

# **Geoparsian** (Geo Shabakeh Parsian Company)

Geoparsian is one of the most successful members of Ghadi Holding, that was founded in 2006 with the aim of gaining the top positions in production and engineering services in the field of geosynthetic products. The management of the company benefits from over 25 years of experience in the field of economic and international activities and over 15 years of experience in technical and engineering services.

Additionally, the research department of the company is formed by the highly trained experts specialized in areas such as research, production, design, and engineering on the implementation of geosynthetic systems by the GEOPARSIAN company on site.

GEOPARSIAN has put out significant investments in purchasing all equipments and machinery from Germany while acquiring technical knowhow for its production.

This is for pursueing the goal of providing necessary and self-sufficient development projects for the country and for beingable to attend engineering projects of the world markets.

Geoparsian Team does its best to comply with the world quality standards of production, design services, and after-sales support.

Our company produces more than 40 types of geosynthetic products, such as mono and Bio-axial polyester geogrid with tensile strenght of 20 to 400 kN/m, fiberglass geogrids with bitumen coated fiberglass geocomposite, several kinds of geotechnical and polyethylene rockshield and various types of geocomposites with polyester fibers and geotextiles.

During the years of our activity, we have supplied these products to hundreds of projects developed both by us and contractors. Hence, we can proudly state that our products are used in the infrastructure of all parts of Iran as well as in several projects internationally.

### Geoparsian

- Won the award of "Role Model Manufacturer" on 2016;
- Obtained a standard certificate from the Industrial Research Organization of Iran;
- Obtained approval from the world's most accredited laboratory of geosynthetic products, TBU Lab and the reputable laboratories of Iran;
- Obtained the certificate EN ISO 9001 (2008; 2015) from the German TUV NORD Institute of design production, and management department.













#### ww.geoparsian.com



#### Specialized and Engineering Services

GEOPARSIAN's design team is relying on the valid regulations of FHWA, AASHTO, and it uses software programmes such as MSEW ReSSA, and Plaxis to implement plans and financial appraisals. GEOPARSIAN's design team provides specialized and optimal design of geosynthetic systems, shares outstanding technical knowledge, and provides the best engineering solutions according to the specific requirements of each project. In addition to developing and designing construction projects GEOPARSIAN has the ability to support contractors in the sphere of supervisory engineering in order to control, enchance, and execute projects using geosynthetic materials.

#### Service and Support

GEOPARSIAN's Textile and Polymer laboratories, thoroughly control raw materials and end products according to the parameters of the existing standards. Therfor, GEOPARSIAN is advantaging from the best raw materials, highly-experienced teams, and superior machine technologies to be able to produce their products in accordance with the world's highest standards.







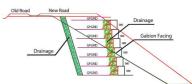






## GPGrid \_ Geogrid

- Limited creep effect
  Easy and fast installation
  Optimal grid opening size
  High tensile strength in low elongation
  High resistance to installation damages
  High resistance to chemical and environmental agents
  Maximum interaction with surrounding soil and high resistance against pullout











- Road widening
  Railway construction
  bridge ramps reinforcement
  Retaining walls and bridge abutments
  Stabilization of embankment of landslide and buoyancy
  Improving the bearing capacity of loose and unstable soils
  Avoiding of river shore erosion using Geogrid retaining walls
  As an alternative to all retaining wall systems just like reinforced concrete walls, masonry walls, gabion walls and steel strip reinforced walls with different facing types suitable for project conditions

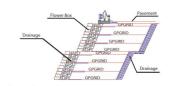






















### Advantages of GPgrid wall construction

- Economical advantage from 30% up to 60% comparing with other solutions
- other solutions

  Faster construction activities

  Less stringent requirements on fill material and borrow

  Possibility of using in situ soil sources

  Better use of space and avoiding right of way conflicts

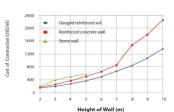
  Reduction of borrow material consumption

  Excellent performance against seismic forces

  No need to construct foundations

  Possibility of using different options of facing

  Environmental friendly structure



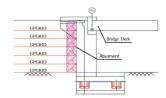
	Stone retaining wall	Reinforced concrete retaining wall	Geogrid Reinforced soil retaining wall
Max height	5m	12m	No Limit
Construction speed	Low	Very low	High
Cost	Expensive	Very Expensive	Inexpensive
Performance difficulty	Medium	High	Low
ability against earthquake	Low	Medium	High
Rexibility	Sensitive	Sensitive	Insensitive
Facing variety	No	No	Yes
Foundation	Yes	Yes	No





## GPGrid \_ Geogrid

Geogrid reinforced walls can be used in bearing and non-bearing bridge abutments. It is very important to do a precise calculation when designing a bearing abutment as it should also handle a portion of the load exerted by the bridge deck.



