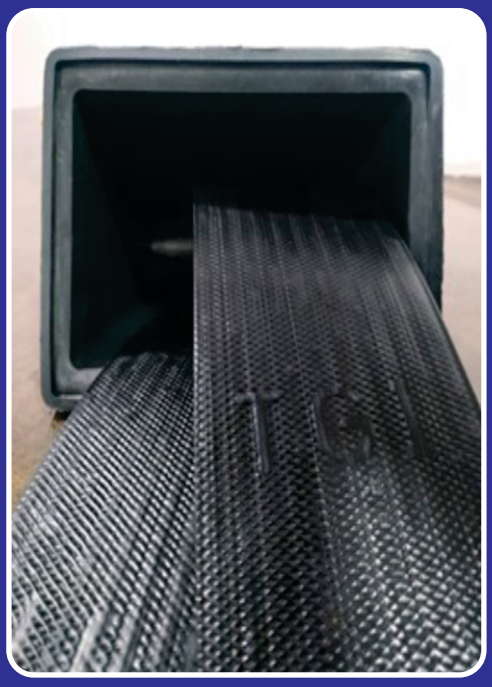
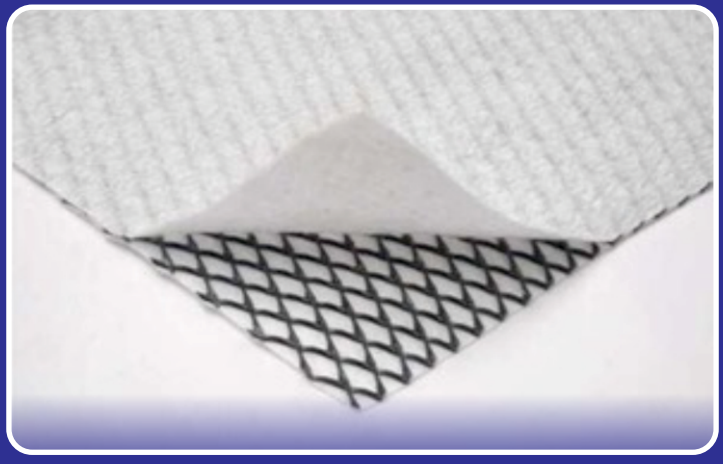
TECHGEO
INDUSTRIES





TECHGEO INDUSTRIES

https://techgeoindustries.com

We, Techgeo Industries, an ISO 9001:2015 and CE certified company, established in the year 2021, manufacturing various products for infrastructure and construction solution Like Geostrap, Geocomposite, Geocells, EPDM Pads & Polymeric Cavity connectors. All the Techgeo Products are manufactured with international quality standards and parameters. We have In House Testing laboratory setup with all the latest available equipments in the market. At Techgeo industries all the machines used in Manufacturing process are imported and we have staff of nearly 50 members in plant at different skill levels.

Situated at Hyderabad, Telangana, We are Supplying our Products to various well-known companies working on NHAI and State Highways projects.

सत्यमेव जयते

Government of India
Ministry of Commerce and Industry
Directorate General of Foreign Trade
Office of the Additional Director General of Foreign Trade, Hyderabad
Room No.302, 3rd Floor, CGO Towers,,Kavadiguda

Importer-Exporter Code

This is to certify that **TECHGEO INDUSTRIES** is issued an Importer-Exporter Code (IEC) **AASFT0645A** with details as follows -

IEC	AASFT0645A
स्थाई खाता सं./पैन) /PAN	AASFT0645A
फर्म का नाम/Firm Name	TECHGEO INDUSTRIES
निगम की प्रकृति /Nature of Concern	Partnership
जारी करने की तारीख/Date of Issue	16/07/2022
पता/Registered Address	Survey No. 236, Bhadurpally, Hyderabad, HYDERABAD, TELANGANA, 500043
धारक का नाम / Name of the Signatory	Sathish Reddy Narapa
Director / Partner Details	Refer online at https://dgft.gov.in or scan the QR Code
शाखा/इकाई /Branch Details	Refer online at https://dgft.gov.in or scan the QR Code

Last Modified : 16/07/2022
File Number : HYDIECPAPPLY00008328AM23

Note : This is a system-generated certificate. Authenticity / Updated details of the IEC can be checked at official DGFT website https://dgft.gov.in by entering the IEC and Firm Name under Services > View Any IEC Details. You can also authenticate the certificate by scanning the QR code.

