

Product Evaluation

Product ID: 8132-1
Initiation Date: July 25, 2002
Revision Date: March 12, 2003
Expiry Date:

RE: Review of Maccaferri Gabions and Mats

PRODUCT

The Maccaferri gabions and mats consist of rectangular units, fabricated from double-twist, hexagonal mesh of soft annealed, heavy zinc coated wire. They are manufactured by Maccaferri Canada Ltd. Located in Ayr, Ontario and distributed in Edmonton by Maccaferri Canada Ltd.

VENDOR CLAIMS AND INFORMATION

CLAIMS:

Maccaferri offers a variety of erosion control products that allow the engineer to choose the right type of protection needed for each specific situation.

DESCRIPTION:

Gabions and mats are made of 8x10 hexagonal double twisted wire mesh. Filled with stone, gabions and mats become large, flexible and permeable elements from which a broad range of structures can be built (retaining walls, river bank protections, weirs, etc). They are divided into cells with diaphragms, whose function is to reinforce the structure. The mesh (except for the diaphragms) is reinforced on all edges with wires of a larger diameter to strengthen the gabions and mats and facilitate the assembly and installation. Gabions and mats can also be manufactured with wire mesh coated with a continuous PVC (polyvinyl chloride) sleeve. This provides protection against corrosion making them suitable for use in marine or polluted environments. Gabions and mats are also available in Galmac wire. For protection of larger areas, gabion mats are used.

POTENTIAL USAGE:

Used in road ditches, channels, slopes and construction sites.

STANDARDS:

ASTM A975 Hexagonal double twisted wire mesh

ASTM A641 Tensile strength

ASTM A370 Elongation

ASTM A641 Zinc coating

Maccaferri has developed installation instructions for the installation of gabions and mats and use of fasteners and fastening tools. They are color coded for various sizes.

ALBERTA TRANSPORTATION COMMENTS

EXPERIENCE:

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

APPLICATION STANDARDS:

Standards for the gabion materials and rocks can be found in Alberta Transportation Special Provisions SpE007 and Guidelines for Erosion and Sediment Control Design, 2003, Best Management Practices, BMP#2.

RECOMMENDATIONS:

Maccaferri Gabions and Mats be listed under Alberta Transportation Products List ,Proven Products category, Erosion Control Systems – Gabions and Mats – Proprietary based on the information provided.

TRIAL PROJECTS

H63:11 - North of Ft McMurray, fall 2003.

H841:02 and H637:02 - Drumheller area, summer 2002.

Fred Cheng

cc New Product Evaluation Standing Committee – Terry Willis
Roger Skirrow