

Secugrid® Geogrid

Reinforcement and Stabilisation Geogrid

Soil reinforcement, stabilisation and stiffening



Product Information

Secugrid® Geogrid is a stiff, high strength, high modulus at low elongations, Polypropylene (PP) or Polyester (PET) biaxial geogrid consisting of pre-tensioned, surface textured, laid and welded monolithic flat bars with a continuous molecular structure.

The extraordinary high extensional stiffness of Secugrid® effectively and efficiently provides subgrade and basal reinforcement/stabilisation with the intention of improving the load bearing capacity of the subgrade and granular material pavement layer(s) above. This delivers a reduction in deformations within the subgrade and pavement, a reduction in the granular material needed in the pavement design, increases the service life of the pavement for a fixed design depth, as well as helps control expansive subgrade and environmental impacts imposed on the pavement or built modern infrastructure on top.

Applications

- Subgrade stabilisation
- Base reinforcement and stabilisation
- Stiffening and Minimising lateral movement within aggregate base course
- Controlling environmental cracks in pavements on expansive soils
- Working platforms and hard stands
- Access roads on soft subgrades
- Paved roads on soft subgrades
- Railways on soft subgrades
- Rail ballast stabilisation
- Controlling differential settlements
- Proof rolling
- Improving bearing capacity
- Extension of maintenance cycles/design life

Secugrid® Geogrid

Benefits

- Reinforcement/stabilisation of the subgrade and base layers to reduce aggregate thickness to provide significant cost savings
- Increases lateral confinement of unbound & modified gravel material layers
- Improves the subgrade or base course load bearing capacity
- Helps control expansive soil/subgrade movements and associated longitudinal cracks in sealed road pavements
- Immediate interlock with fill material (no construction-related strain)
- Excellent stress/strain behaviour (high tensile stiffness)
- High radial stiffness and high cyclic tensile stiffness
- Robust against installation damage, and chemical and biological attack
- Low creep characteristics available when composed of polyester
- High interface friction because of the structured geogrid surface
- 4.75 m wide x 100 m long rolls to reduce wastage and increase speed of construction.
- Easy to install with no recoil



Secugrid® Geogrid

Product Data Sheet

Product Grade

Typical Properties	Test Method	Unit	20/20 Q1	30/30 Q1	40/40 Q1	60/60 Q1	80/80 Q1
Polymer	Polypropylene (PP), white						
Ultimate tensile strength, MD / CD	ASTM D4595 or EN ISO 10319 / ASTM D6637	kN/m	≥ 20 / ≥ 20	≥ 30 / ≥ 30	≥ 40 / ≥ 40	≥ 60 / ≥ 60	≥ 80 / ≥ 80
Elongation at ultimate strength, MD / CD	ASTM D4595 or EN ISO 10319 / ASTM D6637	%	≤ 7 / ≤ 7	≤ 7 / ≤ 7	≤ 7 / ≤ 7	≤ 7 / ≤ 7	≤ 7 / ≤ 7
Tensile strength at 2% elongation, MD / CD	ASTM D4595 or EN ISO 10319 / ASTM D6637	kN/m	8 / 8	12 / 12	16 / 16	22 / 22	25 / 25
Tensile strength at 5% elongation, MD / CD	ASTM D4595 or EN ISO 10319 / ASTM D6637	kN/m	16 / 16	24 / 24	32 / 32	48 / 48	50 / 50
Radial stiffness at 0.5% strain**	ASTM D4595 or EN ISO 10319 / ASTM D6637	kN/m	≥ 334	≥ 592	≥ 802	≥ 900	≥ 1,008
Aperture stability	Method of Kinney	N-m/degree	N/A	1.14	1.30	2.50	N/A
Junction strength at 2% strain	ASTM D7737/D7737M-15	kN/m	N/A	≥ 9.5	≥ 12.5	≥ 12.5	N/A
Installation damage resistance	ASTM D5818 or ISO 10722	%	≥ 98	≥ 98	≥ 98	≥ 98	≥ 98
Coefficient of direct shear	ASTM D5321 / D5321M	%	> 75	> 75	> 75	> 75	> 75
pH resistance	EN 14030	-	2 to 11	2 to 11	2 to 11	2 to 11	2 to 11
Aperture size, MD x CD	-	mm x mm	Approx. 33 x 33	Approx. 32 x 32	Approx. 31 x 31	Approx. 31 x 31	Approx. 31 x 30
UV-resistance	ASTM D 4355 (500 hrs)	%	> 95	> 95	> 95	> 95	> 95
Roll dimensions, width x length	-	m x m	4.75 x 100	4.75 x 100	4.75 x 100	4.75 x 100	4.75 x 100

Secugrid® is a registered trademark of Naue GmbH & Co. KG.

MD = machine direction, CD = cross machine direction

The listed technical values are minimum average roll values (MARV), achieved in our laboratories and/or independent testing institutes.

** this test is performed by external laboratories and is not part of our regular quality control.

The listed technical values are guiding values, achieved in our laboratories and/or independent testing institutes. Our products are subject to changes without prior notice.



About Us

Leaders in Geosynthetics

Global Synthetics is a 100% Australian-owned company, proud to offer a complete range of high-quality geosynthetic products backed by over 200 years of combined staff experience in the industry.

We have supplied products to some of the largest recent infrastructure works in Australia. Global Synthetics provides major benefits to any geotechnical engineering project with the right products and our technical expertise.

Global Synthetics products are used in the following applications:

- Pavement Stabilisation
- Ground Improvement
- Soil Reinforcement and Retaining Structures
- Water Management
- Drainage Systems & Hydraulic Works
- Landfills
- Coastal Erosion Structures

Get in Touch

AUSTRALIA

Website

globalsynthetics.com.au

Email

info@globalsynthetics.com.au

New South Wales

(02) 9725 4321

North Qld

(04) 5921 1692

Victoria/Tasmania

(03) 9791 1772

Queensland

(07) 3865 7000

South Australia

(08) 8384 8894

Western Australia

(08) 9459 4300

NEW ZEALAND

Website

globalsynthetics.co.nz

Email

info@globalsynthetics.co.nz

Auckland

0800 510 120

Christchurch

0800 510 120



All information provided in this publication is correct to the best knowledge of the company and is given out in good faith. The information presented herein is intended only as a general guide to the use of such products and no liability is accepted by Global Synthetics Pty Ltd for any loss or damage however arising, which results either directly or indirectly from the use of such information. Global Synthetics Pty Ltd have a policy of continuous development so information and product specifications may change without notice.



Global Synthetics
LEADERS IN GEOSYNTHETICS