



IDEAL FOR THE CONTAINMENT OF WASTE AND WATER

TERANAP EXPERT BITUMINOUS GEOMEMBRANES



Teranap Expert Bituminous Geomembranes (BGM) are ideal for the containment of waste and water. They are commonly used as liners in Australian waste and mining applications.

Teranap Expert with **Teranap Control** is the first bitumen geomembrane with **an integrated seam control system**. This technology reduces risk of contamination caused by defects through improved leak detection accuracy when compared to current methods like ultrasonic testing and air lance testing. These traditional methods allow for human error and are known to be less accurate.

Teranap Expert Control with seam technology enables geomembrane installers to carry out on site construction quality assurance (CQA) by checking the seams for defects and repairing them as they are found.

The control channel is embedded in the geomembrane and located in the middle of the weld zone. When the overlaps and welds are completed, the channel becomes fully encapsulated between the two layers of the membrane.

Leak detection is carried out after the welding of Teranap Expert rolls. Tracer gas is injected at low pressure into the channel and spreads along the geomembrane's welded channel, finding all possible escape routes.

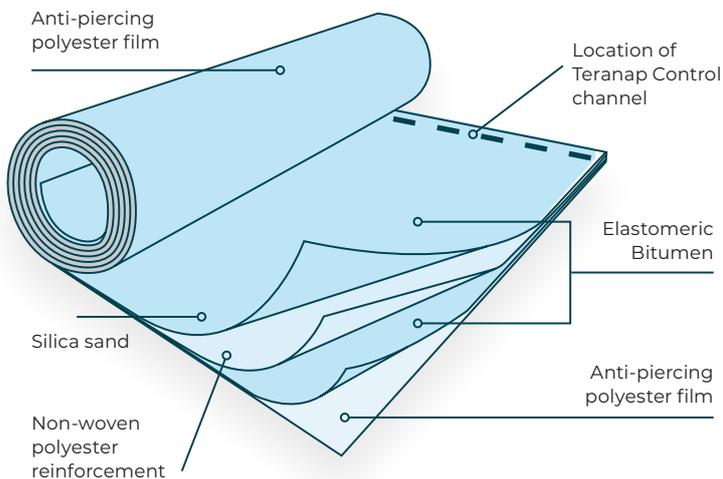
The detector quickly locates the leak with high precision, alerting the operator to possible defects that require repair.

Not only is leak detection easy; it is fast, reliable, and precise, with non-destructive control.

Teranap Control:

- Reduces risk of contamination caused by defects by allowing precise leak location detection so that repairs can be made
- Improves accuracy and increases reliability compared to traditional methods such as ultrasonic and air lance testing that often allow for human error
- Increases quality assurance, mitigating the risk of embankment failures and improving environmental protection measures

TERANAP GEOMEMBRANE CONSTRUCTION



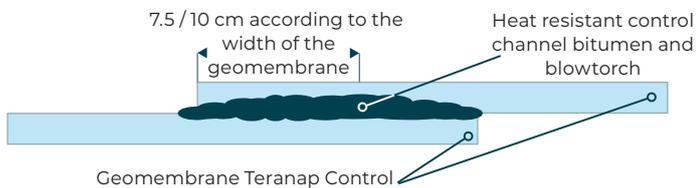
LEAK DETECTION PROCESS WITH TERANAP CONTROL

Tools

- Tracer gas bottle regulator, pressure setting and hose connector
- Flexible gas hose and connector fitting
- Two gas channel connector tips and two membrane clamps
- Leak detection cane, also known as a “sniffer”
- Detector meter
- Soapy solution

Steps

1. Locate the end of a BGM panel and seam
2. Cut out a small section (150mm wide) either side of the seam using sharp knife, exposing the channel
3. Cut 2 small notches 40mm apart either side of the channel to allow for insertion of the gas channel connector and clamping of the membrane clamps
4. Apply the channel connector and membrane clamps to the exposed channel within the membrane
5. Connect gas bottle and connector hose to the gas channel connector
6. Inject the tracer gas at 0.1 Bar pressure
7. Pre-set and configure the detector
8. Start the detection at a moderate pace
9. The detector will set off an alarm when gas is detected through the defect
10. To precisely locate the defect, use the soapy solution over the area - bubbles will confirm the location
11. Mark the defect with paint and repair as needed



TERANAP CONTROL SPECIFICATION

Geofabrics in partnership with BMI Siplast manufacture the Teranap Control seaming technology into all grades of Teranap Expert.

To ensure the correct product is installed on site, engineering specifications should call for Teranap Control seaming technology or similar tracer gas leak detection method is required to carry out CQA of seams on site. Air lance testing and ultrasonic testing will NOT be accepted on their own.



	Roll Dimension	Roll Weight (≈)	Mandrel ϕ int.	Chuck Width
Teranap Expert 300	4 X 110m	1,830kg	15cm	4.80m
Teranap Expert 400	4 X 95m	1,897kg	15cm	4.80m
Teranap Expert 500	4 X 85m	1,926kg	15cm	4.80m
Teranap Expert 600	4 X 75m	1,920kg	15cm	4.80m