Chembase Treatment System (CTS)

Application and treatment of reclaimed land sub-base layers

Product: Chembase® C-SSSB1 | Research and development

“It costs you nothing to find out how much you can save.”

What is land reclamation?

New land from water

Creating new land from oceans, seas, riverbeds or lake beds. Also called land fill, not to be confused with waste landfill.

Raising low ground

Raising the elevation of a waterbed or low-lying land, or pumping water out of marshy areas.

Restoring disturbed land

Returning land disturbed by mining or oil and gas operations to its former or another desired state.

How land is reclaimed

Poldering

Enclosing low-lying land and pumping the water out.

Dry earth movement

Raising the ground level with dry fill.

Hydraulic filling

Pumping dredged material into place.

Rock and soil fill

Heavy rock or cement, then clay and soil to the desired height.

One product, supplied in two parts

PART A

Polymer-Stabiliser

+

PART B

Activator

Chembase®
C-SSSB1

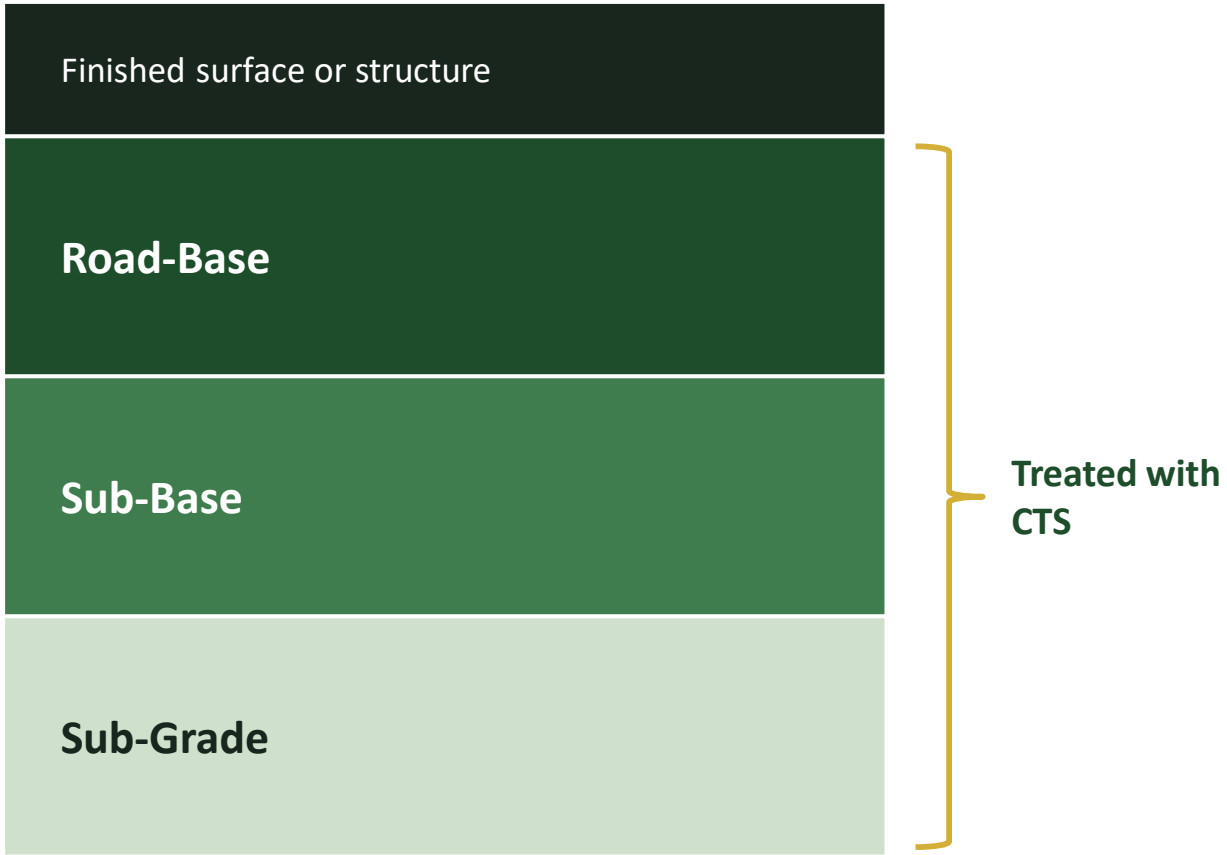
Five characteristics
combined in one product

A simplified range

- Five different chemistry characteristics are now combined into a single Chembase product.
- The application and treatment methods stay the same.
- The same characteristics, benefits and advantages are retained.

Naming: CTS stands for Chembase Treatment System. Chembase is also known as Chembase International and Chembase International Group.

Where CTS works: the base layers



Indicative cross-section

CTS modifies the properties of the existing soil to improve performance and durability.

- **Greater strength**
- **Higher load-bearing capacity**
- **Resistance to moisture-related issues**

Chembase and conventional road construction work together.

From stabilised layers to lower costs

1. **Stabilised base layers**
   CTS stabilises the road-base, sub-base and sub-grade.

2. **Less water, fewer potholes**
   Water leakage and potholes are reduced in the treated area.

3. **Less maintenance**
   The treated area needs less ongoing repair.

4. **Lower cost, longer life**
   Reduced costs and greater longevity for the treated area.

Performance benefits of treated layers

CBR increase

Raises the California Bearing Ratio (CBR), a standard measure of soil strength.

Water resistance

Treated layers resist water, limiting moisture-related damage.

Liquefaction resistant

Treated soil resists liquefaction, the loss of strength in saturated ground.

Freezing-condition tolerance

Tolerates freezing conditions.

Oil and petroleum barrier

Prevents oil and petroleum penetrating the treated soil.

Longevity

A long service life for the treated area.

Practical and environmental benefits

On site

Workable in any weather
Application is not held up by conditions.

Stable once diluted
The diluted product will not oxidise.

Re-compactable
Treated soil can be re-compacted (20 years).

Savings
Less maintenance and reduced costs.

Safety and sustainability

Safe to use
Product-safe and environmentally safe.

Waste plastic and glass
Shredded plastic or stained glass added to treated soil increases CBR.

Ash waste
Ash added to treated soil increases CBR.

Saltwater
Saltwater can replace fresh water, and increases CBR.

Brick pavements
Can be used in brick pavement manufacturing.

The cost challenge, and where CTS helps

Why reclamation is expensive

Weak soil
Reclaimed soil is weak and compressible.

Slow to settle
It takes many years to stabilise.

Costly foundations
Only low-rise buildings on raft or mat footings are practical, with other expensive engineering measures.

What CTS adds

Water resistance
Applied correctly, CTS makes the treated layers water resistant.

Less maintenance
Fewer potholes and less ongoing repair.

Longevity
A longer life for the treated reclaimed area.

Lower cost
Water resistance helps limit the expense of reclaiming land.

It costs you nothing to find out how much you can save

Talk to Chembase about treating your road-base, sub-base and sub-grade layers.

INDEPENDENT UNIVERSITY REPORTS

Reports from The University of Sydney and UNSW (University of New South Wales) are available at www.chembase.com.au

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