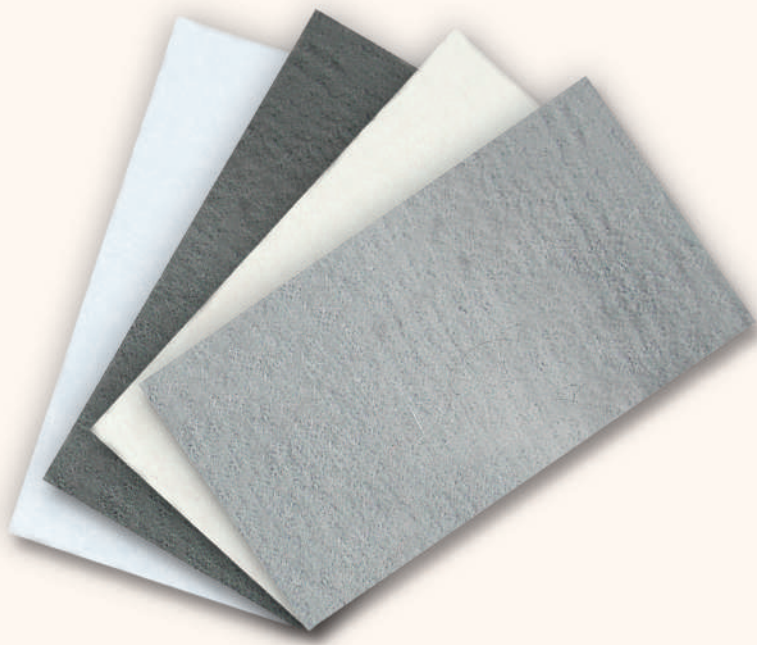




***nahee***  
***Geotextiles***



**NAHEE GEO-TEXTILES INDUSTRIES LTD.**

[www.nahee.com.bd](http://www.nahee.com.bd)

## Nahee Geo-Textiles Industries Limited

### ABOUT US

Nahee Geo-Textile Industries Limited is a manufacturer of non-woven needle punched Geotextile (calendared / non- calendared).

Our strength is flexibility and ability to manufacture products of high quality and yet competitive that meet the industry specific requirements covering drainage, filtration, protection, reinforcement, separation applications including housing, roadway, railway, marine, water, coastline and landscape such as soil or slope stabilization and protection.

Our factory is located at Abdar, Telehate, Sreepur, Gazipur, Bangladesh which is around 65 km away from Dhaka. The factory has been built up on 12 acres of land. The factory has been equipped with European technology machinery to manufacture the best quality geotextile and has a lot of laboratory equipment to conduct full range of geosynthetic tests with the latest version of national and international standards, e.g. BSTI, ASTM, DIN. Initially the factory has the production capacity of around 14 tons / day.

Engr. Abu Noman Howlader, Managing Director of Nahee Geo-Textile Industries Limited formed a team of expert engineers who will ensure quality of the products and provide technical support to customers. Nahee Aluminum Composite Panel Limited and Nahee SS Pipes Industries Limited are the concern members of Nahee Geotextile. Mr. Howlader is also the Managing Director of Bangladesh Building Systems Limited (BBS), BBS Cables Limited, BBS Metallurgic Industries Limited, Xiamen Reflective Insulations Limited and Helix Wire & Cables Limited. They are the market leaders in each of their relevant fields.

Join us! We are looking forward to building long term business relationships with all partners over the world!

### MISSION

To promote green solution in treating erosion problems and to raise the nation's awareness of environmental concerns and to create a better and safer living environment for the public.

### VISION

To be the largest manufacturer of erosion control related products in Asia while constantly innovating competitive and contemporary product offering to protect the dynamic environment.



## Non-woven Geo-Textiles Fabric

Nahee Geo-textiles Fabric is made from the highest quality polypropylene or polyester yarns which are needle punched to form a strong fabric that retains its dimensional stability, adding years to the life of any roadway, railroad, landfill or civil/environmental engineering project. It is used in subsurface drainage, separation, stabilization, erosion control and cushioning applications.