Certificate

Breakthrough Management Quality Registrar (BMQR)

Certifies that the Quality Management System of

TECHGEO INDUSTRIES
Survey No: 236, Bahadurpally Village, Quthbullapur, Medchal, Malkajgiri, Telangana – 500 043. India.

has been assessed and found to be in accordance with the requirements of the quality standards

ISO 9001:2015

for the following scope of certification

MANUFACTURING OF GEOSYNTHETICS MATERIALS LIKE, GEOSTRAPS, GEOGRID, GEOCOMPOSITES, GEOCELL MATERIALS, CAVITY CONNECTORS, EPDM (ETHYLENE PROPYLENE DIENE MONOMER) PADS, ROCKFALL NETTINGS, GABION BOXES AND OTHER ALLIED BUSINESS.

Further clarifications regarding the scope of this certificate and applicability of ISO 9001:2015 requirements may be obtained by consulting the organization.

Original Certification Date	: 21/10/2021
Current Certification Date	: 21/10/2021
First Surveillance Due on	: 20/10/2022
Second Surveillance Due on	: 20/10/2023
Certificate Expiration Date	: 29/10/2024

Surveillance Audit

BMQR ISO 9001 CERTIFIED

Certificate No: AE0905214450

AIAO-BAR EMS ACCREDITED USA

For BMQR

European Conformity

WRG CERTIFICATIONS INTERNATIONALLY RECOGNISED

Certificate of Compliance

WRG Certifications hereby certifies that the:

TECHGEO INDUSTRIES

Survey No. 236, Bahadurpally Village, Quthbullapur, Medchal - Malkajgiri, Telangana - 500043, India.

has been assessed and found to operate in compliance and meets the requirement of following

Directive (EU) No 305/2011

The Technical Documentation/ Inspection/ Test Result Comply with the Requirement of CE Construction Products Regulation – Regulation (EU) No 305/2011 And Can Put the CE Marking with his Responsibilities as Follows

CE

for the scope of following Products:

Manufacturing of Geostrap, Geocomposite, Geotextile, Geocells, EPDM Pads & HDPE Cavity Connectors for Infrastructure and Construction Industries.

Initial date of certification	: 03-Mar-2023
Current date of certification	: 03-Mar-2023
Date of expiry	: 02-Mar-2026
Surveillance Date - 1	: 01-Feb-2024
Surveillance Date - 2	: 01-Feb-2025

Certificate Number : CE-MMXXII-03-12384
Nace Code : G45.21

WRG Certifications
Adpanghal
Authorised Signatory

WRG CE REGISTERED

AIAO-BAR COMPLIANCE USA

Registry information can be found at: www.wrgcert.com/register

CE

This certificate remains the property of American International Accreditation Organization – Bureau of Accredited Registrars, (AIAO-BAR) & World Registrar Group Certification, (WRG Certifications). This certificate is valid for three years from the date of its issuance. Must be returned if certificate is withdrawn. Compliance & Accreditation by AIAO-BAR, www.aiao-bar.org Registration No – AIAO-BAR-0305121

Our Products

1.TGI Geostraps

TGI[M] Geostraps have a flat webbing like structure and comprise closely packed and tensioned parallel bundles of high tenacity polyester filament yarn tendons which are encased in a linear low density polyethylene sheath.

TGI[M] Geostraps is a planer structures consisting of a core of high tenacity polyester yarn tendons encased in a polymer sheath. TGI[M] Geostraps are suitable for Reinforcement applications in combination with concrete facia panels.

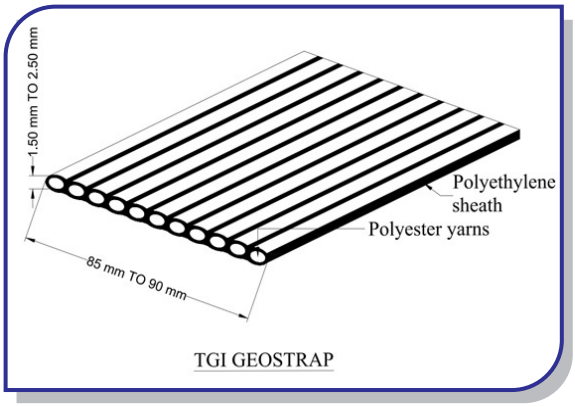
TGI[M] Geostraps are the most tested Soil Reinforcement material in the world offering 120 years design life with high performance. The polymer sheath act as protective resistance forthe yarns against Physical, Chemical and Biological conditions found in Reinforced Soil wall Structures.

