



Secure Matrix

CONSTRO ENGINEERING SOLUTIONS





WELCOME TO
Secure Matrix

WE OFFER

GEOTECHNICAL SERVICES

- ◆ Gabion Retaining Walls
- ◆ Coastal & Offshore Protection
- ◆ Wetlands & Weirs
- ◆ Highways & Railways
- ◆ Erosion Protection Works
- ◆ River-Bank Protection Works
- ◆ Canal Embankment Works
- ◆ Land Development Works
- ◆ Mining Dump Walls
- ◆ Slope Protection Works
- ◆ Culvert & Bridges
- ◆ Green Slope Establishments
- ◆ Flood Protection Works
- ◆ Offshore protection works
- ◆ Rock Fall Netting
- ◆ Landslide Protection Works

PERIMETER SECURITY FENCING SOLUTIONS

- ◆ International Borders Fencing
- ◆ Industrial/Plants Fencing
- ◆ Residential Complex Fence
- ◆ Educational Institutes Fencing
- ◆ Sports Complex & Stadiums Fence
- ◆ Prison & High Security Zones Fence

- ◆ Gabion Landscaping
- ◆ Gabion Free Standing Walls
- ◆ Gabion Cladding Works
- ◆ Gabion Gardens

ADVANTAGES OF GABION

Flexible

Strength

Permeable

Durability



Ease of Construction

Aesthetics

Erosion Control

Eco-friendliness

WE MAKE

GEOTECHNICAL SERVICES

- ◆ Secure Gabion Box
- ◆ Secure Gabion Mattresses
- ◆ Secure Rockfall Netting
- ◆ Secure Wire Rope Panel
- ◆ Secure Terrain Mesh
- ◆ Secure Erosion Control Blankets
- ◆ Secure Mesh System
- ◆ Secure Drainage Composite
- ◆ Secure Grid System
- ◆ Secure Geo Strap
- ◆ Double Securemesh System
- ◆ Secure Coir Mat
- ◆ Secure Composite Mesh
- ◆ Secure Pro 3D
- ◆ Secure Pro Aura 3D
- ◆ Poly Secure
- ◆ Secure Geo Composite
- ◆ Secure Sack Gabion
- ◆ Secure Geo Cell
- ◆ Secure link-Geogrid
- ◆ Green Securemesh System
- ◆ Secure Green Terrain Mesh

SECURE GABION BOXES

The **gabion** is a rectangular wire mesh container made from double-twisted, Zinc galvanized, and PVC-coated steel wire, forming interlinked hexagonal openings for enhanced durability and strength.

Selvedge/Edge wire, crafted from a more thicker and durable wire, is utilized to fortify the edges and cross diaphragm. It delivers enhanced rigidity and preserves the structural integrity of the Secure Gabion.

BOX SIZES - STANDARDS SECURE GABION BOX

LENGTH (M)	WIDTH (M)	HEIGHT (M)
1.0 to 3.0	1.0 to 2.0	0.5 to 1.0

BOX SIZES - JUMBO SECURE GABION BOX

LENGTH (M)	WIDTH (M)	HEIGHT (M)
4.0 to 6.0	1.0 to 2.0	1.0

STANDARD MESH SIZES

NORMAL 'D'

100 X 120 mm (10 X 12 cm)

100 mm

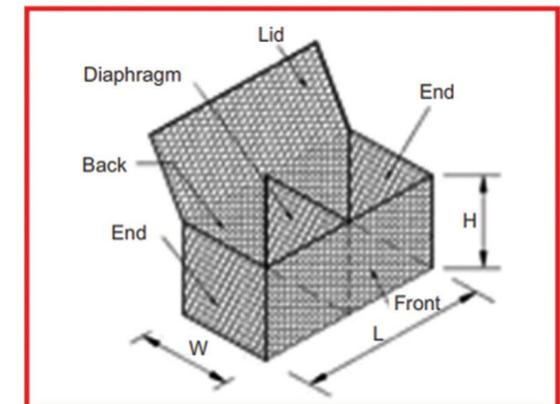
80 X 100 mm (8 X 10 cm)

