

## Product Evaluation

### RE: Review of Reno Mattress Plus

#### **PRODUCT INFORMATION**

Product Name: Reno mattress Plus      Manufacturer: Maccaferri Canada Ltd located in  
Cambridge, Ontario  
Website: <https://www.maccaferri.com/ca/>      Supplier: Maccaferri Canada Ltd located in Cambridge, ON

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

##### **CLAIMS**

Reno mattress is a double-twisted wire mesh container uniformly partitioned into internal cells with relatively small height in relation to other dimensions, having smaller mesh openings than the mesh used for gabions; interconnected with other similar units and filled with stone at the project site to form flexible, permeable, monolithic channel linings, revetments, scour protections and other erosion control structures.

##### **DESCRIPTION**

PoliMac™ coated Reno Mattress Plus shall be manufactured from double twisted hexagonal woven steel wire mesh type 6x8, made of PoliMac™ coated steel wire. The base, diaphragms, front, end and sides of the unit are manufactured from one continuous panel of mesh. The diaphragms are created by inserting an upright double-mesh fold in the base panel and secured with spirals at the production facility, which improves the diaphragm stability during filling operations and the hydraulic performance. To ensure a tighter packing of the filling stones and further improve the hydraulic performances of the mattresses, the units are supplied with pre-formed X-Ties to connect the base panel of the mattress to the lid during the installation. All perimeter edges of the mesh forming the basket and lid, shall be selvedged with wire having a larger diameter.

##### **POTENTIAL USAGE**

Side of road where a recommended clear zone and recoverable slope is not attainable.

##### **STANDARDS**

ASTM 6460 - Permissible shear stress in unvegetated conditions; ASTM 6460 – Mesh Tensile Strength; ASTM A975 - Mesh Punch Strength; ASTM B117 - Salt Spray (5% DBR); STM A975 - Abrasion resistance

#### **ALBERTA TRANSPORTATION COMMENTS**

##### **EXPERIENCE**

Transportation and Economic Corridors has no experience with this product.

##### **APPLICABLE STANDARDS**

Alberta Transportation Erosion and Sediment Control Manual (2010) – B.M.P. # 2  
Alberta Transportation Standard Specification for Highway Construction, Section 6.10 – Gabions and Gabion Mattresses

##### **RECOMMENDATIONS**

Reno mattress Plus be listed as a Potential Product under Alberta Transportation Products List, Erosion Control Systems – Gabions and Mats – Proprietary, based on the information provided. Final acceptance as a proven product will be based on field performance.

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

Caveat: Gabion mattresses shall have minimum thickness of 230mm.

**TRIAL PROJECTS**

Rishi Adhikari

cc Innovations Evaluation Committee – Roger Skirrow,  
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