The polyester yarn tendons are the load-carrying elements and comprise select high tenacity polyester filament yarns with high tensile strength and modulus, low creep, high molecular weight (> 25,000 g/mol) and low carboxyl end groups (< 30 mmol/kg) to ensure excellent performance and durability.

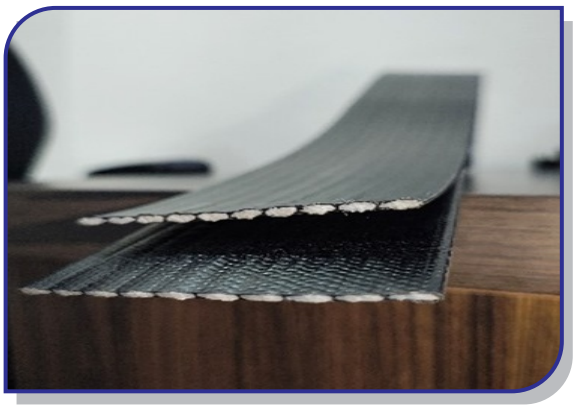
The sheath consists of a custom formulation of superior grades of linear polyethylene and additives to enhance resistance to ultraviolet rays. The composition and thickness of the sheath is specifically engineered to provide a high level of dimensional stability and protection from weathering and installation damage. The surface texture of the sheath ensures a high degree of frictional interaction with the fill to mobilize high pullout resistance.

TGI[M] Geostraps are ideally suited for Reinforcing soils and other fills for the construction of Reinforced soil walls (mechanically stabilized earth walls) and shored MSE walls. Geostraps are most commonly used with precast concrete discrete / segmental / incremental panel facing.

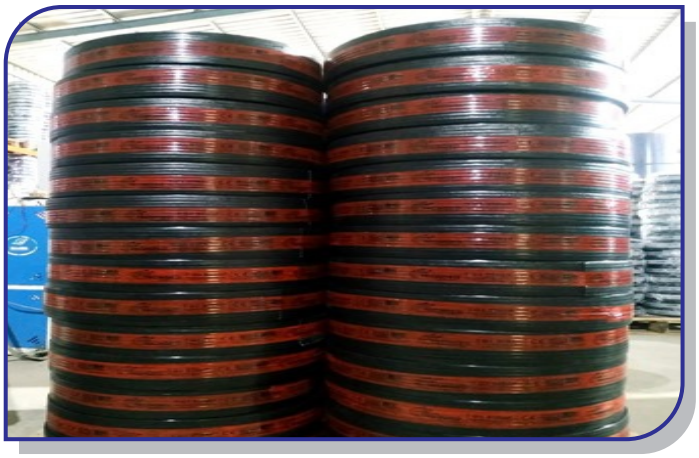
TGI[M] Geostraps can also be used with welded wire mesh cages using appropriate connection fixtures or devices. Precast Concrete Discrete Panels are one of the most widely used types of facings for reinforced soil walls.

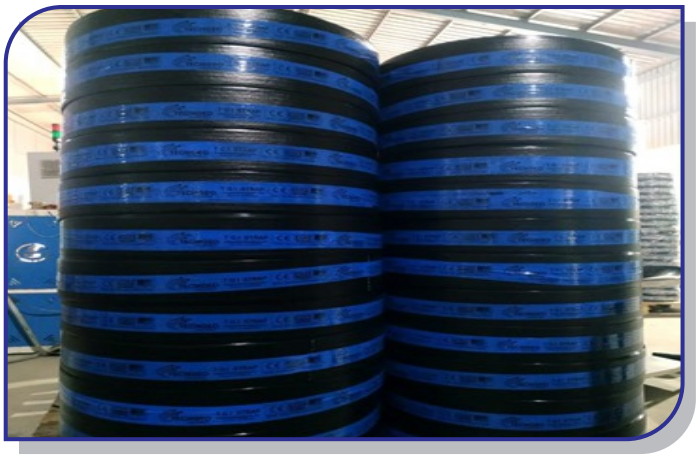


TGI GEOSTRAP



TGI^{M} GEOSTRAP COLOUR COADING DETAILS		
30 kN		WHITE
40 kN		RED
50 kN		BROWN
60 kN		GREEN
75 kN		ORANGE
85 kN		BLUE
100 kN		YELLOW