80 mm



WIRE DIAMETER & TYPE OF COATINGS GABION BOXES

WIRE DIAMETER	ZINC/ZINC AL COATED	ZINC/ZINC AL + ADVANCED POLYMER
Mesh wire	2.70mm ♦ 3.00mm	ID 2.70/ OD 3.70 mm
Selvedge wire	3.40mm ♦ 3.90mm	ID 3.40/ OD 4.40 mm
Lacing wire	2.20mm ♦ 2.40mm	ID 2.20/ OD 3.20 mm





SECURE GABION MATTRESS

The **Gabion Revet Mattress** is a robust structure crafted from mechanically woven, double-twisted hexagonal steel wire mesh, designed to form a durable, interlocking container system. Gabion Mattresses usually have a height of around 0.3 to 1 meter flattened design makes them more suitable for wide or shallow areas that need to be stabilized, like riverbeds, coastal areas, or slopes with less space for height. They provide coverage over a large horizontal area without requiring significant vertical height, making them more adaptable to environments. Gabion Mattresses blend more naturally with their surroundings. This is especially valuable in scenic or environmentally sensitive areas, where minimizing the visual impact is a priority.

SIZES - STANDARDS SECURE GABION MATTRESS

LENGTH (M)
2.0 to 6.0

WIDTH (M)
1.0 to 2.0

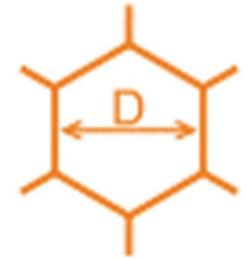
HEIGHT (M)
0.17 to 0.3

STANDARD MESH SIZES

60 X 80 mm (6 X 8 cm)

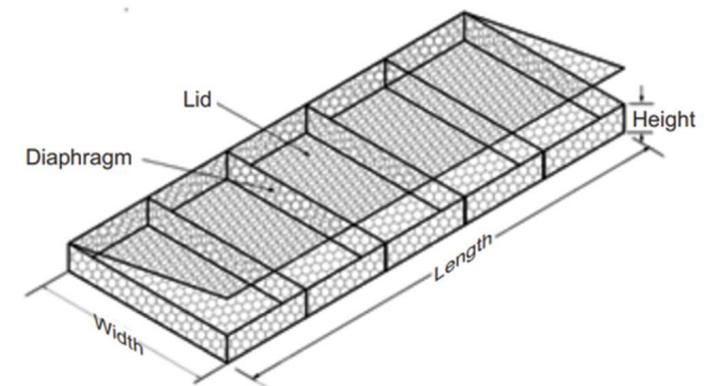
NORMAL 'D'

60 mm



WIRE DIAMETER & TYPE OF COATINGS GABION MATTRESS

WIRE DIAMETER	ZINC/ZINC AL COATED	ZINC/ZINC AL + ADVANCED POLYMER
Mesh wire	2.20mm	ID 2.20/ OD 3.20 mm
Selvedge wire	2.70mm	ID 2.70/ OD 3.70 mm
Lacing wire	2.20mm	ID 2.20/ OD 3.20 mm





SECURE TERRAIN MESH

Tail Gabions are modular structure used to form rock faces reinforced soil walls & Embankments. This is the most trusted solution for taller slopes & structures. It consists of pre-assembled units of double twisted wire **mesh**. The facing section of the unit is formed by connecting a back panel and diaphragms to the main fascia unit, thus creating the rectangular shaped cells used for stone confinement.