Nahee Geo-textiles is made of polypropylene staple fiber, it has excellent resistant to ultraviolet (UV) degradation, biological and chemical environment found in the soil. Nahee Geo-textile extracts no environmental contamination and it maintains stability under temperature.

Nahee Geo-textiles is a product made through a particular process, it is properly designed to meet physical or hydraulic characteristics such as tensile strength, tearing strength for the purpose of civil works, furthermore, apparent opening size (AOS) is also equally formed to get perfect hydraulic function.





## FUNCTIONS

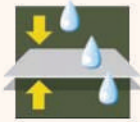


### Separation

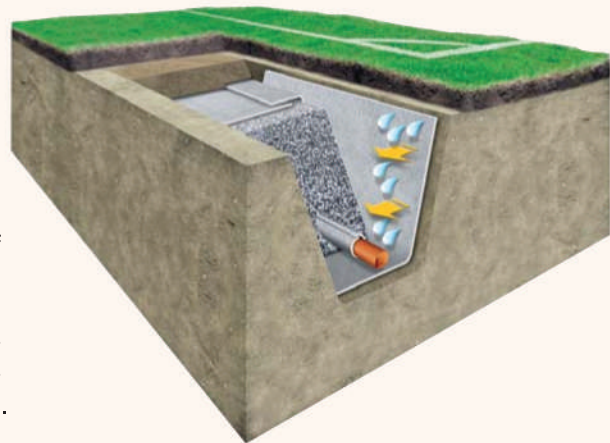


The durability and mechanical properties of Nahee Geo-textiles make them ideal for separating layers in construction works. A strong and flexible Nahee Geo-textile is placed between the different layers in the construction preventing migration and mingling of materials, yet allowing free movement of water. This increases the bearing capacity and provides long-term stability of the foundation layers.

### Filtration



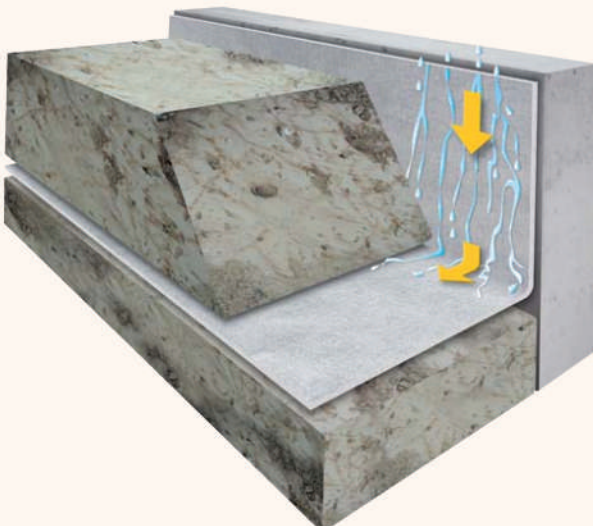
The pore structure of Nahee Geo-textiles is designed to retain particles while allowing free movement of water, making it possible to separate two layers during intense hydraulic activity. Migration of layers, which would reduce the load-bearing capacity of the system, is thereby avoided and at the same time water flow is maintained with minimum pressure loss.



### Drainage



The hydraulic properties of Nahee Geo-textiles is designed to drain excess water off the construction - not by passing through the fabric - but by flowing in the plane of the fabric away from the construction. The use of a drainage geotextile ensures an ongoing drainage of fluids with minimum pressure loss.



## GEOTUBES

Geotube, also known as Geotextile Tubes is prefabricated in cylindrical container form and made of high strength woven/non-woven geotextile. The flexible fabric structure provides ready adaptation to various landforms and field conditions.

Geotextile Tubes can be applied to civil engineering, environmental and hydraulic industries, including coastal protection, beach nourishment and restoration (coastline that are washed by wave action); break waters and groins; ground reinforcement of civil engineering structures such as reclaimed land & artificial islands, formation of temporary roads & cofferdams, and dewatering of dredged materials & sludge.

### Advantages:

- Optimized physical & hydraulic properties of the fabrics developed for the geotextile tube application
- Remarkable flexibility of the fabric structure providing ready adaptation to various landforms and field conditions
- Special fabrics with higher permeability under the same AOS compared to other tubes
- High durability and seam strength allowing the stable formation of structures.