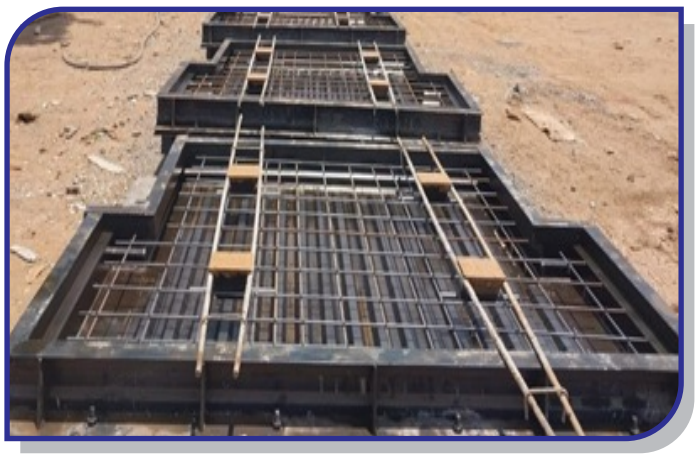
TGI[M] Geostrap rolls are of 100 mt length as per the site requirement.

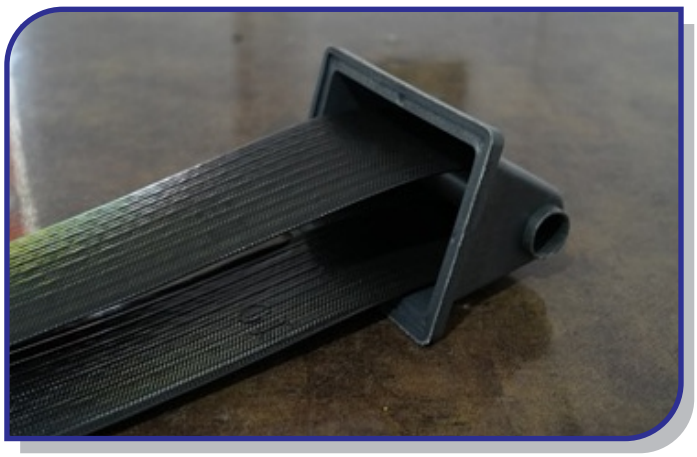
Product	Unit	TGI 30	TGI 40	TGI 50	TGI 60	TGI 75	TGI 85	TGI 100
Ultimate Tensile Strength	kN	>30	>40	>50	>60	>75	>85	>100
Elongation at Break	%	12	12	12	12	12	12	12
Reduction Factor		1.817	1.817	1.817	1.817	1.817	1.817	1.817
Design Life		120	120	120	120	120	120	120
Long Term Design Strength	kN	41.27	55.04	68.80	82.56	103.20	116.96	137.58
Width	mm	85	85	85	85	90	90	90
Roll Length	M	100	100	100	100	100	100	100

Reduction factors of Geostraps

Geostrap	30	40	50	60	75	85	100
Durability reduction Factor (RF_d)	1.21	1.21	1.21	1.21	1.21	1.21	1.21
Installation Damage Reduction (RF_{id})	1.05	1.05	1.05	1.05	1.05	1.05	1.05
Creep Reduction Factor (RF_{cr})	1.43	1.43	1.43	1.43	1.43	1.43	1.43
Coverage Ratio (R_C)	0.21	0.21	0.21	0.21	0.22	0.22	0.22
Coefficient of Interaction (c_i)	0.80 to 0.93						
Environmental Degradation, PH range 4.0 to 9.0	1.21						

Grade	30	40	50	60	75	85	100
Geostrap Width (mm)	85±3	85±3	85±3	85±3	90±3	90±3	90±3
Geostrap Thickness (mm)	1.90	1.90	2.00	2.00	2.10	2.10	2.20



