

Industries we serve....

Oil, Gas & Energy

- ✓ Pipeline Protection
- ✓ Well Pads
- ✓ Skid / Access Roads
- ✓ Solar Farm Dus control

Rail & Transport

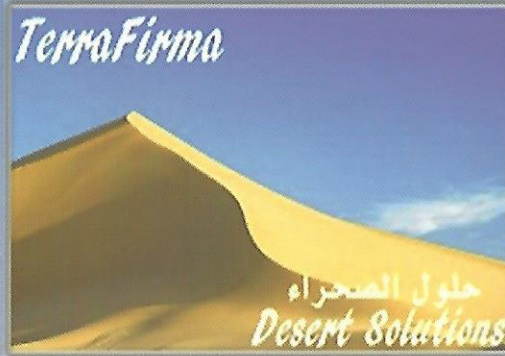
- ✓ Sand Migration Control
- ✓ Polymer Roads
- ✓ Embankment Erosion Control
- ✓ Rail Access Roads
- ✓ Storage Yards

Military

- ✓ Helipad Construction
- ✓ Bunker Protection
- ✓ Perimeter Road construction
- ✓ Forward Staging Areas

Mining

- ✓ Access Roads
- ✓ Dust Suppression
- ✓ Storage Yards / Hardstanding



TerraFirma[®]
Desert Solutions حلول الصحراء

Advanced Polymer solutions for:

- Sand Movement control
- Embankment Erosion control
- Dust & Erosion control
- Road Construction
- Car Park Construction

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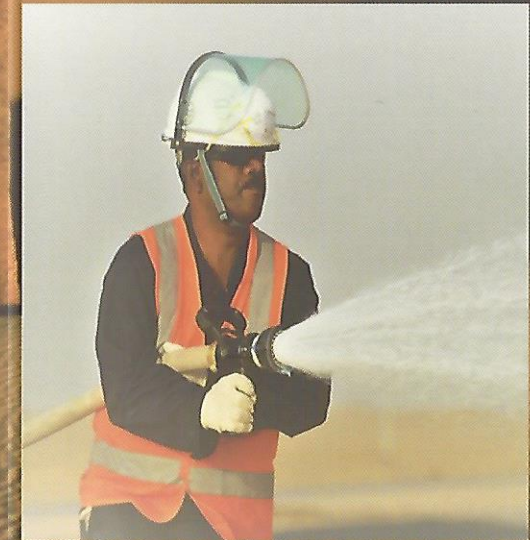
TerraFirma Sand Stabilisation Division

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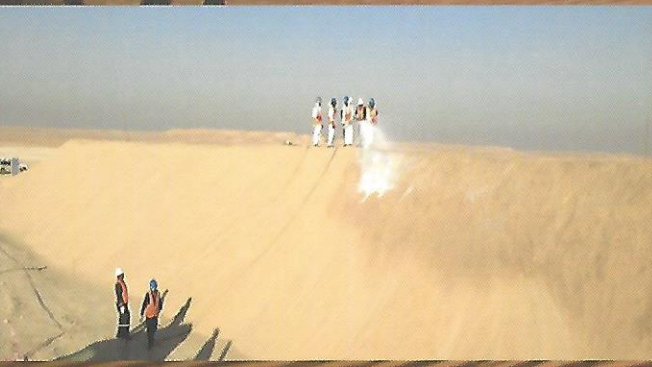
TerraFirma are regional leaders in the use of **Polymers for sand stabilisation, providing eco-friendly and economical solutions for a wide variety of applications.**

Based on project objectives, the primary means of polymer application are **INFUSED & TOPICAL.**

For **TOPICAL** applications, polymer is sprayed onto the surface of loose or compacted sand, and once cured forms a solid crust on the surface of the treated area.



Two major areas where Polymer is applied in this manner in the Middle East are Sand migration control and dust reduction. For Sand migration control - typically, the surface of existing dune structures or specially created sand "berms" are sprayed with polymer which penetrates the surface and dries, forming a hard, wind resistant cap

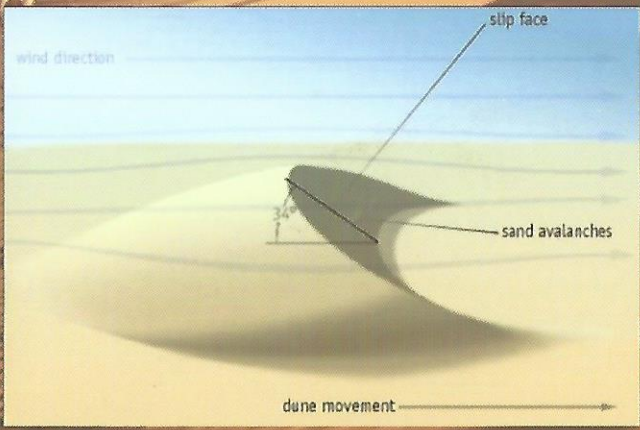


Sand Migration Control – Ain Dar KSA



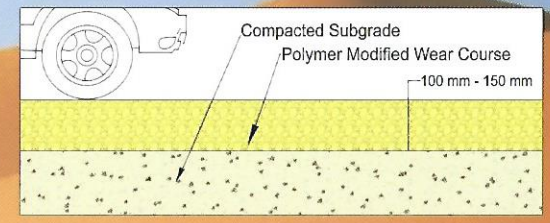
TerraFirma Desert Studies Department

Apart from acting as a protective measure by providing a physical barrier it does not allow windblown sand to accumulate on the hard surface to the same degree, greatly inhibiting sand movement by "dune creep", the avalanche effect caused by the build-up of loose sand.



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INFUSED applications, typically used in polymer road construction, Polymer is mixed into the top 10-15 cms of wear course during the construction process and compacted before finally treating the area with a polymer seal coat. Alternatively, the same method can be used to improve the subgrade in traditional road construction.



The benefits of this in road, car park and similar applications are:

- Reduced migration of fines from base, sub base and wear course.
- Decreased rolling resistance and increased ride performance.
- Less rutting, spalling and surface degradation.
- Dust suppression and particulate emission control.
- Reduced infiltration, improved run-off and erosion control.
- Increased load bearing capacity.
- Reduced wear on vehicles.



Polymer Road Construction Dammam KSA