

Geosynthetic Bentonite Clay Liner

Sodium Bentonite Waterproofing Layer

Geosynthetic Clay Liner is a geocomposite of a layer of sodium bentonite encapsulated between two geotextiles to form a liner for numerous fluid containment and water barrier applications.

GCL uses non-woven geotextile in the upper layer to encapsulate the bentonite swelling clay as a carrier, and a woven geotextile layer beneath for dimensional stability. Needling punching the layers offers reinforced internal shear. HDPE film lamination offers the best sealing effectiveness.



Versatile Sealing Applications of GCL System

- Flood protection
- Underground waterproofing
- Water containment, ponds & lakes
- Landscape waterproofing
- Waterstop to foundation and basement structure
- Wetland creation

Benefits of GCL System

- Reduce construction costs by replacing compacted clay
- Self-sealing overlaps to ensure integrity
- Quick and easy to install, minimal substrate preparation
- Withstands differential settlement
- Flexible with the structure conformity
- Environmentally safe - no chemicals, additives & non-toxic
- Uniform peel strength provides multi-directional shear strength

Our Service

- Design, supply, and delivery
- Installation and site report
- Method statement and testing
- System commissioning



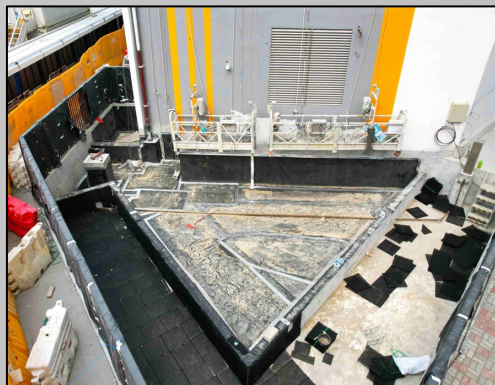
Installation of GCL



Pond Lining using GCL



ZIS Planter Waterproofing, PHD at Anderson Road Quarry Sites, July 2025 (HKHA20210573)



ZIS Planter Waterproofing, PHD at Wang Chiu Road, April 2026 (HKHA20210526)



Wetland Waterproofing, Development of Lok Ma Chau Loop, January 2022 (YL/2020/02)



G and E Company Limited

14th Floor, Kiu Yin Commercial Building, 361-363 Lockhart Road, Wanchai, Hong Kong
Tel: 2570 0103 Fax: 2570 0089 e-mail: info@g-and-e.com website: www.g-and-e.com



土工合成膨潤土襯墊

鈉基膨潤土防水層

土工合成膨潤土襯墊 (GCL) 是一種土工複合材料，由一層鈉基膨潤土包覆於兩層土工織物之間所構成，適用於多種液體圍封及阻水工程。

GCL 上層採用不織土工布，用以包覆鈉基膨潤土作為載體；下層則採用織造土工織布，以提供包覆穩定性。各層經針刺處理後可提供加強之內部抗剪能力。覆貼 HDPE 薄膜則可提供最佳之防漏效果。

GCL 系統的多用途密封應用

- 防洪保護
- 地下防水工程
- 園景防水
- 地基及地下室結構止水帶
- 池塘與湖泊儲水
- 濕地營造

GCL 系統的優點

- 替代傳統壓實黏土，減低建築成本
- 遇水自動膨脹密封，確保結構完整性
- 安裝快捷方便，節省時間與人力
- 出色抗沉降能力，貼合各種複雜地形
- 對環境安全，無化學物同添加劑，無毒性
- 均勻的剝離強度，提供多方向剪切強度

我們的服務

- 設計，供應同送貨
- 安裝同工地報告
- 施工方法及測試報告
- 系統調試支援



安裝 GCL



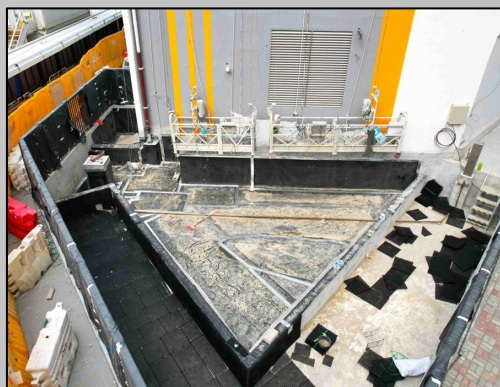
池塘襯墊用 GCL



濕地防水，落馬洲河套區
2022 年 1 月 (YL/2020/02)



ZIS 花槽防水，安達臣道石礦場公營房屋
2025 年 7 月 (HKHA20210573)



ZIS 花槽防水，宏照路公營房屋
2026 年 4 月 (HKHA20210526)