Geotubes are also used for coastal beach protection and breakwater application.





## APPLICATIONS

### Hydraulic Works

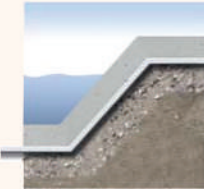
#### Coastal Protection



Nahee Geo-textiles protect the coast line as their flexibility and permeability ensure

withstanding of the impact of waves and currents, preventing erosion and washing out of fines.

#### Dams



Artificial dams and embankments need to be fortified with strong materials to resist the

forces of nature. Nahee Geo-textiles stabilize and prevent washing out of fines.

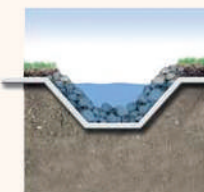
#### Harbor Constructions



Nahee Geo-textiles placed behind the retaining wall keep the drainage layer clean

which relieves the hydraulic pressure on the wall. When placed in front of the retaining wall, Nahee Geo-textiles prevent washing out of the sea bed.

#### River Banks and Canals



Nahee Geo-textiles protect river banks and canals in an effective and environmentally

friendly way.

### Drainage/Filtration

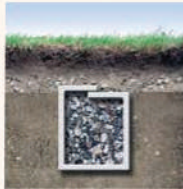
#### Drainage Pipes



With permeable Nahee Geo-textiles wrapped around the pipes, an effective and

long lasting drainage system is ensured, without any risk of clogging.

#### Drainage Trenches



Nahee Geo-textile protect the drain system by preventing mingling of fines.

#### Surface Drains



Surface drains are likely to become silted up from the surrounding soil. Nahee

Geo-textiles keep the fines separated from the drainage layer ensuring the effectiveness of the drain system.

#### Building Drains



In the construction of foundations and basement walls, Nahee Geo-textiles

ensure a clean and effective circumferential drain, which e.g. prevents damage caused by dampness.

### Ground Systems

#### Pipes and Trenches



Placing a Nahee Geo-textile on the bottom of the trench increases the bearing

capacity considerably.

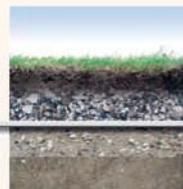
#### Storage Areas



Using Nahee Geo-textiles prevents mingling or loss of fines in the bearing courses as well as

clogging of the drainage layer.

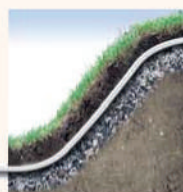
#### Sport Grounds



Grass fields, cinders and gravel courts/grounds are stabilized with Nahee Geo-textiles due to the

effective drainage, ensuring an even surface.

#### Slopes



With Nahee Geo-textiles under the top layer, the slope will withstand

subsoil water, rainwater and water from melted snow which would, otherwise, wash out the fines.



## APPLICATIONS

### Road Works

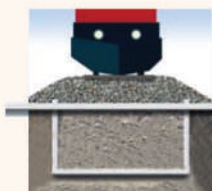
#### Permanent Roads



By separating the different layers of materials, Nahee Geo-textiles stabilize road

constructions that are designed to resist dynamic and static stresses.

#### Railways



The rapidly increasing speed and weight of trains place heavy demands on the bearing

course. Nahee Geo-textiles is used for stabilization.

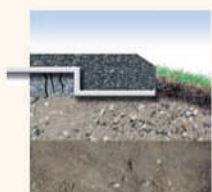
#### Airports



In constructions with heavy demands on the surface, Nahee Geo-textiles stabilize the

foundations enabling them to withstand dynamic loads.

#### Road Widening



Nahee Geo-textiles ensure separation and stability between subsoil and added road

building materials.

### Construction

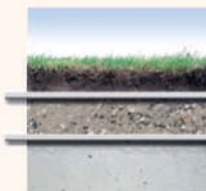
#### Foundations



When placed under foundations, Nahee Geo-textiles replace the blinding layer. It is simple,

effective and economical.

#### Roof Gardens



Nahee Geo-textiles are used as sliding layer, mechanical protection of roof

membranes and as filter protection of any drainage layers.

#### Concrete Floors



Below concrete floors, the permeable Nahee Geo-textile protects the drainage

layer from contamination from the concrete and the subsoil.