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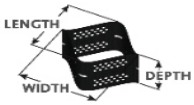
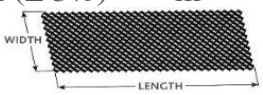
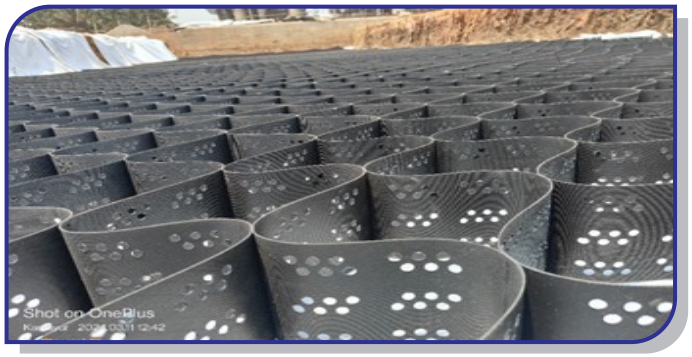
2. TGI Cells

TGI Cells a strong, lightweight, three dimensional cellular confinement system, which offers unique, eco-friendly geo technical solutions for civil engineering challenges. TGI Cells made of ultrasonically-welded HDPE strips that are expandable on-site to form a honeycomb-like structure, consisting of a regular open network of synthetic strips, linked by extrusion or adhesion or other methods. It provides solutions for load support, erosion control and earth retention projects, there by leading to cost savings on the cost of select soil and its transportation while also rendering ecological advantages. It acts as a foundation reinforcement mat for improvement of bearing capacities of weak soils. We are equipped to produce 75mm, 100mm, 150mm & 250mm depth of cells in our manufacturing unit.

Polymer density (ASTM D 792) : 0.935 - 0.965 g/cm³
Carbon black content (ASTM D 1603) : min. 1.5 %
Nominal sheet thickness (post texturing) (ASTM D 5199) : min. 1.2mm
Material :Compound of numerous polyethylene types and additives
Texture : Polyethylene strip consists of multiple rhomboidal indentations, having a surface density of 22 to 32 per cm²
Perforations : Polyethylene strip is perforated with horizontal rows of maximum 10 mm diameter holes. Cell perforations area is less than 16% of the cell surface area

Cell/section properties	
Property	**XG 712**
Weld spacing (± 3%) mm	712
	508
Expanded cell dimensions (± 3%) mm 	475
Nominal expanded section (± 3%) m 	2.56/3.05
	13.72
Nominal expanded section area (± 3%) m2	35.1/41.8
Seam properties	
Cell depth (available for all welds)	
Seam peel strength (min.) mm	75
(EN ISO 13426-1 Method C) N	1050



Salient features TGI Cells:

TGI Cells wall shear strength - Sufficient wall strength and joint strength to resist the shear forces as well as construction loading during the infilling process.

Wall / soil frictional interaction must be high so the infill stays in the cell under loading.

TGI Cells size -The correct cell size and cell depth is a must for optimal designs.

TGI Cells slope protection systems may be designed with a variety of infill materials to meet project requirements for aesthetics, stability, environmental impact, material availability, and erosion-control.

TGI Cells Advantages:

The unique three dimensional structures of TGI Cells confine the fill material and protect it from lateral spread. The textured surface of the cell walls as well as the perforations help holding the soil with in the cells.

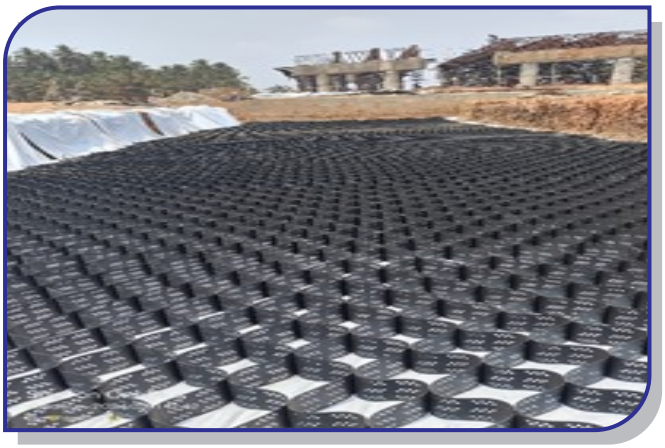
TGI Cell shelp in strengthening the pavement life by reinforcing soil within.

TGI Cells are easy to transport since there are flat and collapsible structure.

Installation of TGI Cells is several times faster than installing conventional systems.

