

MANUFACTURERS, DISTRIBUTORS AND INSTALLERS OF H.D.P.E. GEOMEMBRANES & GEOSYNTHETIC MATERIALS ACROSS THE AFRICAN CONTINENT.

THE **NAME YOU  
CAN TRUST**

**Gundle®**  
**GEOSYNTHETICS**



# HDPE Enviroliner

Supply And Installation Of HDPE Geomembrane And  
Other Geosynthetic Materials



Institute of  
Waste Management  
of Southern Africa



South  
Africa  
Benefactor



**SABS**  
ISO 9001

[www.gundle.co.za](http://www.gundle.co.za) | [www.gundlegeo.co.za](http://www.gundlegeo.co.za)

**Gundle Geosynthetics is a division of the Gundle Plastics Group and was established in 2004. Since then, Gundle Geosynthetics has built a reputation through efficient service, quality products and unbeatable workmanship.**

From 2004 to the beginning of 2023, Gundle Geosynthetics has completed more than 3500 projects and installed over 20 million m<sup>2</sup> of liner and more than 15 million m<sup>2</sup> of other geosynthetic liners such as geotextiles, GCL's, leakdrain, etc.

Gundle Geosynthetics is technically focused and is able to assist with design, supply and installation of geomembrane materials, in most lining applications requirements. This means peace of mind to all our customers.



## Our Success can be attributed to:

- Our affiliation to the Gundle Plastics Group, which in turn is a wholly owned subsidiary of the Winhold Group – a relationship that provides financial muscle, security and stability, as well as years of knowledge and experience.
- A young, though experienced team that is dedicated to growing the business through attention to detail, quality, service and a professional approach;
- Our ISO certification;
- Strong contacts with the international manufacturers of Geoliners, Geotextiles and Drainage layers.
- Offering Environmentally friendly and green building solutions (green roofs + rain water harvesting etc.).



# Service Areas

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Irrigation Dams



Leach Pads



Tailing Dams



Landfills



Canal Lining



Golf Courses



Aquaculture



Cappings



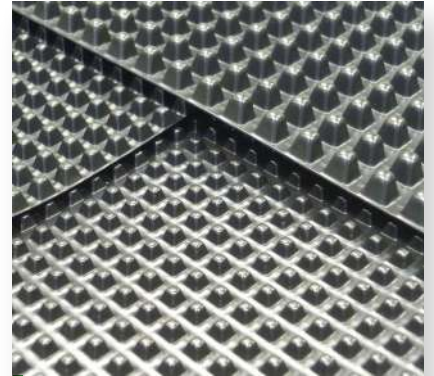
# Product Range



HDPE



Geotextiles



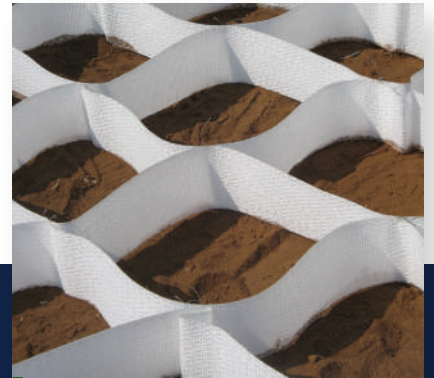
Drainage  
Membrane



Grids



GCL's  
Geosynthetic Clay Liner



GEO Cells

# Applications

## High Density Polyethylene (HDPE)

0.5 to 3.0mm smooth or one side or both sides textured.



Liquid / Solids  
containment  
system

# Applications

## GEOTEXTILES

**Non-woven Polypropylene (PP) or Polyester (PET) Staple Fibre filament.**

Other types:

- Stitch Bonds
- Staple Fibre
- Woven Polypropylene.



Liner protection;  
separation; filtration  
and drainage

## CUSPATED DRAINAGE MEMBRANE

**High/Low density cusped drainage sheet**

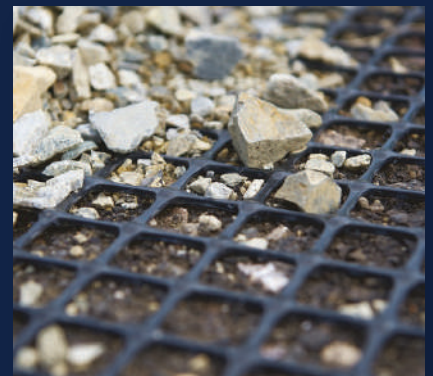
Used for Leachate and ground water drainage +anti moisture insulation. Performs better than conventional stone drainage with increased volume and has great hydraulic properties.