#### Roofs

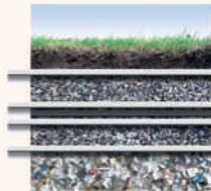


Nahee Geo-textiles are used as sliding layer, mechanical protection of roof

membranes and as filter protection of any drainage layers.

### Waste Disposal

#### Waste Disposal (Top Layers)



In supervised waste disposal sites, Nahee Geo-textiles on both sides of the membranes

protect them from perforation. Furthermore, Nahee Geo-textiles are used as filter protection of the drainage layers.

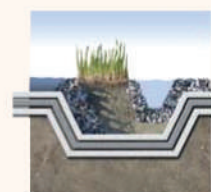
#### Waste Disposal (Bottom Layers)



As described above, Nahee Geo-textiles on both sides of membranes protect them

from perforation. Nahee Geo-textiles also help to detect leaks.

#### Water Purification Systems



Nahee Geo-textiles on both sides of the waterproof membrane protect the system

against perforation.





## GEOBAGS

Geobags are small soil containers that are made of non-woven geotextile, used for slope protection and river training work. Geobags, also known as Geotextiles Bags, Geotextile Sand Containers or Non-woven Geobags, are filled with locally available sand (F.M > 0.9) and stitched manually on site to form a bag.



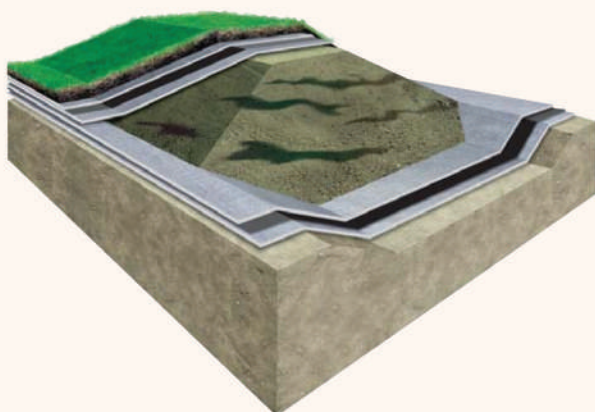
### Advantages:

- Erosion control, filtration and drainage in one product for coastal, off-shore, waterfront, waterway structures and foundation applications
  - Soft Rock RS includes UV resistance and an anti-vandalism protection layer
  - Conforms to uneven terrain without sacrificing strength
  - Environmentally smart: reduces carbon footprint, creates habitat zones, minimizes site disturbance
  - Transforms erosion-prone soils into erosion-resistant systems
  - Long-term durability and performance
- Erosion control, filtration & drainage, all-in-one – the Geotextile bag.

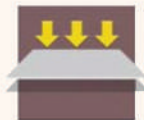




## FUNCTIONS

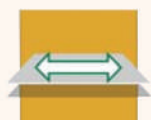


### Protection

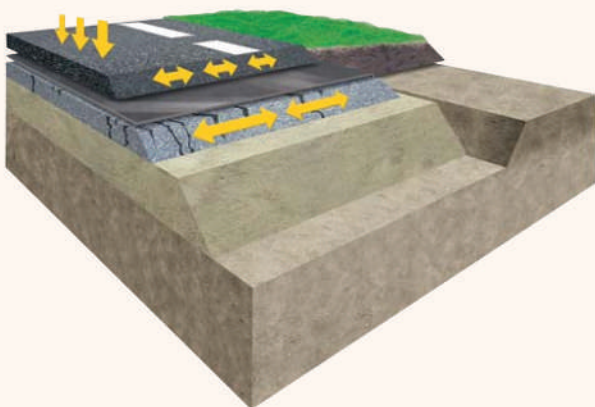
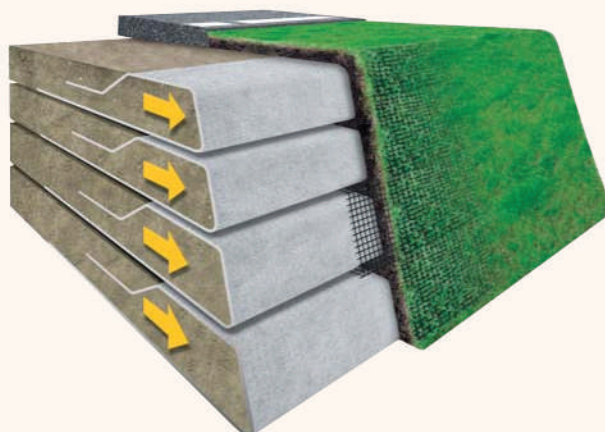