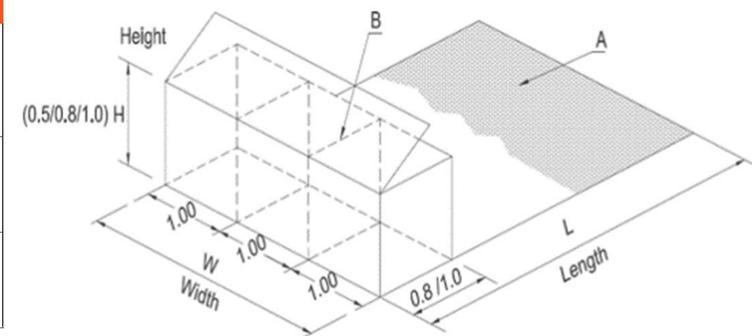
The geogrid reinforcement, fascia and lid are all one continuous panel of mesh. The units are supplied in standard lengths, requiring no cuts on site.

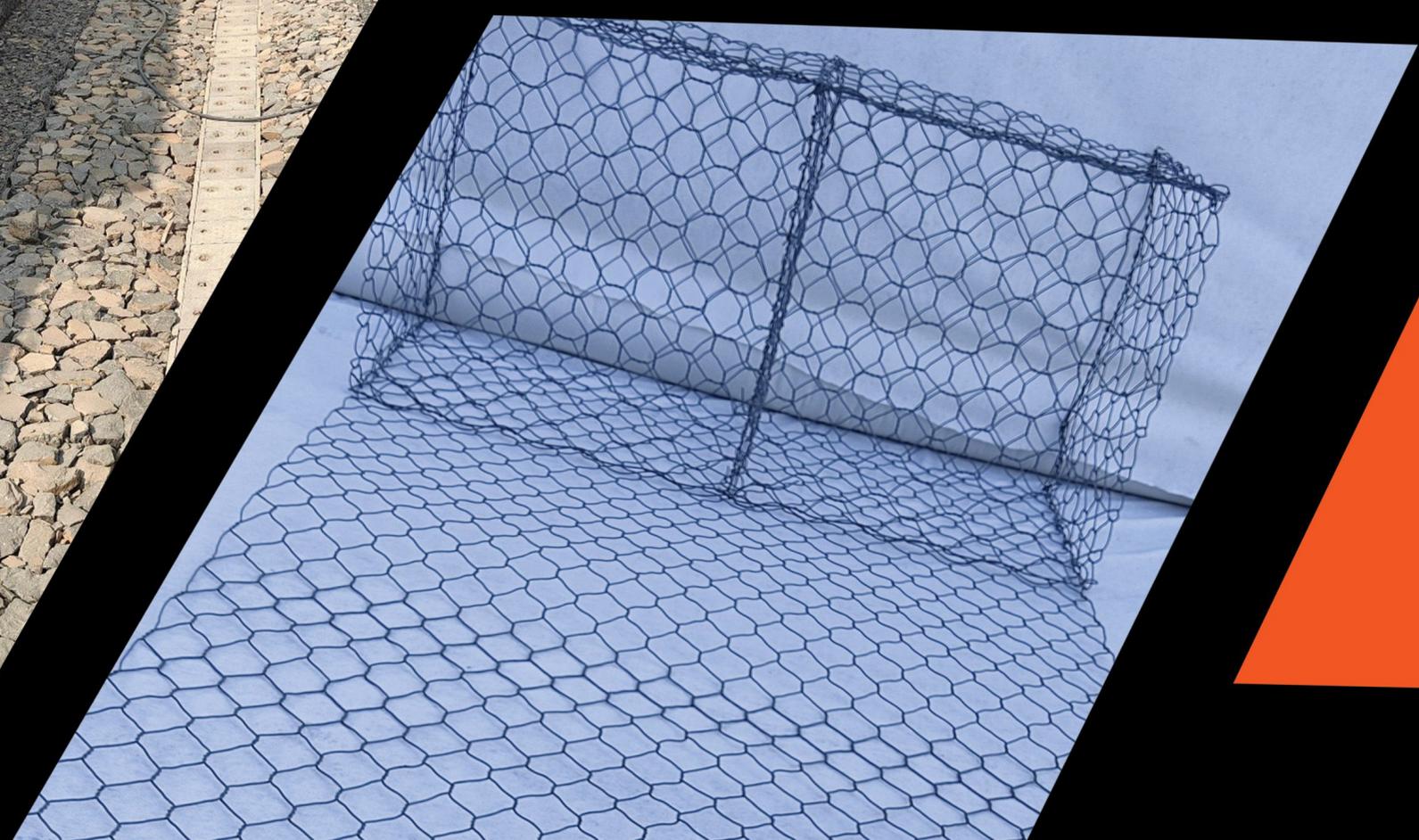
BOX SIZES - SECURE TERRAIN MESH		
LENGTH (M)	WIDTH (M)	HEIGHT (M)
2.0 to 6.0	2.0 to 3.0	0.5 to 1.0