Leakage Detection  
Layer

## GEOGRIDS

Highly orientated polypropylene or polyester bar that is uniformly extruded and drawn to achieve a high modulus and strength at low elongations.



Base Re-Enforcement  
Retaining Wall Construction  
Embankment Re-Enforcement  
Pile Cap Platforms

# Applications

## GEOSYNTHETIC CLAY LINERS (GCL)

Mechanically bonded composite Bentonite Powder and/or granules encased in a body of woven / non-woven geotextiles. Commercially viable option to replace natural clay layers in the use of sealing various engineering facilities (ecological and resources).



Sealing of earth dams  
Sealing of cappings  
Sealing of landfills

## GEOCELLS

Honeycomb-like structure manufactured from stitched coated woven geotextile or HDPE or LDPE. Recommend a geotextile below the cells.



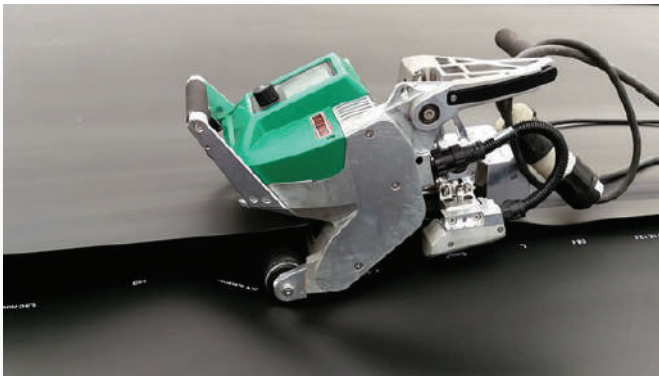
Erosion control  
Landscaping  
Load support  
Canal lining used when concreting canals





# Seaming Systems & Equipment

The processes that have been approved for field seaming and repairing are extrusion welding and fusion welding. All welding equipment is fitted with accurate temperature monitoring devices to ensure the proper measurement of the applicable fusion welding wedge temperature or the extrusion barrel temperature.



Double Hot Wedge Weld

## Double Hot Wedge Weld

This is a thermal technique that melts the two opposing geomembrane surfaces together by running a hot metal wedge or knife between them.



Extrusion Fillet Weld

## Extrusion Fillet Weld

This seaming technique involves extruding molten polypropylene at the overlapping edge of geomembranes to form a continuous bond.

## Testing Methods

To ensure quality, longevity and a product that we can confidently hand over to the client, all seams are tested before general seaming operations may proceed via the peel test and air pressure test. Vacuum box testing done on extrusion weld T-joints.



Testing Methods



# Quality Control Plan

The Gundle Geosynthetic quality control plan has been developed to incorporate the Geosynthetic research institute (GRI) standard specifications, SANS10409 and ISO 9001.

These specifications were incorporated as the backbone of the document to ensure that quality is the vital determining factor for every project. As each project is unique it may be required to adhere to project specifications, such documentation when required, which will become an appendix to the project contract or the documents.

The document covers the most common geosynthetic components used for the construction of a synthetic lining system, including geomembranes; geotextiles; geonets, geocomposites and geosynthetic clay liners. This document outlines the quality control procedures and recommended standards, to which the above mentioned geosynthetic products have to be installed.

**Our quality assurance / quality control document covers the following:**

1. Personnel functions and duties on site.
2. Pre-Construction meeting.
3. Geomembranes layout and process tests.
4. Geotextiles layout and process tests.
5. Geocomposites layout and process tests.
6. Geosynthetic Clay Liners layout and process tests.
7. All on site test logs (Destructive and Non-destructive)

**S A B S**  
**I S O 9 0 0 1**

## Ideal Installation Conditions



Anchor trench Size: min 300mm by 300mm (to advise).  
Position: 500mm - 1500mm away from brim (to advise)  
Trench/canal edges to be round.  
No sharp edging.  
Backfilling to the outside of dam next to anchor trench.  
Soil preparation: Stone free, soft contours.



Sandbags for holding down liners and prevent wind damage.  
  
Area to be free of any water/mud. Exposed rocks in lined area to be covered with soil or geo textile (see page 4 product range).