The excellent static puncture resistance of Nahee Geo-textiles makes them ideal for protecting waterproof membranes and other sealing materials from puncture when fill material and/or loads are applied. When placed between sealing material and other layers, the geotextile withstands and distributes any local pressure from the layer above, ensuring that the protected material is not stressed to failure.

### Reinforcement



The mechanical and hydraulic properties of Nahee Geo-textiles make the product ideal for reinforcing slopes and other earthworks. Reinforcement which incorporates the correct type of Nahee Geo-textile will prevent the collapse of vertical earthworks and steep slopes.



### Stress relieving



Nahee offers a flexible precompressed non-woven designed especially for stress relieving. The stress relieving paving fabric is ideal in both new road constructions and in road maintenance, as it absorbs differential movements in the road layers, preventing reflective cracking. The bitumen-saturated paving fabric also forms a waterproof interlayer, protecting the subsoil from water intrusion and thereby loss of bearing capacity.



## Quality Control & Assurance

Nahee's quality management system is certified in accordance with the most comprehensive standards set by the International Organization for Standardization EN ISO 9001:2008. This means that the quality management system has been implemented and verified at all levels within the organization.

Nahee Geo-Textiles Industries Limited has a fully organized geosynthetic testing laboratory to conduct full range of geosynthetic tests according to any international standard.

Nahee Geo-Textiles Industries Limited has a highly qualified and well experienced team of experts, who always work intelligently to improve the quality of the products and ensure client satisfaction level.





# TECHNICAL SPECIFICATION

Parameter	Test Standard	Unit	NG-150	NG-180	NG-200	NG-250	NG-300	NG-350	NG-400	NG-450	NG-500	NG-600	NG-700	NG-800	NG-900	NG-1000
Weight	ISO 9864	g/m <sup>2</sup>	150	180	200	250	300	350	400	450	500	600	700	800	900	1000
Thickness at 2kpa	ISO 9863	mm	1.0	1.5	2.0	2.3	2.5	3.0	3.2	3.5	3.75	4.0	5.0	5.5	6.0	6.5
Effective Opening Size (EOS)	ASTMD 4751	mm	0.14	0.12	0.11	0.10	0.09	0.08	0.08	0.08	0.07	0.06	0.06	0.05	0.05	0.04
Index Puncture Resistance	ASTMD 4833	N	250	310	400	490	550	590	635	740	820	900	950	1000	1100	1200
Vertical Permeability at 2 kPa and 20°C	DIN 5396	10-3m/s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Horizontal Permeability at 2kPa and 20°C	DIN 5396	10-3m/S	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Average Grab Tensile Strength	ASTMD 4632	N	450	550	800	1050	1300	1650	1700	1800	2000	2200	2300	2400	2400	2500
Grab Tensile Elongation	ASTMD 4632	%	80/50	80/45	80/45	80/45	75/50	75/50	75/50	70/50	60/45	60/45	55/45	55/45	55/45	55/45
Average Strip Tensile Strength	ASTMD 4595	KN/m	4	7	9	12	18	20	23	25	30	32	32	33	33	34
Strip Tensile Elongation	ASTMD 4595	%	80/50	80/45	80/45	80/45	75/50	75/50	75/50	70/50	60/45	60/45	55/45	55/45	55/45	55/45
CBR Puncture Resistance	ISO 12236	N	600	1500	2000	2500	3000	4200	4400	4650	5000	6000	6000	6200	6400	6500
Length of Geo-textile per roll		m	170	150	120	120	100	100	100	90	90	80	70	70	60	60
Width of Geo-textile per roll		m	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Roll Area (Length of roll = 5m)		Sqm	750	750	600	600	500	500	500	450	450	400	350	350	300	300

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