



LAFARGE TERRACEM[®]

An engineered solution for stabilisation



WHAT IS TERRACEM®?

Lafarge TerraCem is a Hydraulic Road Binder. TerraCem is a specialised blend of binders designed for soil stabilisation applications. It provides a more efficient and cost effective solution for subgrades in a wide range of projects.

This binder has been engineered specially for the following applications;

- Roads
- Rail
- Harbours
- Airports
- Foundations



Benefits of using TerraCem:

- Strengthens weakened sub-structure layer to create a working platform
- Improved static load resistance
- Improved resilient behaviour (stiffness) under dynamic loads
- Reduced permeability and improved freeze-thaw resistance
- Suitable for use in cementitious road layers
- Potential 40% cost savings through the use of in situ material
- Lower embodied carbon than traditional stabilisation cements
- Saves natural resources

THE TERRACEM[®] APPLICATION PROCESS

The success of any stabilising project depends upon having the component activities planned and closely controlled throughout the process. The preferred sequence is as follows:



1: Spread TerraCem in a predetermined concentration on the surface.



2: Blend TerraCem and the in-situ material.



3: Add a predetermined amount of water to the mixture to achieve optimum moisture for compactability.



4: Compact the blended material with a pad-foot roller in vibratory mode followed by a pneumatic roller and grade the surface to comply with design requirements.



5: Complete the final grading and rolling with a steel drum roller.



6: The surface is then ready for paving or sealing.

MORE INFORMATION

Primary benefits of using TerraCem

Soil stabilisation offers a saving over the traditional dig and dump methods; as well as improved load bearing resistance. The stabilised section offers a foundation which is ready to support a range of construction projects. Lafarge TerraCem is specially designed for this application. It is a more sustainable option and offers a carbon saving over the traditional choice of CEM I.

Technical aspect of soil stabilisation

Before work commences a ground investigation should be undertaken to determine the in situ material. This information enables a suitable mix design to be chosen bespoke to the project. This will indicate the choice of stabilisation material and dosage rate. Laboratory trials should be performed to ensure that the performance levels are met. Once a suitable mix design has been determined a site trial should be completed along with testing to confirm suitability.

Important factors for successful stabilisation project

Health and safety should be taken into consideration before any work commences. There should be safe access to the silo for tankers delivering material and a workplace transport plan in place. Suitable checks should be taken on the receiving silo before discharging.

TerraCem will not typically become airborne if left undisturbed once it has been spread. Since TerraCem undergoes a hydration process when water is added, it is very important to begin the grading operation and compaction as soon as possible. Optimum grading and compaction completion time during warm weather is 3 to 4 hours from the time of optimising moisture (water application). Beyond this timeframe, achieving good surface results becomes more difficult due to the potential for flocculation.

The contractor should carefully watch the yield of TerraCem during distribution. Pace or measure the remaining work area and estimate volume requirements. It is important to avoid over or under-treating any of the work areas.

The operator must ensure that all areas where TerraCem is distributed are properly mixed or blended. Care must be taken to keep TerraCem out of roadside ditches and off private property. Upon subsequent finish grading and compaction, caution should be taken to ensure that no organic materials, such as grasses or weeds from the roadside, are incorporated into the final blend of TerraCem stabilised subgrade soil. It is important to keep trucks and equipment from running through the newly placed TerraCem. Preserving environmental integrity is crucial.

The information in this document is not intended to be a replacement for a consultation with a Lafarge Cement representative prior to the start of any project.



FOR MORE INFORMATION
AND TO PLACE AN ORDER,
PLEASE CONTACT US:

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