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PVC Friction Angle & Slope Stability

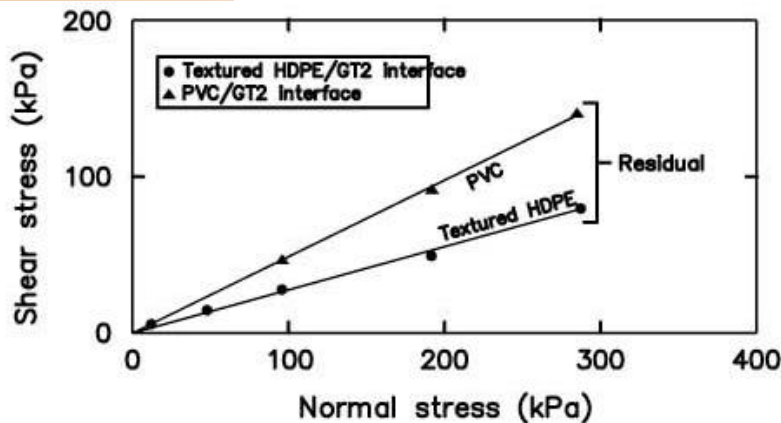
It is well known by many engineers that smooth PVC geomembrane provides excellent performance on slopes as high as 3/1, with both sand and nonwoven geotextiles. Other engineers tend to rely solely on textured membranes to provide slope stability for their designs.

Many applications such as wastewater treatment lagoons and landfill closures are ideal projects for using smooth PVC geomembrane. Performing like a NASCAR racing tire, the smooth, flexible surface of PVC provides

The "Velcro effect" of textured PE tends to orient the fibers of nonwoven textiles in one direction upon initial movement, thereby reducing residual friction angle of PE dramatically. PVC however, performs very differently. More PVC surface area contacts more fiber surface area, and residual friction angles remain almost as high as peak friction angles of PVC.

Testing has even shown instances of failure within the construction of some types of geocomposite drainage nets that were tested in contact with smooth PVC. The surface friction between the PVC geomembrane and the nonwoven geotextile of the composite was stronger than the bond between the geosynthetic net and the geotextile fabric.

For more information on PVC geomembrane interface friction angle and slope stability with PVC liners, visit our web site. There you will find technical papers and research information on testing of PVC geomembrane.



the grip to prevent sliding. This increased smooth surface area provides a higher friction angle with nonwoven geotextile than even textured PE membranes!