Less man power comprising of un skilled labour is required. About 400 to 1,000m^2 per day may be covered with no special equipment required for execution.

TGI Cells helps in distributing the load to a wider area there by reducing stresses on the over all crust thickness



3.TGI Composite

MATERIAL

TGI composite is geonet sandwiched between geotextiles on both sides and manufactured by thermal bonding of filter consisting of thick supporting ribs with high density polyethylene and laminated by a core with polypropylene. Must temperature of bonding materials must be compatible so that the properties of each material may be retained. The geonet is made from fibers which intersect at 60 degrees and this pattern creates channels with high flow capacity under pressure and also at very low gradients

TGI composite is capable of quickly remove surface water infiltrating or ground water seeping in to the soil base. The product provides a void-maintaining system under high normal loads to work as a capillary break; it also works as a separation and sub-base reinforcement layer and will have properties conforming to the values and test methods

APPLICATIONS

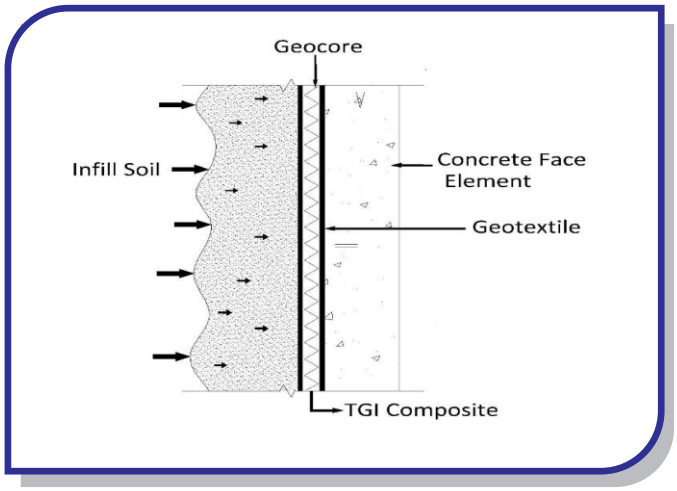
Drainage	Extensively used in drainage applications because of its nature to provide efficient water flow
Filtration & Separation	To prevent the mixing of different soil layers ,controls soil erosion and provide stability(Road construction, railway embankments, landfill liners)
Environmental protection	They are used in landfill liners, caps, covers, to prevent the contamination of soil and ground water.
Erosion control	To control the soil erosion in various applicants such as river banks, coastal areas & slopes.
Pavement systems	To enhance the separation between the subgrade and base layers by preventing the intrusion of fines

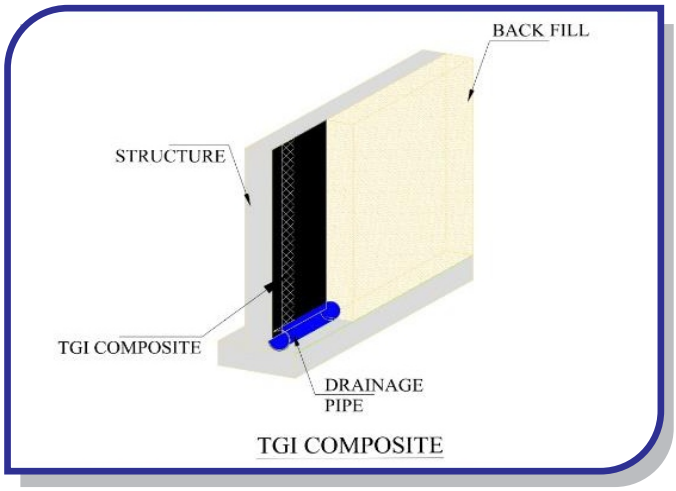
ADVANTAGES

- TGI Composites are cost saving by providing multiple functions in single material
- TGI Composites are lightweight and easy to handle which results in improved construction efficiency.
- TGI Composites can with stand the harsh environmental conditions and exhibit long-term durability.
- TGI Composites assist in managing storm water runoff by reducing the impact on natural water ways and preventing soil erosion.