STANDARD MESH SIZES	NORMAL 'D'
100 X 120 mm (10 X 12 cm)	100 mm
80 X 100 mm (8 X 10 cm)	80 mm
60 X 80 mm (6 X 8 cm)	60 mm



WIRE DIAMETER & TYPE OF COATINGS TERRAIN MESH	WIRE DIAMETER	ZINC/ZINC AL + ADVANCED POLYMER	ZINC/ZINC AL + ADVANCED POLYMER
	Mesh wire	ID 2.70/ OD 3.70 mm	ID 2.20/ OD 3.20 mm
	Selvedge wire	ID 3.40/ OD 4.40 mm	ID 2.70/ OD 3.70 mm
	Lacing wire	ID 2.20/ OD 3.20 mm	ID 2.20/ OD 3.20 mm



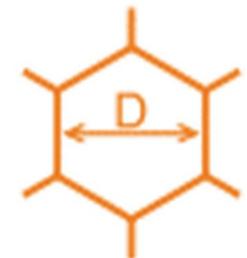


SECURE SACK GABION

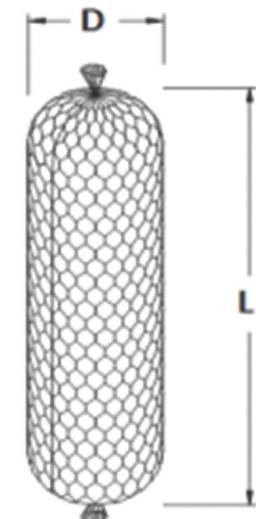
Sack gabions consist of a single mesh panel and are supplied with steel reinforcing wires inserted during the manufacturing process. The wire used in the manufacture of the sack gabion is heavily zinc coated soft temper steel. Sack gabions are filled with rock at the project site to form flexible, permeable, monolithic structures used for emergency and river training works where local conditions require fast installation or where the water does not allow for easy access to the site and where underwater installation is necessary.



STANDARD MESH SIZES	NORMAL 'D'
100 X 120 mm (10 X 12 cm)	100 mm
80 X 100 mm (8 X 10 cm)	80 mm



WIRE DIAMETER & TYPE OF COATINGS GABION BOXES	WIRE DIAMETER	ZINC/ZINC AL + ADVANCED POLYMER	ZINC/ZINC AL + ADVANCED POLYMER
	Mesh wire	2.70mm ♦ 3.00mm	ID 2.70/ OD 3.70 mm
	Selvedge wire	3.40mm ♦ 3.90mm	ID 3.40/ OD 4.40 mm
	Lacing wire	2.20mm ♦ 2.40mm	ID 2.20/ OD 3.20 mm





SECURE ROCKFALL NETTING

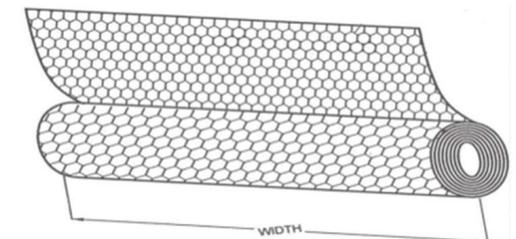
Secure DT Mesh Rolls are constructed from mechanically woven, double-twisted hexagonal wire mesh of zinc coated galvanized wire coated with advanced PA6 polymer and installed with wire ropes spaced at regular intervals. Mainly used for rockfall protection in mountainous regions, around cliffs, tunnels, and in areas near construction zones where there is a risk of rock movement to prevent rockfalls, landslides, and other forms of debris from falling.



