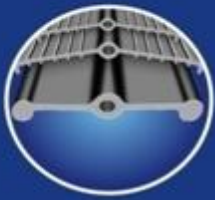


Fusion of Technology



MARUTI GEOGRID



MARUTI RUB-PLAST PVT. LTD.

Introduction

MARUTI RUB PLAST PRIVATE LTD., established in the year 2008, a group company of Maruti Techno Rubber Private Ltd., renowned brand in the Infrastructure and Construction Sector, has set up its state-of-the-art manufacturing facility at Greater Noida and installed with World's best and automated Technical Textile Machine to manufacture Warp- Knitted GEOGRIDS and Other GEOSYNTHETIC PRODUCTS.

The Flagship Company, Maruti Techno Rubber Private Ltd., market leaders in manufacturing Rubber & PVC Products, Water Stop Seals, Rubber Sheets, Shuttering Rubbers, Elastomeric Bearing Pads, Hydrophilic Rubber Gaskets, LDPE & HDPE Membranes, Expansion Joints, etc., are well established in Indian and Middle East & European Markets for the last 25 years.

Known for its quality the entire range of MARUTI Geogrids are manufactured to strict quality management systems. Also, the Company has specialized Geogrids testing facilities for testing of any specific standards/tests.

MARUTI RUB has a team of dedicated service professionals to provide you with efficient response to your queries, assist in the design as well as on-site installation support.

Maruti Geogrid

New Generation Soil Reinforcement

Description:

Geogrids are high strength oriented polymer grid structures used to reinforce soils & are made from high Tenacity polyester yarns, when coated with Poly Vinyl Chloride they make a strong, durable & dimensionally stable geogrid. Our product is highly recommended for reinforcement of soils & other granular materials for a wide variety of applications including soil retaining walls.



Maruti Geogrid™ has good tensile strength, low elongational ratio & high occlusive force with soil or gravel which is ideal for soil reinforcement purposes. Maruti Geogrid™ is resistant to UV rays, bacteria attacks and aging resistant & has a product life of about 75 to 120 years.



FUSION OF TECHNOLOGY

Typical Application:

✓ Geogrid Reinforced Earth (RE) walls:

Reinforced earth walls have emerged as a technically superior and cost effective alternative to conventional rigid concrete retaining structure.



Advantages:

- ü Ease and speed of installation-Prefabricated materials and granular soil simplify construction.
- ü High static and dynamic load carrying capability.
- ü Low material and installation costs.
- ü Effective utilization of land.
- ü Pleasing appearance-panels maybe given a variety of architectural treatments
- ü RE walls distribute loads over compressed soils, reducing the need for deep foundations.



Reinforced Earth wall

✓ Pavements:

Geogrids in aggregate-surfaced roads are used to support mechanical subgrade stabilization and aggregate base reinforcement.



Advantages:

- ü Increase the passive bearing capacity of granular base course material.
- ü Prevent localized overstressing of the subgrade thus reducing pavement deterioration.
- ü Minimized base course thickness requirement.
- ü The grid structure provides optimum interaction in all types of soil.



Base reinforcement for paved roads

✓ Rail Track Support:

Geogrids can be used for reinforcement of a granular sub-base layer beneath the railway ballast to increase the bearing capacity of the track foundation.



Advantages:

- ü Maintain track geometry for longer.
- ü Reduce the rate of ballast settlement.
- ü Reduce maintenance induced ballast degradation.
- ü Extend the maintenance cycle by a factor of around three.
- ü Stabilize ballast for over 25 years.



Base reinforcement for railway tracks



Why Maruti Geogrids?

- We have incorporated advanced multispeed machine for high quality geogrid production, which enable us to produce geogrids with very high junction strength.
- Maruti geogrids are produced from high molecular weight, low CEG, high tenacity polyester (PET) yarns with:
 - >Average Molecular Weight >25,000
 - >Carboxyl End Groups <30.
- Our geogrids are inert to environmental effects, and retains high strength for about 75-120 years, depending upon project design and requirements.



DATASHEET:

Maruti Geogrid Biaxial (MGB)

		Product Name						
		MGB15	MGB30	MGB40	MGB60	MGB80	MGB90	MGB100
Mechanical Properties ASTM D 6637								
Ultimate Tensile Strength (kN/m)	MD	15	30	40	60	80	90	100
	CD	15	30	40	60	80	90	100
Tension at 2% elongation (kN/m)	MD	3	6.5	8.5	10	10.5	12	13.5
	CD	3	6.5	8.5	8.5	9	10	12
Tension at 5% elongation (kN/m)	MD	5	11	14.5	16	23	26	30
	CD	5	11	14.5	16	21	22	27
Aperture size(mm)	MD X CD	26x26	25x25	25x25	25x25	23x23	23x23	22x22
Reduction Factors & LTDS (Long Term Design Strength)								
RF _{CR}	120 yrs life, 40°C temp	1.52	1.52	1.52	1.52	1.52	1.52	1.52
RF _D	pH = 4 to 9	1.1	1.1	1.1	1.1	1.1	1.1	1.1
RF _{ID}	Sand/Silt/Clay	1.10	1.10	1.10	1.10	1.10	1.10	1.10
	<38mm Gravel	1.15	1.15	1.15	1.15	1.15	1.15	1.15
LTDS (sand/silt/clay); pH=4-9		8.16	16.31	21.75	32.62	43.50	48.93	54.37
LTDS (Gravel<38mm);pH=4-9		7.80	15.60	20.80	31.20	41.60	46.80	52.00

Standard Roll Dimensions	Roll Length (m)	50/100	Roll width (m)	1/2/2.5/5.0
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**Disclaimer: The above information is to the best of our knowledge accurate, but it is not intended to be considered a guarantee. Any implied warranty for a particular use or purpose is excluded.



DATASHEET:

Maruti Geogrid Uniaxial (MGU)

		Product Name									
		MGU 20	MGU 40	MGU 60	MGU 80	MGU 100	MGU 120	MGU 150	MGU 200	MGU 250	MGU 300
Mechanical Properties ASTM D 6637											
Ultimate Tensile Strength (kN/m)	MD	20	40	60	80	100	120	150	200	250	300
	CD	15	20	30	30	30	30	30	30	30	30
Aperture size(mm)	MD X CD	28x24	28x24	28x24	28x24	28x22	28x22	28x22	28x21	28x21	28x2
Reduction Factors & LTDS (Long Term Design Strength)											
RF _{CR}	120 yrs life, 40°C Temp	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52
RF _D	pH = 4 to 9	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
RF _{ID}	Sand/Silt/Clay	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
	<38mm Gravel	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
LTDS (sand/silt/clay); pH=4-9		10.87	21.75	32.62	43.50	54.37	65.25	81.55	108.74	136	163.1
LTDS (Gravel<38mm);pH=4-9		10.40	20.80	31.20	41.61	52.00	62.41	78.00	104.01	130.02	156.0

Standard Roll Dimensions	Roll Length (m)	50/100	Roll width (m)	1/2/2.5/5.0
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Maruti Geotextile

Description:

Geotextiles are permeable fabrics used in conjunction with foundation, soil, rock, earth, or any other geotechnical engineering-related material and have ability to separate, filter, reinforce, protect, or drain.



Typical Application

- Coastal, River & Flood Protection Works
- Roads, Railways
- Retaining structures
- canals
- Water and sludge containment



Properties

- 100-400 gsm
- 2.5-5m wide
- High puncture resistance
- Large elongation before break
- Excellent filter characteristics at all strains
- High UV resistance

