

BREATHABLE SOIL WATERPROOFING OF ROAD BASES & SLOPES

Terrasil nanotechnology is water-soluble, UV and heat stable, reactive soil modifier with the ability to retain strength of road bases and resistance to deformation.

SX 100

NANO SILICONE

SX 100 nano silicone emulsion extends performance of Terrasil upto 100%. It is mixed with Terrasil solution and sprayed on compacted soils.

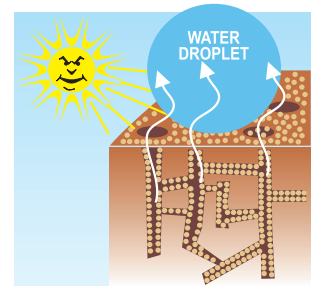
Zycobond

One Step Bonding & Waterproofing for Soils

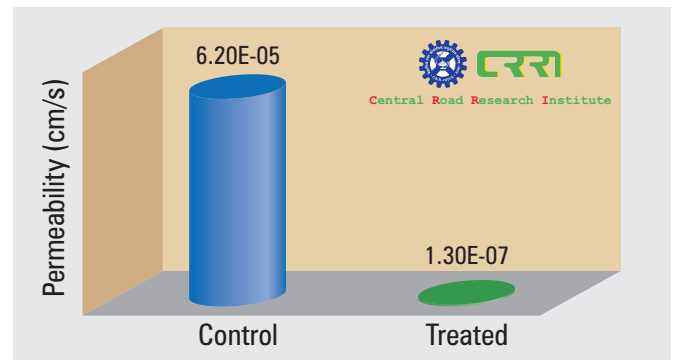
Zycobond acrylic co-polymer emulsion bonds the soil particles to resist soil erosion in side shoulders and slopes. It is mixed with Terrasil solution for one step waterproofing and bonding of compacted soils.

TERRASIL BENEFITS

➤ Eliminates Capillary rise and water ingress from top



➤ Reduces water permeability of soil bases (10^{-5} cm/s to 10^{-7} cm/s) while maintaining 100% vapor permeability



➤ Maintains Dry CBR under wet conditions
Retains strength of road bases and increases resistance to deformation by maintaining frictional values between silt, sand, clay particles.

Soil Type	Untreated (4 Day soak % CBR)	Treated with Terrasil (%CBR)	
		4 Day dry	4 Day Dry + 4 Day Soak
Bihar, India Soil	1.1	9.7	6.5
Black Cotton Soil	1.0	5.8	4.1

➤ Controls erosion of soils in side shoulders and slopes



SUBGRADE MULTILAYER ENVELOPE

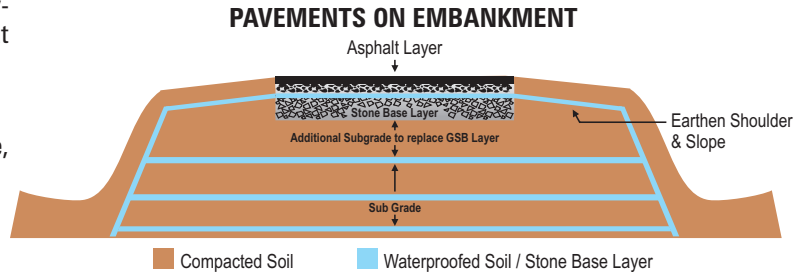
Apply TerraSil solution through two application cycles of Spray-Dry-Spray on compacted soil (Proctor Density above 95% at optimum moisture content).

First spray cycle waterproofs almost 90 - 95% of the soil surface.

Second spray cycle ensures 100% saturation of the soil surface, penetration and waterproofing of micro-cracks.

Shoulders & Side Slopes

Use regular soil to cover the treated slopes and build shoulders. For extra binding of the side slopes mix 10 kgs of Zycobond with TerraSil solution.



DOSAGE

Soil Layer		TerraSil : Water (<1000 ppm TDS) Ratio	SX 100 in kg	Zycobond in kg	Spray Rate Liters/m ² upto saturation	No. of Applications
Bottom, Intermediate and Top		1 kg : 800 liters	0.5	–	1-3	2
Shoulders & Side Slopes		1 kg : 800 liters	0.5	0.5*	2-3	2
Stone pitching	Soil	1 kg : 800 liters	0.5	0.5	1-2	1
	Cement mortar	1 kg : 40 liters	0.5	0.5	0.5	1

* Zycobond binds side slopes to be used for stone pitching

APPLICATIONS

- Road bases – Asphalt and Concrete Pavements
- Dirt Roads – Rural, Mining, Waste Sites
- Landfills / Construction Sites, Ponds, Canals, Levees (Bunds) etc.
- Solar Farms & Reclamations

STORAGE AND SHELF LIFE

TerraSil should be stored between 5 – 45 °C (41 – 113 °F) in a shaded, dry area away from sunlight, heat, ignition, source of sparks, rain and standing water. The container lid should be securely fastened every time it is used. Its shelf life is 24 months.

ZYDEX : SUSTAINABILITY THROUGH INNOVATION

ZycoTherm / Zycosoil
Warm / Hot Mix

Nanotac
Tack Coat

Terraprime
Prime Coat

TerraSil
Soil Waterproofing

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