

## Product Evaluation

### **RE: Review of Maccaferri ParaDrain Series Geocomposite (ParaDrain 50, ParaDrain 80, ParaDrain 100, ParaDrain 120, ParaDrain 150, ParaDrain 200)**

#### **PRODUCT**

Maccaferri ParaDrain Series Geocomposites are manufactured and distributed in Alberta by Maccaferri Canada Ltd. Located at Cambridge Ontario.

#### **VENDOR CLAIMS AND INFORMATION**

##### **CLAIMS:**

Maccaferri ParaDrain Series Geocomposites are manufactured from high tenacity, multifilament polyester yarns aligned and co-extruded with polyethylene (LLDPE) to form polymeric strips. ParaDrain are ideal for applications of reinforcement of cohesive soils with low permeability and high moisture content. In terms of mechanical properties and installation damage factor the ParaDrain products are equivalent to their correspondent ParaGrid grade. Company website:

<https://www.maccaferri.com/ca/>

##### **DESCRIPTION:**

ParaDrain Series Geocomposites are uniaxial geogrids with longitudinal strips having channel shape and covered with wicking geotextile to provide drainage layer. The geocomposite consists of a regular array of geosynthetic straps, which comprise cores of polyester tendons encased in a polyethylene sheath. The main strips are laid flat in the machine direction with a secondary strip laid and welded across the full width in the cross direction.

##### **POTENTIAL USAGE:**

MSE Wall, embankment over soft soil, sink holes, piled embankments, steep and shallow slopes, basal foundation etc.

##### **STANDARDS:**

ASTM D6637 Ultimate tensile strength (MD); ASTM D6638 Strength between geosynthetic reinforcement and segmental concrete, ASTM D5261 Mass per Unit Area; ASTM D4491 water permeability of geotextile; ASTM D4751 Determining apparent opening size of a geotextile, GRI-GG7 Polymeric (Core) Carboxyl End Group (CEG Max.); GRI-GG8 Molecular Weight;

#### **ALBERTA TRANSPORTATION COMMENTS**

##### **EXPERIENCE:**

Alberta Transportation has no experience with this product.

##### **APPLICATION STANDARDS:**

Alberta Transportation does not have a standard for geogrids. All geogrid / geocomposite applications must be properly designed and stamped by a Professional Engineer (registration with APEGA).

The use of extensible reinforcement in MSE bridge abutments or wing walls applications shall confirm to the requirements of Alberta Transportation *Standard Specifications for Bridge Construction Section 25, Mechanically Stabilized Earth Walls*.

<http://www.transportation.alberta.ca/Content/docType246/Production/StandardSpecificationsforBridgeConstruction2017.pdf>

**RECOMMENDATIONS:**

Maccaferri ParaDrain Series Geocomposites (ParaDrain 50, ParaDrain 80, ParaDrain 100, ParaDrain 120, ParaDrain 150, ParaDrain 200) be listed as Potential Products under Alberta Transportation Products List, Geosynthetics – Geonet / Geocomposite / Wickdrain - Proprietary, based on the information provided. Final acceptance as a proven product will be based on field performance.

**TRIAL PROJECTS**

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