

Webster's dictionary defines a blanket as a covering layer. Filtrex[®] Slope protection is typically used to stabilize soil on slopes with the goal of preventing soil erosion from occurring due to soil particle dislodgement resulting from splash erosion and from soil transport due to sheet runoff.

By blanketing the soil, Filtrex[®] Slope protection protects the soil surface by preventing soil particle dislodgement created by the impact of rain drops, the first stage of water soil erosion. Tightly woven mats do this by intercepting these raindrops prior to contacting the soil. The larger particles used in Filtrex[®] Slope protection provide the same function, just as a layer of mulch in a forest would provide.

Once the soil underneath Filtrex[®] Slope protection has reached its water holding capacity during storm conditions, runoff begins. Unlike conventional erosion control blankets, Filtrex[®] Slope protection holds a much higher quantity of water, therefore delaying and in some cases preventing runoff from occurring (Faucette et al, 2005). This is a function of the humus content and smaller particles in the Slope protection. Once runoff conditions occur, therefore entering the second stage of water soil erosion, Filtrex[®] Slope protection is designed to reduce the rate of runoff flow over the soil surface by interrupting its flow and dispersing its energy over the slope. If the runoff flow rate is slowed, the runoff will have a reduced erosivity potential, therefore reducing the likelihood of interrill soil erosion and soil transport. Filtrex[®] Slope protection has been shown to significantly reduce runoff rates, delay the time until peak runoff rates occur, and reduce overall runoff volume on slopes (Faucette et al, 2005).



Perhaps the most important function of Filtrex[®] Slope protection is to protect soil surfaces prior to vegetation establishment and to quantifiably reduce soil erosion and transport from sloped areas. Research at the University of Georgia has shown that over two storm events, with rates and intensities over 3 in/hr for one hour duration, compost Filtrex[®] Slope protection reduces soil loss on slopes by 99% and have a C factor of 0.008, the cover factor in the equation commonly used to predict soil loss by the RUSLE computer model software (Faucette et al., 2005).

Many erosion control professionals are beginning to prefer compost Filtrex[®] Slope protection over rolled erosion control blankets, because they can improve soil structure and overall soil quality (Faucette et al., 2004) which leads to sustained and permanent vegetation growth. Additionally, they tend to increase vegetation establishment while suppressing weed growth (Richard et al., 2002; Faucette et al., 2004), which is the principle goal of permanent erosion control tools. In a recent study in the Journal of Soil and Water Conservation, researchers at the US Department of Energy's Savannah River Site found that rolled erosion control blankets captured an average 1.26 snakes per roll with a 75% kill rate, and concluded that the synthetic netting was likely harmful to other wildlife as well, including endangered species (Barton and Kinkead, 2005). Additionally, leachate from aspen excelsior has been shown to be toxic to aquatic organisms, and therefore should not be used near surface waters (Taylor et al., 1996). Whether the issue is ecosystem health, erosion control, soil quality, water quality, storm water reduction, vegetation establishment, or permanent vegetation, compost Filtrex[®] Slope protection increasingly are the Filtrex[®] Slope protection of choice by erosion control professionals and environmental managers.