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TerraFirma

Desert Solutions حلول الصحراء

Company Profile

2017

PRESENTED BY: REHAB

TERRAFIRMA

HIDD - KINGDOM OF BAHRAIN

ABOUT US

TERRAFIRMA DESERT SOLUTIONS

In 1937, Saudi Aramco produced a document that called for a solution to their blowing sand problem, but only when TerraFirma was launched in 2012, was a solution that worked made available.

Using Data Specific results provided by the regions only full time Desert Studies department has allowed TerraFirma to provide a new comprehensive list of solutions to suit our client's project requirements.

1. Studying the topography.
2. Analyse the soils.
3. Chart the weather.
4. Design the Barrier (sand berm) to its correct height, shape, and position.
5. Design the polymer requirements to fit.

These are some the key areas that our engineers look at to protect client projects against blowing sand. The berm does not move as the surface is fixed with a hard polymer cap. The sand particles travel, hit the berm and drop to the foot of the berm, not on the railway or road being protected. Similar technology applies to embankment erosion control and dust suppression.

TerraFirma are also specialists in polymer road building and car park construction. Using as much of the residual sand and stone materials available on site, the polymer road offers a very cost competitive, effective, and long lasting, alternative to asphalt. This is especially valuable where a natural look is required or in location's which are difficult to maintain.

TerraFirma technologies are water based, durable, eco-friendly, and easy to apply, custom designed using technology manufactured in the region. The range is expanding all the time.

The TerraFirma team is made up of industrial chemists, civil engineers, desert trained sales engineers and support staff based in the TerraFirma head office in Bahrain, in Saudi Arabia and in the UAE.

Specialising in Sand movement control, Embankment erosion control, Dust control and Skid road construction, TerraFirma have, and continue to expand the level of knowledge and experience our clients and prospective clients require when considering a project.

TerraFirma are a complete one stop solution for all your projects including Study, Survey, Supply, Application and training for your contractors. TerraFirma does not simply sell a product, we supply a Technology. TerraFirma works with each client to decide the best solutions which meets their exact specification and objectives.

WHO **WE** ARE ...

TerraFirma is regional leader in the field of polymers for soil stabilisation, sand migration and dust control in the middle east set up in 2012, *TerraFirma* uses specially developed technology based in the GCC.

WHAT **WE** SOLVE ...

TerraFirma uses new technology and a new approach to solve old problems.

MAIN PROBLEMS WE SOLVE ...

SOIL STABILISATION AND SAND MIGRATION CONTROL:

- Penetrates surface and forms a hard, stable crust.
- Inhibits dune creep by stabilising dune surface.
- In conjunction with building of protective berms, divert and reduces the effects of wind borne sand.
- Provides a solid surface which reduces sand build up.

FOR:

- ✓ Roads.
- ✓ Railways
- ✓ Car parks.
- ✓ Industrial facilities

EROSION CONTROL:

- Reinforces soil against wind, rain, and traffic erosion

For:

- ✓ Secondary containment structure (i.e. tank bunds)
- ✓ Trails, paths and access roads
- ✓ Cuttings and embankments
- ✓ Road shoulders

DUST CONTROL:

- Binds surface dust and sand particles

For:

- ✓ Roads.
- ✓ Parking areas
- ✓ Winds farms
- ✓ Helicopter pads
- ✓ Industrial facilities / loading facilities

ROAD CONSTRUCTION:

- Reinforces soil in wet & dry conditions
- Increased load bearing capacity (CBR rating)
- Reduces soil permeability
- Eliminates migration of fines
- Stabilises sub-base
- Increased durability

WHY *TerraFirma*...

- *TerraFirma* is a unique financially stable company.
- We are specialised in sand stabilisation, migration and erosion control solutions throughout the Middle East using specially developed polymer and skills.
- Our products are environmentally friendly.
- *TerraFirma* registered trade mark, trusted throughout the GCC.

TerraFirma DESERT STUDIES...

- In 2014 set up mobile desert studies unit
- Self-contained accommodation / laboratory unit

Benefit

- Allows us provide on-site technical support during application
- Ideally suited for extended studies of site conditions in remote locations



OUR **POLYMERS** ...

- TF-1000
- TF-2000
- TF-5000

- ✓ Specifically, formulated polymers solutions,
- ✓ White water based liquid emulsions,
- ✓ Generally supplied in concentrated form,
- ✓ Requires site dilution before application,
- ✓ Dilution adjusted according to performance requirements

POLYMER PROPERTIES ...

- Environmentally safe to plant and animal life
- Non-flammable
- Non-corrosive
- Non-hazardous
- Unregulated for transport

HOW THE **POLYMERS** WORK...

- As water evaporates, the polymer forms a matrix in the sand
- Bonds sand particles together
- Resultant matrix forms a hard crust
- When cured, highly weather resistant

POLYMER CHARACTERISTICS ...

- Durable and wear resistant
- Easy to install using standard equipment
- Long lasting, low cost maintenance
- Bio-active crust designed to degrade if not maintained

TF-1000	TF-2000	TF-5000
<ul style="list-style-type: none"> ➤ Form a wind-resistant crust 	<ul style="list-style-type: none"> ➤ Designed for non-traffic dust control applications 	<ul style="list-style-type: none"> ➤ Designed for road construction
<ul style="list-style-type: none"> ➤ Stable under wet conditions 	<ul style="list-style-type: none"> ➤ Can withstand foot 	<ul style="list-style-type: none"> ➤ Designed for traffic applications as polymer road or sub base improver.
<ul style="list-style-type: none"> ➤ Stable under high and low temperature 	<ul style="list-style-type: none"> ➤ Excellent sand penetration 	<ul style="list-style-type: none"> ➤ Increase bearing capacity
	<ul style="list-style-type: none"> ➤ Stable under high and low temperature 	<ul style="list-style-type: none"> ➤ Excellent sand penetration
	<ul style="list-style-type: none"> ➤ Stable under wet conditions 	<ul style="list-style-type: none"> ➤ Form a wind-resistant crust
		<ul style="list-style-type: none"> ➤ Stable under high and low temperature
		<ul style="list-style-type: none"> ➤ Stable under wet conditions

OUR **POLYMER** ADVANTAGES...

➤ High solid content

- ✓ TF-1000: 48% - 1%
- ✓ TF-2000: 50% - 1%
- ✓ TF-5000: 61% - 63%

Products with high solid content. Resultant strong matrix and creates hard crust. And gives the product better dilution characteristic:

Uses and Characteristics	TF-1000	TF-2000	TF-5000
From Wind-Resistant Crust	✓	✓	✓
Crust Stable under wet conditions	✓	✓	✓
Crust Stable under High and low temperature	✓	✓	✓
Withstand Pedestrians	✓	✓	✓
Withstand light vehicle traffic			✓
Withstand Heavy Vehicle Traffic			✓

OUR **TEAM** AND CONTACT NUMBER.....

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OUR **LOCATION** AND ADDRESS.....

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