STANDARD MESH SIZES	NORMAL 'D'
100 X 120 mm (10 X 12 cm)	100 mm
80 X 100 mm (8 X 10 cm)	80 mm
60 X 80 mm (6 X 8 cm)	60 mm



WIRE DIAMETER & TYPE OF COATINGS GABION BOXES	WIRE DIAMETER	ZINC/ZINC AL + ADVANCED POLYMER	ZINC/ZINC AL + ADVANCED POLYMER	ZINC/ZINC AL + ADVANCED POLYMER
	Mesh wire	2.70mm ♦ 3.00mm ♦ 2.20mm	ID 2.70/ OD 3.70 mm	ID 2.20/ OD 3.20 mm
	Selvedge wire	3.40mm ♦ 3.90mm ♦ 2.70mm	ID 3.40/ OD 4.40 mm	ID 2.70/ OD 3.70 mm
	Lacing wire	2.20mm ♦ 2.20mm ♦ 2.20mm	ID 2.20/ OD 3.20 mm	ID 2.20/ OD 3.20 mm





SECURE RHOMBODIAL ROCKFALL NETTING

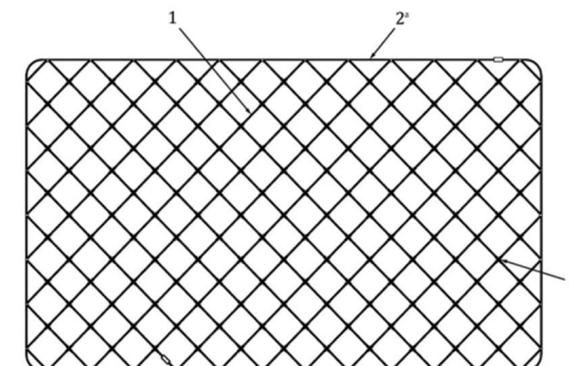
RHOMBOIDAL ROCK FALL NETTING WITH HIGH STRENGTH WIRE KNOT

Secure Cable panels are made of steel cable mesh, with single steel cable laced and woven to form a rhomboid mesh. The Intersection points are reinforced with high-strength knots to resist any static or dynamic stress that could deform the panel. These reinforcement are made of double steel wire knots with a wire diameter of 3.0mm. During the production phase, these knots are mechanically inserted on each side of the panel, providing double binding with two separate wires.

Items	Nominal Net Size ^a (mm)	Net Wire Ropes		Peripheral Wire ropes(optional)	
		Diameter(mm) and type ^b	Minimum breaking load (KN)	Diameter(mm) and type ^b	Minimum breaking load (KN)
Wire Rope net panel Double knot	250 x 250	8 mm 6 x 7 + WC	40.7	10 mm 6 x 19 + WC	63.0
	300 x 300	10 mm 6 x 19 + WC	63.0	12 mm 6 x 19 + WC	90.7
	400 x 400	12 mm 6 x 19 + WC	90.7	14 mm 6 x 19 + WC	124.0
16 mm 6 x 19 + WC				161.0	
Wire Rope net panel Clips knot	200 x 200	8 mm 6 x 7 + WC	40.7	10 mm 6 x 19 + WC	63.0
	250 x 250			12 mm 6 x 19 + WC	90.7
	300 x 300			14 mm 6 x 19 + WC	124.0
				16 mm 6 x 19 + WC	161.0
Wire rope net rolls without connection clips	250 x 250	8,6 mm (3 x 4) mm	61.4	12 mm 6 x 19 + WC	90.7
	275 x 275	6,6 mm (3 x 3) mm	36.7	16 mm 6 x 19 + WC	161.3

a) The tolerance on the nominal size is $\pm 10\%$ but can change in relation to the panel dimensions.

b) Rope type (see ISO 2408), rope grade 1770 N/mm².





