

CoirNet

Coir Geotextile Netting



CoirNet is a natural innovative way to improve soil stability and add value to the construction. CoirNet is a highly renewable fibre made from coir which is strong and robust to withstand the rigors of soil stabilisation and the time required for revegetation. CoirNet harmonises with soil and vegetation, providing an active buffer to enhance planting or natural regeneration. CoirNet can be used for:

- Road Embankments
- Bio Engineering
- Soil Erosion Control
- Capping Land Fills
- Mining And Wastelands
- Stream Bank Stabilisation
- Golf Courses
- Landscaping
- Ski Slopes And Ski Lift Tracks
- Re-Vegetation
- Shoreline stabilisation
- Roof Greening



BENEFICIAL ENGINEERING

The most effective way to protect slopes and reduce erosion is through natural vegetation. This reduces the kinetic energy of rain and reduces runoff velocity. When revegetation is required there is the need to initially stabilise the soil and then create an environment to allow regeneration to occur through planting or natural regeneration. The use of proper soil stabilisation methods is key, and there are a number of methods and materials used for this process. The optimum method should demonstrate beneficial engineering properties but also aid regeneration through the mechanical retention of soils as well as the retention of moisture and nutrients. CoirNet is a highly competitive natural application because of its robust structure and its retention of moisture and nutrients. Its open matrix also adds in natural regeneration.



STRENGTH & DURABILITY

CoirNet demonstrates excellent mechanical strength over other natural soil stabilisation options such as Cotton, Jute and Sisal due mainly to its high lignin to cellulose ratio. It can be expected to have CoirNet last 4 - 7 years. It is much less sensitive to UV due to leaching out of photo-sensitive materials during the production process. Tests conducted in highly fertile soil, high humidity (90%) and moderate temperature revealed that coir retained its strength after one year whereas cotton degraded in six weeks and jute in eight weeks. Alternate wetting and drying of coir does not accelerate the degradation of the fibre.



MOISTURE & NUTRIENT RETENTION

CoirNet can absorb and retain moisture up to 40%. This hygroscopic property of the coir fibre helps to retain soil moisture. The image above shows turf rooting into the coir netting providing the buffering required to enable turf to establish itself. CoirNet plays a significant role in retaining valuable soil nutrients to improve regeneration and reduce leaching into waterways. Trials conducted under the Sustainable Watershed Management reported the reduction of nutrient losses when using a coir fibre geonetting in conjunction with planting versus untreated soil.

Nutrient loss reduction

Nitrogen	- 83.8%
Phosphorous	- 71.4%
Potassium	- 73.4%
Organic Carbon	- 64.2%



FLEXIBILITY IN APPLICATION

CoirNet can be used in conjunction with FitaBoom which provides a high level silt retention, soil stabilisation and soil regeneration. It can be used in steeply inclined surfaces or in shallow swales, moist wet ground or when water is intermittent, to hold soils structurally or laid across soil surfaces.