Bridge Abutment Cross Section



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An interchange in Bakeri highway in Tehrai



Mahshahr Airport intercha



Mohammad Shahr Metro interchang



An Interchange in Gilan

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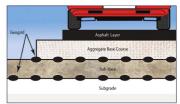








- Simple and easy construction method.
  Fast and construction sequence.
  Economical Solution
  Gaining even settlement under roads and foundations where total settlement is unavoidable with simple methods.



Application of Gpgrid in base reinforcement and subgrade improve











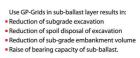
- Satisfaction of economic approach of the project.

  Increment of ballast mechanical life time.

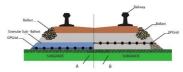
  Reduction of changes in ballast grading.

  Reduction of maintenance frequency down to 3 times.

  Reduction of the rate of ballast settlement.



















### GPCAsphalt\_GeoComposite

■ Prevention of reflective cracking and reduction of asphalt thickness in overlay construction. The amount of tack-coat to be applied on the surface is 1.1 to 1.3 kg/m2. The material used for tack-coat is emulsion or pure bitumen, therefore flushing does not happen. On the other hand the retained bitumen inside Gpcompo forms a sealing layer and does not let water goes through sublayer.

#### Properties and Advantages of GPCOMPO in Asphalt **Layer Performance**

- Postpones movement of reflection cracks to new overlay
- Produces adhesion between new and old asphalt
  Working as stress relief layer by distributing the load
- Omits the need of asphalt mealing and deep patches
   Reduces thickness of new pavement and overlays
- Quick and easy installation
- Omits water penetration to sublayers of pavement
   Increases service lifetime





















## GPCAsphalt\_GeoComposite

This product consists of a layer of an asphalt geotextile which is reinforced with glass fibers and is used for reinforcing and sealing asphalt layer; consequently, delaying the movement of the reflection cracks to the surface of new pavement. This product has tensile estrength of 50 to 200 kN/m at a width of 1.90, 3.80 and 5.40 m.



#### **ASPHALT GPTEXTILE AR**

This product is made of high melting point polypropylene fibers and absorbing bitumen. Also it is suitable for increasing the lifetime of asphalt layer. This specific product has tensile strength of 10kN/m and weighing 140g/m2.



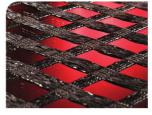
### GPAsphalt\_Geogrid

This product is made of polyester fibers with a bitumen coating and is used to strengthen the asphalt cladding consequently, delaying the movement of reflective cracks towards the new pavement.



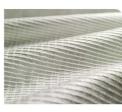
### GPGrid \_ Asphalt NW

Made of fiberglass with a bitumen coating, using for strengthen the asphalt overlay; consequently delaying the movement of reflective cracks towards the new pavement. This product is produced with tensile strength of 30 to 100kN/m.



#### GPCSoil \_ Geocomposite

Combination of a geotextile and polyester fibers which is used for increasing the load capacity of the loose & muddy soil as well as for reinforcing of fine-grained soils.



GPGrid2BX \_ Geogrids

This product is made of polyester fibers in

mono and bio axial manner with a width of 5.30m with tensile strength of 20-400 KN/m.

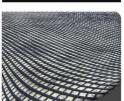
### **GP Drain**

Consists of a layer of GPNet that is located between two geotextiles. This product is used for the drainage behind the retaining walls.



### GPGrid \_ Geogrid

This product is produced from the extruded polyethylene granules, used as a protector for oil and gas pipelines.



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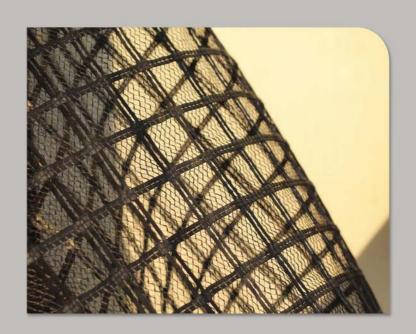




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Factory: Mazandaran, Amol - Mahmoudabad road, Shohadae Mahmoudabad Industrial Zone.

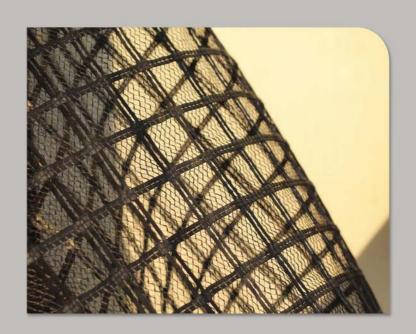
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