

ARMATER

Slope Protection

The slope profile should be generally smooth. Small irregularities, $\pm 40\text{mm}$ on slopes in excess of 40° will assist in providing a greater shear resistance with the soil fill. All gullies in the slope must be backfilled and well compacted. Large hollows allowing (concave) bridging by the Armater must be avoided.

Top Anchorage

An area no less than 800mm wide by 100mm deep at the shoulder and 200mm deep at the Armater termination point should be excavated (approximately 10° below the horizontal).

Spreading out and Joining

Unpack the Armater panel. This is folded prior to packing and is 10 metres long when collapsed. Prior to opening out the Armater into its panel form, place the 10 metre length longitudinally with the slope (the arrows on the Armater are to point down the slope). Effect temporary pinning in one top corner, and pull out the Armater across the slope effecting further temporary pinning along the top of the panel to maintain a uniform cell configuration. No buckles are used at this stage to allow the panel to conform to the slope and layout required. Do NOT overstretch the cells and maintain the hexagonal shape of the cell. The cell walls should be aligned vertically up and down the slope.

Once acceptable layout of panel is achieved, begin securing the Armater to the pins by means of the proprietary buckle. Buckles are always installed in conjunction with a fixing pin. Wherever possible install the buckle/fixing pin on the "double" vertical cell walls. The hexagonal shaped cells will distort slightly during process as the buckles remove 2-3cm per cell.

The overall width of the panel is 10.3 metres; the slope length is 8 metres.

Joining Panels

The panels are joined together by means of pins and buckles. Industrial staples (e.g. Bostich or similar) can be used to staple adjacent double thickness cell walls.

Pinning

The pin dimensions and frequency is dependant on the soil/rock conditions. The end user must select an appropriate pin to ensure a sound anchorage

The panel of Armater should be pinned in each cell at the top anchorage and in every full cell on the edges. Thereafter anchorages within the body of the panel are on a staggered grid and dependant on the slope angle ($1:2$ needs 1 per 18m^2 , $1:1.5$ needs 1 per 32m^2 , $1:1$ needs 1 per 1.4m^2 , $3:2$ needs 1 per 0.9m^2). Buckles are used to effect a firm bond between the Armater and the pins. It is preferable to place the pin and buckle where a double thickness of fabric occurs.

When placing pins and buckles gain access over the Armater by ladders. Do not use the cells as foot holds.

Filling

Place 'spots' of top soil across the Armater panel to pre-stress the panel. Thereafter fill each cell from the top anchor detail downwards. The top cells must be filled first and lightly compacted. Overcompaction will reduce the topsoil ability to vegetate. Scarify the surfaces in the top anchor detail prior to seeding. The remainder of the face panel should be filled from the top down. Overfill the cells by about 20mm to allow for settlement. The soil fill may be lumpy rather than friable for steep slopes (over 40°). The higher Phi angle may be used to advantage.

The fill for the Armater must be capable of supporting vegetation. Due consideration must be given to the selection of suitable plant species which should be compatible with the immediate environment.

Care should be taken to ensure water control/ run-off measures are effected at the crest of the slope to avoid the top oil becoming saturated.

Guide to total number of fixings for anchoring			
Slope V:H	Angle of Slope	No of anchors per m^2	No. of anchors per 82.4m^2 panel
1:3	18.4°	0.6	50
1:2	28.6°	0.6	55
1:1.5	33.7°	0.9	76
1:1	45.0°	1.3	109
3:2	56.3°	1.7	142

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