

## Product Evaluation

### RE: Review of Hydrotex Enviromat Fx Fabric Formed Concrete Mattresses

#### **PRODUCT**

Hydrotex Enviromat Fx Fabric Formed Concrete Mattresses is manufactured and distributed in Alberta by Synthetex located in Peachtree Corners, Georgia, USA. Website: <https://synthetex.com/>

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

##### **CLAIMS**

Enviromat FX offers the cost advantages of fabric-formed concrete and the flexibility of a lightweight precast block system. It is a lightweight fabric formwork, which arrives to the site ready to be filled with grout. Its flexibility allows mat to adjust to surface irregularities and maintain positive subgrade interaction. It is easy to access and inexpensive to install either by *cast-in-place* or *precast and hoist* methods. It has 30% open area for ample vegetation.

##### **DESCRIPTION**

The product protects critical infrastructure from surface erosion and scour. Enviromat FX consists of a fabric formed concrete mattresses with openings to permit growth of vegetation. It is used to protect dams, spillways, bridge abutments/pier scour protection, channels and dike/berm protection. The product can be installed both in the dry and under water.

##### **POTENTIAL USAGE**

Enviromat FX can be used for ditch lining, culvert inlet/outlet protection, and shoreline, river, or streambank protection.

##### **STANDARDS**

ASTM 6460 – Large scale channel erosion on un-vegetated mats

#### **ALBERTA TRANSPORTATION COMMENTS**

##### **EXPERIENCE**

Alberta Transportation has no experience with this product. Alberta Transportation used a grout filled fabric formed mattresses at a 2007 comparative erosion control test location in the Peace River area. That application has performed well over a 15 year period to date.

##### **APPLICABLE STANDARDS**

Alberta Transportation does not have a standard for fabric formed concrete mattresses or articulated concrete blocks for erosion control applications. ASTM 6460 provides permissible shear velocity and tractive stresses that form a design basis.

##### **RECOMMENDATIONS**

Enviromat FX be listed as a Trial Product under Alberta Transportation Products List, -Erosion and Sediment Control Systems – Miscellaneous Erosion and Sediment Control – Proprietary, based on the information provided. Final acceptance as a proven product will be based on field performance.

##### **RESTRICTIONS ON USE**

Caveat:

#### **TRIAL PROJECTS**

Trader Ridge Ditch Repair, Grand Prairie County (Installed: October 2022)

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