POLY SECURE

SECURE MATRIX

ADVANCED CORROSION PROTECTION COATINGS

It offers improved

- Adhesion to the wire
- Long term strength and elasticity
- Resistance to hydrocarbon pollutants
- Environmental performance
- Resistance to mechanical damage
- Cold temperature performance



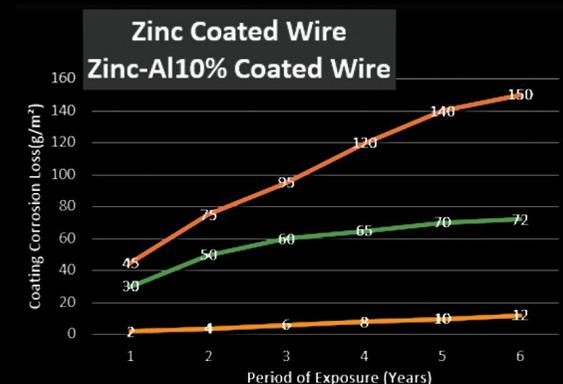
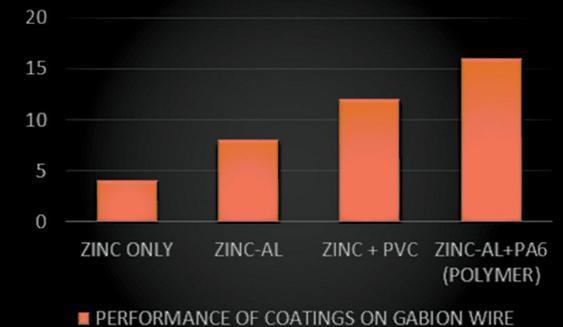
POLY SECURE

SECURE MATRIX

ADVANCED CORROSION PROTECTION COATINGS

PVC V/S ADVANCED POLYMER (PA6)

