

Introduction of Takino Filter Mat

Feb 7th, 2024



緑・土・水

Takino Filter Inc.

What is Takino Filter?

Takino Filter is the mat that prevents erosion and promotes revegetation of slopes caused by development activities such as road construction and land development, as well as by heavy rain and earthquake disasters.



Under installation

Conventional slope greening methods

Hydroseeding



Vegetation sheet



Vegetation mat



Comparison with the conventional method

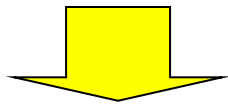
Conventional method
(Sheet, Mat, Spraying)

Takino Filter

Bare slope occurred by the development construction

Revegetation

Turf grass of which the germination and the growth are fast

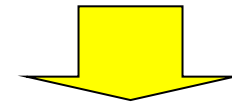


Slope protection

Stop of the slope soil movement

Slope protection

Stop of the slope soil movement



Revegetation

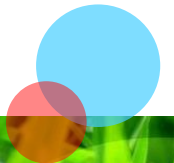
Harmony with the ecosystem,
Revegetation by native local plants

Issues of Slope Revegetation Method

Erosion caused by rainfall prior to completion of revegetation



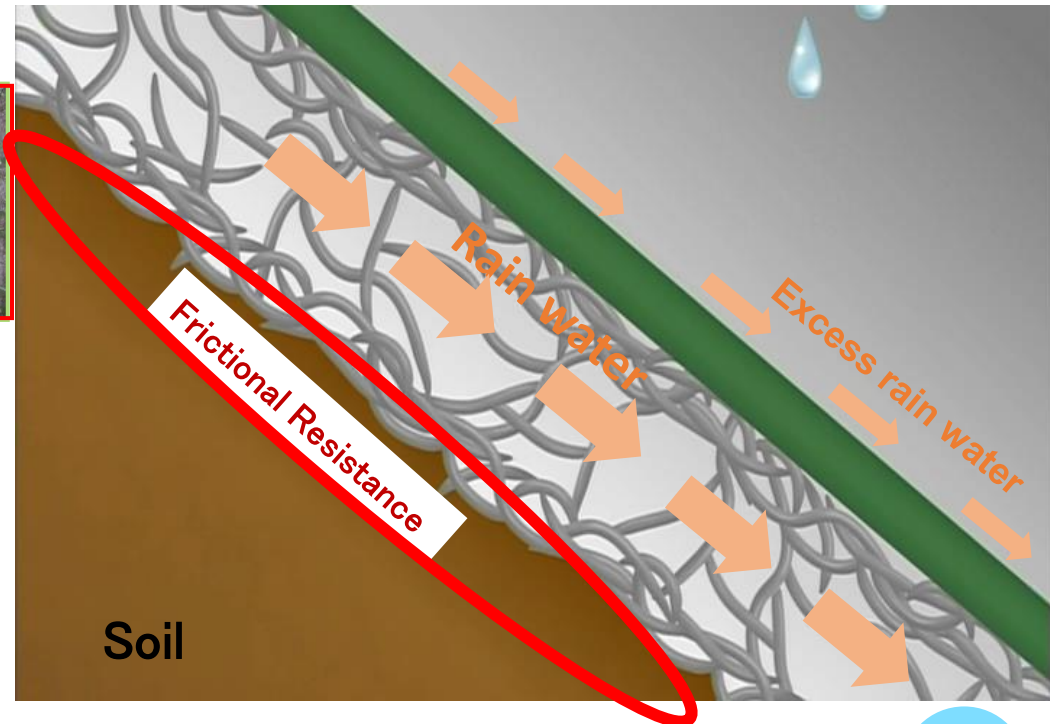
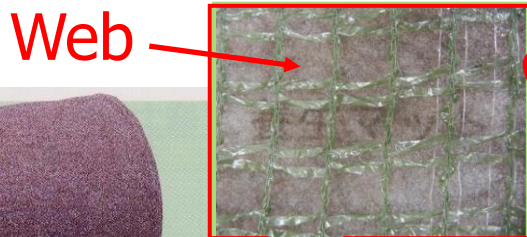
Soil runoff on slopes



Structure and Erosion Control Mechanism

• Mat consisting of a non-woven fabric (**web**) of polyester staple fibers overlaid with a protection net of polyethylene fibers.

- Rain Drop Impact Cushioning Function
- Drainage Function
- Close adhesion to soil surface
- Stop of soil movement



Erosion Prevention Function



Vegetation sheet

Soil is flown out



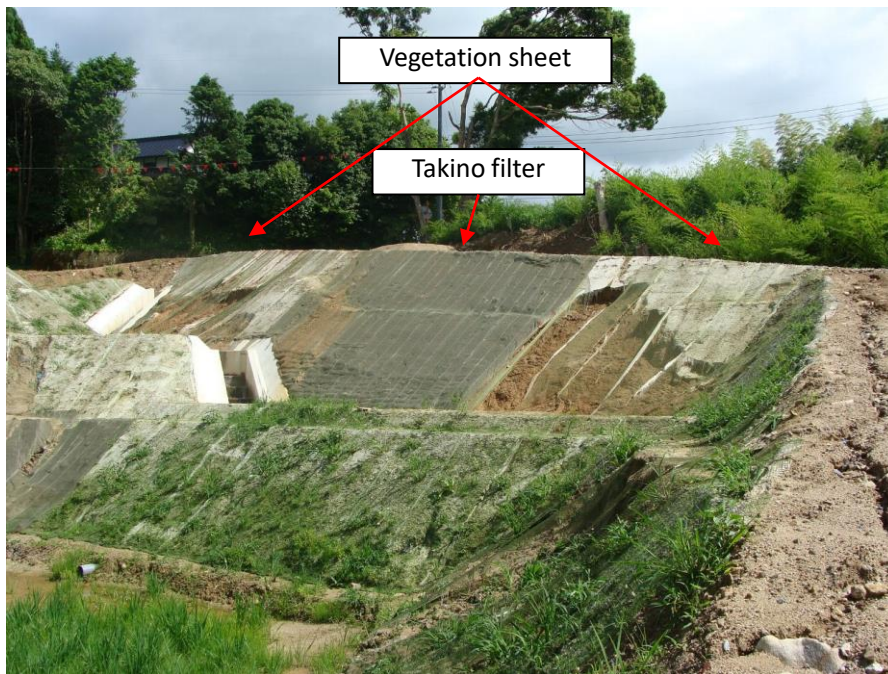
Takino Filter

Soil is not flown out

Experimental situation by the artificial rainfall in National Research Institute for Earth Science and Disaster Resilience



The situation that soil is flown out for 10 minutes at the precipitation condition of 100mm/h was examined.



Actual site
Vegetation sheet and Takino filter

Embankment slope after 150mm of daily precipitation.

- Vegetation sheets were unable to control rainwater permeation, resulting in surface erosion.
- Takino filter is highly effective in surface drainage and prevents surface erosion.



Slopes where Takino Filter is recommended

- Easily eroded soil



Sandy soil



Volcanic ash soil