Product Range

Roll Length : 50 meters
Roll Width : 2 meters
Thickness : 4 +/- 0.5mm

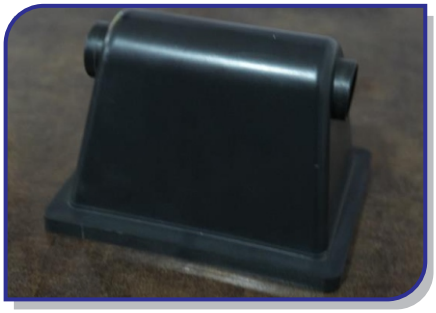
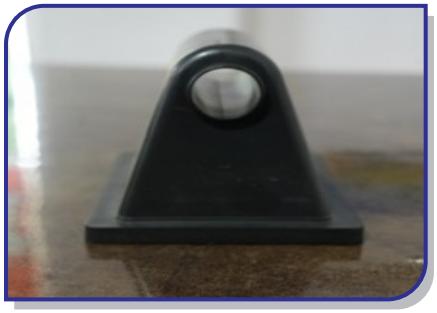


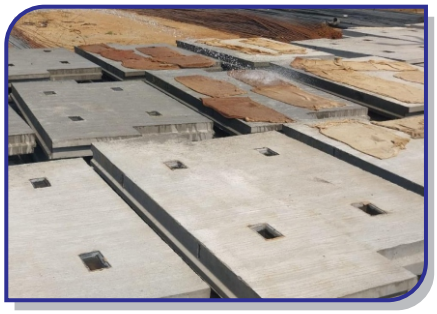


4. POLYMERIC CONNECTION BOX: -

Polymeric Cavity connector boxes are made up of HDPE stands for high density polyethylene, it is cavity type of structure used to hold strap during enforcement of RE walls, cavity boxes are casted in RE panel during casting process later we pass Geostrap through cavity boxes and wrap the strap in a zig-zag manner to provide Stability to RE walls, connector box consist of two parts cavity and pipe.

Dimensions: -
Length-165mm
Width- 123mm
Height-110mm
Pipe I.D.-20 mm

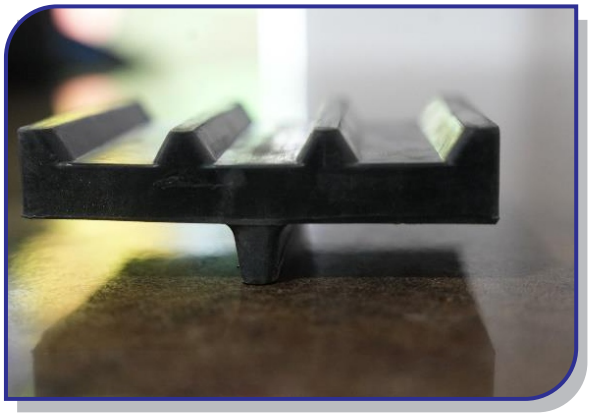
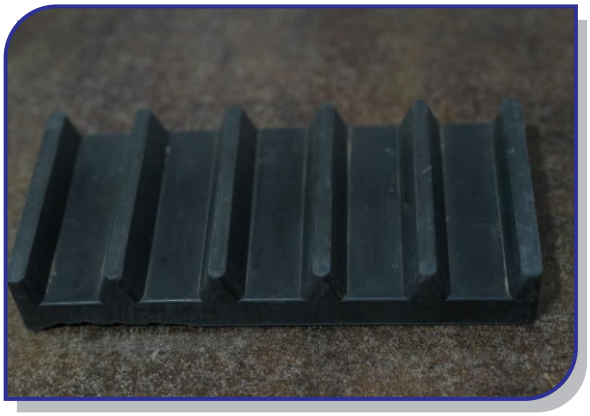



5. EPDM PADS: -

EPDM stands for ethylene propylene and diene monomers which have extremely resistant properties to outdoor conditions like abrasion, UV rays, Ozone, Aging and Weather. It is also the most waterproof rubber available it is alsosteam resistant. Due to its highly weather and shock resistant properties, it is used in RE wall for cushioning in at adjacent layer of walls.

Product Range-
Thickness-20-22mm
Elongation%-200%
Size-150x70x22 mm, 100x85x22mm
Tensile Strength-12MPa
Hardness-80+/-5 Shore A
Weight-200gm

FEW OF OUR LIST OF CLIENTS, CONSULTANTS AND CONTRACTORS:

TECHGEO INDUSTRIES

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No-236, Bahadurpally, Village, Quthbullapur
Medchal-malkajgiri, Hyderabad, Telangana - 500 043. India
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