

## Product Evaluation

### RE: Review of GBN Gabion Mattresses and Baskets

#### **PRODUCT**

GBN Gabion Mattresses and Baskets are manufactured and distributed in Alberta by Give Back Novelty Ltd. located in Edmonton. Website: <https://www.givebacknovelty.com/>

### **VENDOR CLAIMS AND INFORMATION**

#### **CLAIMS**

GBN Gabion Mattresses and Baskets are used in road ditches, channels, slopes and construction sites to decrease water velocity, protect slopes from erosion and offer stabilization/retaining of soil.

#### **DESCRIPTION**

GBN Gabion mattresses and baskets are double twisted wire mesh structure which typically are 1m in width and can be obtained in various lengths up to 4m. The structures are divided into cells, each being 1m wide, using internal mesh diaphragms to separate the cells. As gabion mattresses and baskets get formed and set in place, they are filled with large granular stones to provide structural integrity and a base for other baskets to be installed on top of. For gabion mattresses and baskets longer than 1m, internal diaphragms shall be connected along one edge at 1m intervals, and then folded flat for shipping.

#### **POTENTIAL USAGE**

Gabion mattresses and baskets are used to form flexible, permeable, monolithic structures. GBN Gabion Mattresses and Baskets are used in road ditches, channels, slopes and construction sites to decrease water velocity, protect slopes from erosion and offer stabilization/retaining of soil.

#### **STANDARDS**

ASTM A370-20: Test Methods and Definitions for Mechanical Testing of Steel Products  
ASTM A90/90M-13: Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings  
ASTM D746: Test Method for Brittleness Temperature of Plastics and Elastomers by Impact  
ASTM A975: Specification for Double-Twisted Hexagonal Mesh Gabions and Revet Mattresses (Metallic-Coated Steel Wire or Metallic-Coated Steel Wire with PVC Coating)

### **ALBERTA TRANSPORTATION COMMENTS**

#### **EXPERIENCE**

Alberta Transportation has been using gabion baskets and mats for erosion control along highway ditches

#### **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**

GBN Gabion Mattresses and Baskets 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: Only the GBN gabion and mattresses with galvanized and PVC coated wire mesh can be used in the Alberta Transportation projects.

**TRIAL PROJECTS**

Rishi Adhikari

cc Innovations Evaluation Committee – Roger Skirrow,