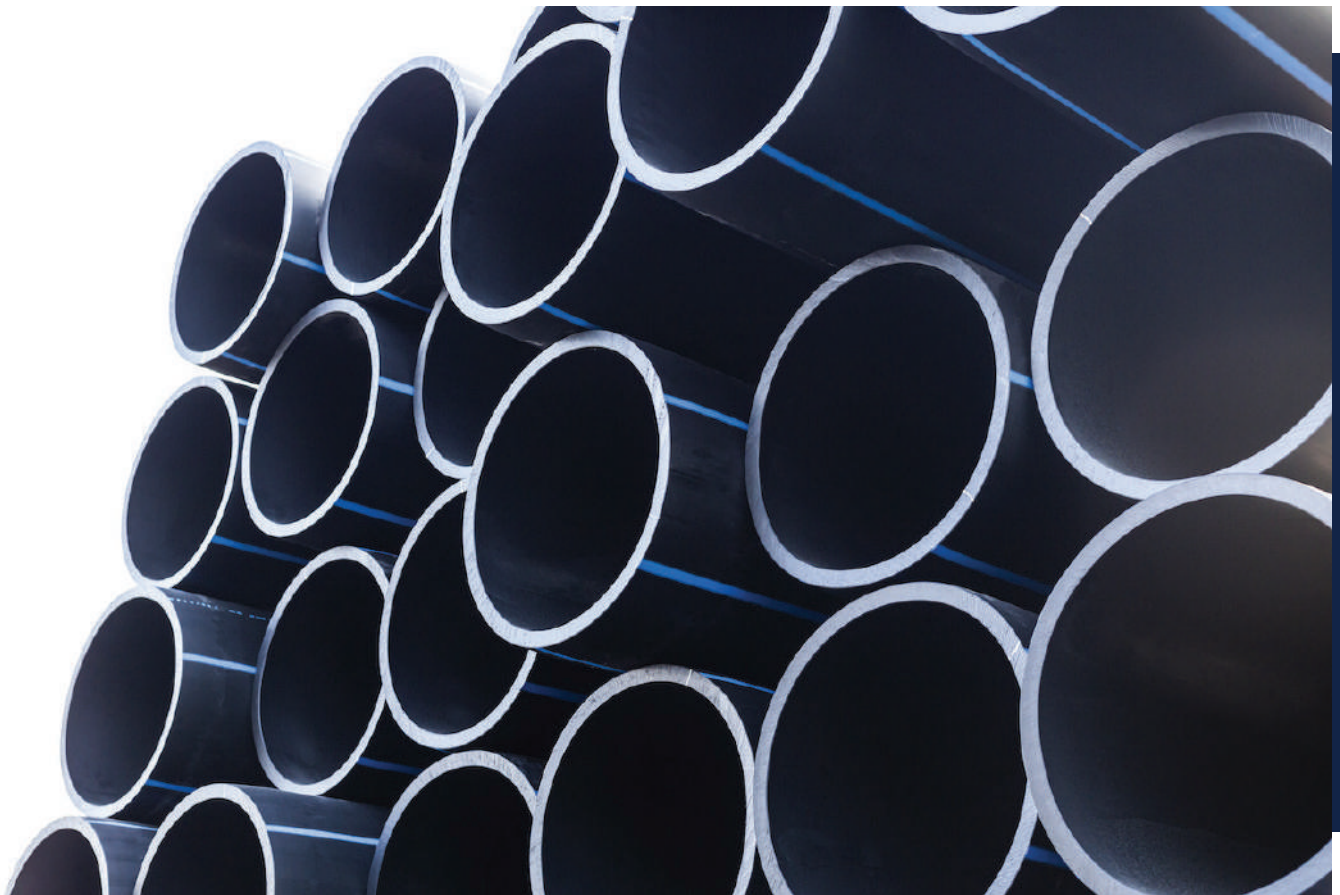


Pipe penetrations: minimum 300mm clearance around inlet to ensure a watertight seal around the pipe.

# HDPE Piping

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HDPE Pipe is a tough pipe with high resistance to chemicals and abrasion/corrosion/decaying resistant properties. HDPE has become the preferred material for the mining industry in slurry applications as well as for clean drinking water reticulation systems, infrastructure, sewage, waste water, storm water, and natural gas systems. HDPE supports agriculture in sprinkler irrigation and subsoil drainage systems and drill pipes.



Gundle Geosynthetics is SANS ISO 9001:2015 accredited, all relevant quality control documents are available for inspection. We therefore adhere to the most stringent quality control processes. HDPE Pipe systems are manufactured to SANS ISO 4427, and are available in:

- Coiled HDPE Pipe from 16mm - 110mm OD
- Straight Lengths HDPE Pipe from 16mm - 1200mm OD
- Perforated HDPE Pipe from 63mm - 1200mm OD
- Subsoil Drainage Corrugated HDPE Pipe in 75mm, 110mm and 160mm Dia
- Cable Duct Corrugated HDPE Pipe in 75mm, 110mm and 160mm Dia
- Storm water Drainage Structured Wall HDPE Pipe from 250mm - 1500mm ID



# HDPE Structured Wall Pipe

Gundle Geosynthetics supplies HDPE Structured Wall Pipe ranging from 250mm ID to 1500mm ID, and in various ring stiffness, depending on customer requirements. The combination of raw material properties and product technology provides a lightweight engineered pipe with superior capacity for various municipal, industrial, road-building, rehabilitation, marine, and PE manholes applications.