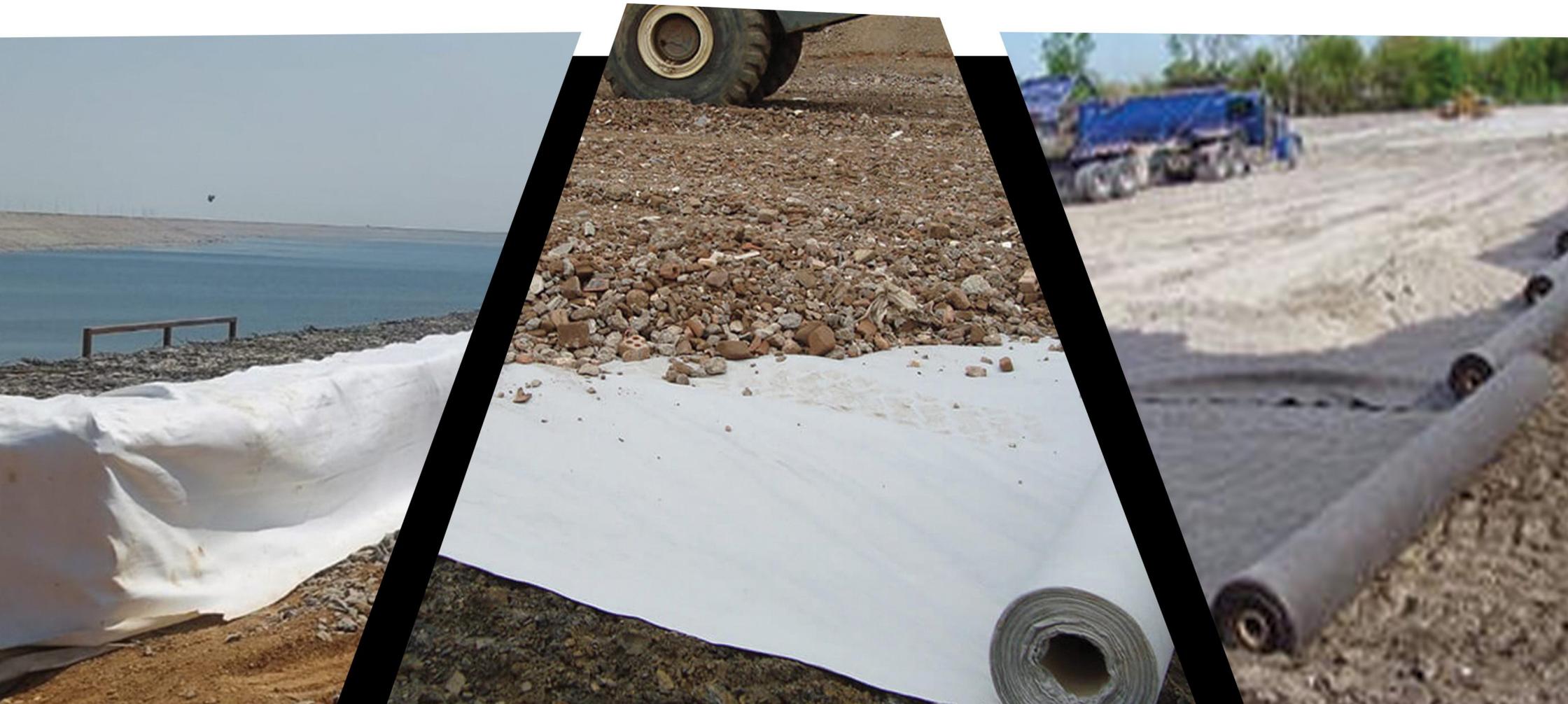
- ◆ 3x Better Adhesion To Steel Wire
- ◆ 50% Harder And Better Able To Resist The Damage
- ◆ 25% More Elongation After 3000 Hrs Uv Test
- ◆ Long Term Strength & Elasticity
- ◆ Resistance To Hydrocarbon Pollutants
- ◆ Better Cols Temperature Performance
- ◆ Resistance To Mechanical Damage
- ◆ Better Environmental Performance



NON-WOVEN GEOTEXTILE

Non-woven Geotextile are made of synthetic fibers, such as polypropylene (PP) or polyester (PET), which are bonded together through mechanical. Plays crucial role in soil stabilization by adding an extra layer of protection and reducing the likelihood of soil displacement.

Secure Non-woven Geotextiles are often placed behind or within gabion walls to prevent soil erosion. The geotextile's ability to filter and drain water while holding back fine particles plays a crucial role in preventing erosion of the underlying soil. This helps protect slopes, riverbanks, or other vulnerable areas from the damaging effects of water flow.



CHAIN-LINK FENCE

A **fencing** material made from steel wire helical wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling or of twisting the ends of the wires to form the selvage of the fabric.



WELDED MESH GABION

Welded wire mesh is widely used due to its durability, strength, and versatility, maintaining its shape and form across various applications. Common uses include fencing, cages, shelving, and grates. Each application requires a specific type of welded wire mesh designed to meet the particular conditions.

Welded mesh gabions can be readily modified on site by cutting the mesh back to the next transverse mesh wire. Welded mesh gabions are available in a number of wire diameters to suit the application or can be manufactured in a combination of mesh-wire specifications to provide economy in supply. The resultant gabions' flexibility is dependant upon the choice of wire diameter.



FENCING SYSTEM

Security **Fencing** is the modern day's alternative to the conventional type of perimeter protection. These are active fences and punish the unwelcome intruder the moment they touches the fence or try to tamper the fence. The conventional types of fences are only passive fences and cannot resist the intruder if they try to forcibly intrude into the protected area. The Security Fence gives a sharp, short but a safe shock and creates psychological fear. Against any tampering the alarm incorporated in the system gets activated and alerts the inmates of the protected area, which facilitates them to counter the unwelcome intruders.

