



## The use of Geotextiles in conjunction with E'GRID Biaxial Geogrids

The following information is offered in good faith to assist end users to achieve the best possible results in situations where it is appropriate to use an E'GRID Biaxial Geogrid together with a Geotextile.

- **Background:** In some projects the Engineer may determine that reinforcement and coarse separation effects of a geogrid can be complemented by the fine filtration and separation effects of a geotextile. This combination can provide a composite geosynthetic layer with better performance than either product alone.
- **Choice of components:** The presence of a geotextile layer has no effect on the selection of the grade of E'GRID Biaxial Geogrid to use. Generally, the heavier the duty expected and/or the softer the ground, then the heavier the grade to use. Also, for normal fills up to 40 or 50mm maximum particle size then the standard range of products is appropriate. For fills with larger stone sizes "L" grades are appropriate.

For the geotextile, the only criteria for selection are the Engineer's filtration and separation requirements together with high extensibility (>50%) to allow interlock of the fill with the geogrid. As the geogrid will protect the geotextile there is no need to consider high strength or high weight geotextiles for survivability reasons. Therefore suitable materials are generally needle-bonded, non-woven geotextiles of 150-250g/m<sup>2</sup>.

- **Installation:** A typical installation sequence is illustrated in Figure 1 below:

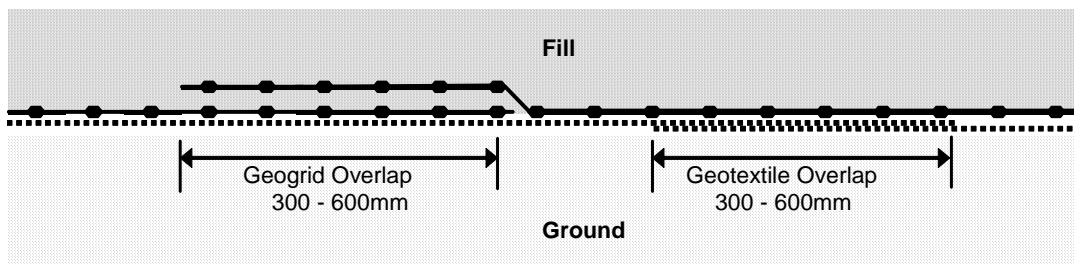


Figure 1: Installation of geotextile and geogrid composite layer

First, the geotextile is laid on the ground with overlaps of 300-600mm at roll edges and ends to maintain continuity of filtration and separation. Then the geogrid is laid with overlaps of 300-600mm at roll edges and ends to maintain continuity of reinforcement

**Note:** There are no restrictions on the positioning of the overlap joints. A geogrid joint may lie immediately over a geotextile joint or over a single layer of geotextile.

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