

Designing With Geosynthetics

- Geotextile Lapping Advice

We often get asked what the recommended laps are for geotextiles used in construction. There is a minimum recommended lap; However as ground conditions on site deteriorate, and the CBR figures for the sub-grade decrease, there is a need to increase the size of the laps. This is necessary to counter the anticipation of increased differential settlement.

Approximate CBR	Recommended Minimum Laps
>3%	300mm
>2% & <3%	500mm
>1% & <2%	600mm
<1%	750mm

We also get asked about how much material to allow for laps. For example if 4500m² of ground needed covering; How much should be allowed for laps. Based on >3% CBR, therefore a 300mm minimum lap as above, each standard 4.5m x 100m roll would use 31.35m² to lap one long (100m) and one short (4.5m) edge. That is a 7% requirement for laps not allowing for any deviation or wastage from non standard shapes/angles. Our advice and guidance would therefore allow approx 10% for laps and wastage based on the minimum 300mm laps. For larger laps required for lower CBR figures this percentage will be greater.

We would always recommend that at least six separate area's are tested for CBR figures across the whole of the proposed site area; and the worst result is the one used for any technical recommendations.

References:

Designing With Geosynthetics; Fifth Edition (Robert M. Koerner)
Published by Pearson Prentice Hall (ISBN 10:0-13-145415-3)

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