## Applications:

- Storm Water Pipelines / Culverts
- Sewer Pipelines
- HDPE Manholes
- Mine Drainage
- Landfill Drainage / Leachate
- Custom Holding Tanks / Attenuation
- Biogas Generation / Extraction

## Specifications:

HDPE Structured Wall Pipe is manufactured to and is fully compliant as according per the ISO 21138-1 standard. The pipe is labelled as per the ISO 21138 standard allowing for full traceability for the pipe manufacture process giving you the customer piece of mind.

# HDPE Fittings

Gundle Geosynthetics supplies a wide range of molded, electrofusion, compression, and fabricated HDPE bends, tees, reducers, stubs and flanges. As part of our turnkey HDPE solution we have met the need for more complex and cost efficient pipeline designs by means of HDPE fabricated fittings to solve installation situations where common fittings fail.

We also supply fabricated fittings from SABS approved 966-1 UPVC and 996-2 MPVC pipes. A full range of fabricated UPVC and MPVC fittings is available in most sizes up to 315mm. These includes tees, bends, hydrants, reducers, adaptors, etc. These fittings are made in two pressure classes, 9 and 16.



# GAS HDPE PIPE

PE100 HDPE Gas Pipe is manufactured with ultimate safety being first priority. The HDPE Gas Pipe is orange as per the international color code for pipes and fittings in Gas.





# UPVC & MPVC PIPE

Gundle Geosynthetics supplies UPVC and MPVC pressure pipes and fittings, sewer pipes and fittings, and drainage pipes and fittings.



## Product Range:

- UPVC Pressure Pipe from 50mm - 500mm Dia SANS 966-1
- UPVC Pressure Fittings from 50mm - 400mm Dia
- MPVC Pressure Pipe from 50mm - 400mm Dia SANS 966-2
- UPVC Sewer and Drain Pipe from 110mm - 500mm Dia SANS 791
- UPVC Sewer and Drain Fittings from 110mm - 160mm Dia SANS 791
- UPVC Soil and Vent Pipe from 40mm - 160mm Dia SANS 967
- UPVC Soil and Vent Fittings from 50mm - 110mm Dia SANS 967
- UPVC Structured Wall Sewer and Drain Pipe from 110mm - 200mm Dia SANS 160

# STEEL PIPE

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Gundle Geosynthetics supplies Carbon Steel, Galvanized, Stainless Steel, and Copper pipes and fittings.



## Product Range:

- Seamless and welded carbon steel pipe to API, BS and DIN specifications.
- Seamless and welded "high yield" line pipe to API 5 LX, BS and DIN specifications.
- Drill pipe and conductor pipe.
- Seamless carbon steel pipe for normal applications to ASTM, BS and DIN specifications.
- Seamless and welded, carbon and alloy steel piping for high and low temperature service to ASTM, BS and DIN specifications.
- Seamless and welded stainless steel pipe to ASTM, BS and DIN specifications.
- Welded steel pipe in large diameters and exceptionally heavy wall thickness.



# FITTINGS & FLANGES

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## Steel Fittings

Gundle Geosynthetics supplies forged steel fittings, carbon alloy and stainless steel pipe fittings to ASTM, BS and DIN specifications or to specific drawings, to match pipe specifications.

Carbon, alloy and stainless steel flanges to ASTM, BS



## Valves

Gundle Geosynthetics supplies carbon, alloy and stainless steel valves to all current specifications.



## Fittings & Valves

Gundle Geosynthetics supplies a range of Cast Iron and Stainless Steel Valves and Fittings. They are corrosion resistance, and are used extensively by the water industry. We supply gate valves, butterfly valves, ball valves, non return valves, etc.

We supply Cast Iron Fittings for UPVC and MPVC Pipe. Ranging from tees, bends, flange adaptors, sockets, etc.

# Gundle®

## GEO SYNTHETICS

THE **NAME YOU**  
**CAN TRUST**

### OUR GROUP ALSO OFFERS:

PLASTIC PACKAGING SOLUTIONS  
PLASTIC FOR AGRICULTURE  
CONSTRUCTION PLASTICS

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PORT ELIZABETH | SWAZILAND | EAST LONDON | BOTSWANA  
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