreditation to AFL senior level and is expected to be the first of many projects.

[1] Nahlawi.H "Capillary Rise in Unsaturated Nonwoven Geotextiles" The First Pan American Geosynthetics Conference & Expo March 2008 Cancun, Mexico

THE MASSIVE EXPANSE OF THE PT. COOK FOOTBALL GROUND





WESTMEADOWS SOCCER FIELD

DUX 23c AND DRAINAGE TRENCH CONSTRUCTION AT WESTMEADOWS

ENVIROMAT™

Made in Australia

The recent heavy rains and floods have highlighted the enormous problem of uncontrolled soil movement by water and wind erosion. In the USA it is reported by AASHTO that sediment, (the by-product of erosion) accounts for more than two thirds of all pollutants entering U.S. waterways.

ENVIROMAT™ has been a trusted name in erosion control in Australia for more than 20 years. Manufactured in Australia using plantation poplar wood-wool contained within a double poly net, **ENVIROMAT™** is a bio-degradable erosion control mat that stabilises disturbed soil until vegetative cover is established. **ENVIROMAT™** is specifically designed to promote ideal growing conditions for seeds, while also protecting topsoil from winds and water erosion. The natural fibre mat is designed with a built-in swell factor – wet, curled **ENVIROMAT™** fibres absorb moisture and expand to form a strong fibre matrix. This allows the fibres to provide intimate contact with local terrain. The open, lofty structure slows water flow down and allows excellent seed germination.

WOODWOOL FIBRE MATRIX OF ENVIROMAT™

ENVIROMAT™ is ideal for use on areas with moderate flow channels and slopes up to 1.5:1. The mat will provide protection for up to 24 months. Typical applications include embankments, table drains and areas subject to snow cover.

Installation

1. Prepare soil profile , topsoil and seed as required.
2. Roll Enviromat over soil.
3. Pin (200-300mm long U-shaped steel) @ 1m centres

Material Properties

Net:	Top and bottom net lightweight photodegradable polypropylene mesh 0.30mmØ strand. Mesh dimensions is approx. 35mmx20mm.
Matrix:	100% poplar woodwool, 500g/sqm. Enviromat uses only shredded branch and trunk material, and is seed free
Design Life:	24 months
Roll Dimensions:	1m x 60m
Mass:	25 kg / roll
Wrap:	Individually plastic wrapped

STEEP SLOPE TREATED WITH MAT

Lasts twice as long as Jute Mat!

We're on the web!
www.geosynthetics.com.au

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