Fencing System means any components supplied to the Customer by ADVANCED including but not limited to fence panels, bases, clamps, access gates, hinge tubes, hoarding, trip guards, screens, shade cloth, crowd control barriers, any equipment that is on-hired or cross-hired from a third party and any other equipment

- ◆ **SECURE PRO/AURA**
- ◆ **SECURE MAX**
- ◆ **SECURE LINK**
- ◆ **SECURE ARM**





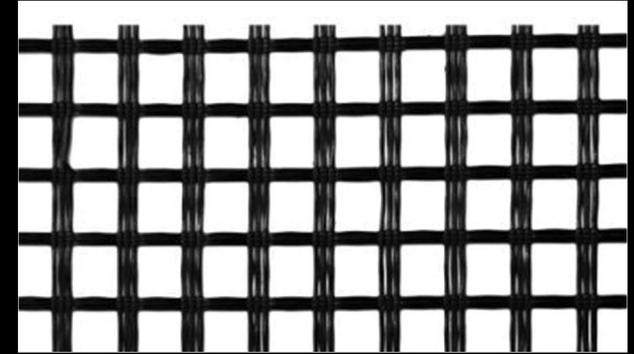
OTHER GEOTECHNICAL PRODUCTS



SECURE EROSION CONTROL BLANKET



SECURE DRAINAGE COMPOSITE



SECURE GRIDSYSTEM



SECURE PRO 3D



SECURE PRO AURA 3D

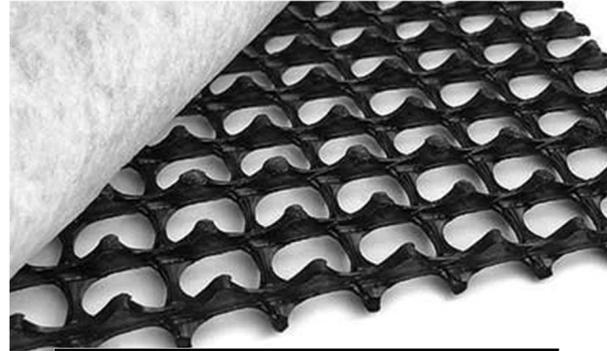


SECURE LINK-GEOGRID

OTHER GEOTECHNICAL PRODUCTS



SECURE COIR MAT



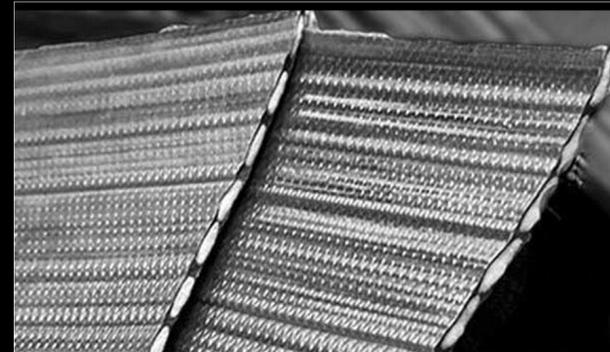
SECURE GEOCOMPOSITE



SECURE GEOCELL



SECURE GEOBAGS



SECURE GEOTRAP



Secure Matrix

CONSTRO ENGINEERING SOLUTIONS

SECURE MATRIX
CONSTRO ENGINEERING SOLUTIONS

◆

HEAD OFFICE:

235/236, Kohinoor
Majestic, Thermax Chowk,
Pimpri- Chinchwad,
PUNE-411019

◆

CONTACT US:

+91-9423388501
www.securematrix.co.in
info@securematrix.co.in
sales@securematrix.co.in

◆

MANUFACTURING UNIT:

Address: Gat No 309/2,
At post Kuruli, Tal-Khed,
Pune Nashik Highway,
Chakan, PUNE-411019