

BIOMAC™

BioMac™ is a biodegradable coir mat manufactured from randomly arranged coconut husk fibres layered between photosensitive polypropylene netting. BioMac™'s three-ply composite provides immediate erosion control and a stable medium to support healthy plant growth. The closely arranged fibres intercept the energies of impacting raindrops and water scour, keeping the underlying soil in place. The dense mat acts as mulch, creating a localised water reservoir for the soil below. With time, the coir material biodegrades, enhancing the soil fertilisation and the cohesive strength of the root systems. At this point the flexible nature of the plants become the primary stabilising and protecting element. Depending on climate conditions, the biodegradation period is typically up to 3 years. BioMac™ provides nature with a helping hand at erosion control and vegetation generation. In certain instances BioMac™ may be used in conjunction with double twist wire mesh reinforcement.

BioMac™ is used for short term erosion control and revetment protection to assist in the establishment of vegetation on:

- Steep slopes and embankments up to 1:1;
- Areas exposed to high rainfall;
- Ditches and water courses with low energy flows.

BioMac™ provides 100% soil cover, providing immediate soil protection against water and wind erosion. The blanket further insulates the soil and seed against extremes of temperature, thus ensuring a higher germination rate. Newly planted seeds are protected against wind, rain and birds. Rain water run-off is minimised and soaks through the blanket, permitting soaking of the underlying soil. Prolonged capillary storage improves seed germination. Decomposition of the natural fibres within the blanket ultimately improves the soil organic content, permeability and moisture retention ability. BioMac™ rolls are easily cut and shaped by unskilled labour to accommodate existing topographical conditions.

Storage & Handling

During transportation and prior to installation on site, BioMac™ should be kept dry and retained in its original wrapping out of sunlight, in dry ventilated conditions.

Installation Equipment

Where joining is required, the blanket shall be overlapped by a minimum 100mm. BioMac™ shall be fastened to the ground using suitable pegs (Figure 3). The material may be cut using conventional scissors or a utility knife. Please refer to the [Erosion Control Blanket Installation Guidelines](#) for peg spacing and density.

Vegetation Cover

BioMac™ is used for short term erosion control and relies on vegetation for a permanent solution. BioMac™ may be vegetated by hydroseeding or with cuttings. The choice of vegetation depends on a number of factors. Contact a local nursery or horticulturist for appropriate advice on local plant mixture / selection. For further information, refer to the [Maccaferri Southern Africa's Soil Bio-Engineering Manual](#).

BIOMAC™ SPECIFICATIONS	
Composition	Untreated 100% Coconut Husk Fibres
Netting	UV stabilised polypropylene
Weight	450g/m ²
Strength	3,7kN/m ²
Roll Size	25m x 2m (50m ²)
Average roll weight	22,5kg
Normal functional life	Up to 3 years

Table 1



Figure 1



Figure 2

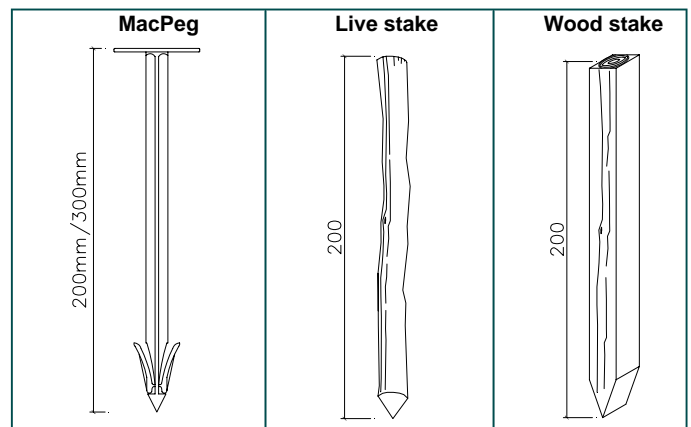


Figure 3 - Peg types

Item No	Description	Unit	Quantity	Rate	Amount (R)
	EROSION CONTROL BLANKETS.				
1	BIOMAC™ - Biodegradable coir mat layered between polypropylene netting.	m ²			
2	Scarifying for loosening topsoil.	m ²			
3	DOUBLE TWIST WIRE MESH REINFORCEMENT (As per Double Twist Mesh Specs). (Including material and delivery).				
3.1 (a)	Mesh Type 60 with 2,2 mm, Class A Galvanised wire. Length x Width	m ²			
(b)	Mesh Type 60 with 2,2/3,2 mm, Class A Galvanised and PVC coated wire. Length x Width	m ²			
3.2 (a)	Mesh Type 80 with 2,7 mm, Class A Galvanised wire. Length x Width	m ²			
(b)	Mesh Type 80 with 2,7/3,7 mm, Class A Galvanised and PVC coated wire. Length x Width	m ²			
4	Vegetative topsoil below and above erosion control blanket.	m ³			
5	VEGETATION:				
5.1	Cuttings.	m ²			
5.2	Sodding.	m ²			
5.3	Hydroseeding.	m ²			
5.4	Handsowing (Specify plant species).	m ²			
6 (a)	Installation of BioMac™ (Including unrolling and fixing).	m ²			
(b)	Installation of Double Twist Wire Mesh Reinforcement (Including unrolling, fixing and lacing).	m ²			
7	MacPegs for erosion control blankets.	No.			

Table 2