Chembase Treatment System (CTS)

Construction sites and subdivisions: treatment of sub-base layers

Product: Chembase® C-SSSB1 | Research and development

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

What is subdivision work?

Dividing land

Subdivision divides land into pieces that are easier to sell or develop.

Approved physical works

Subdivision work is any physical activity approved under a development consent for the subdivision of land.

Roads and drainage

The work can be in, on, under or over the land, and includes roads and stormwater drainage.

A paper subdivision is land whose lots exist only on paper, usually with no formed roads, drainage, reticulated water, sewer or electricity.

The subdivision approval path

1

Development application

Consent to subdivide is ordinarily sought from the local council.

2

Development consent

Council issues a notice of consent, which may include several conditions.

3

Soil and water plan

A Soil and Water Management Plan, including stabilised site access, may be required.

4

Subdivision certificate

Certifies the plan was completed in line with the consent or complying development certificate.

One product, supplied in two parts

PART A

Polymer-Stabiliser

+

PART B

Activator

Chembase®
C-SSSB1

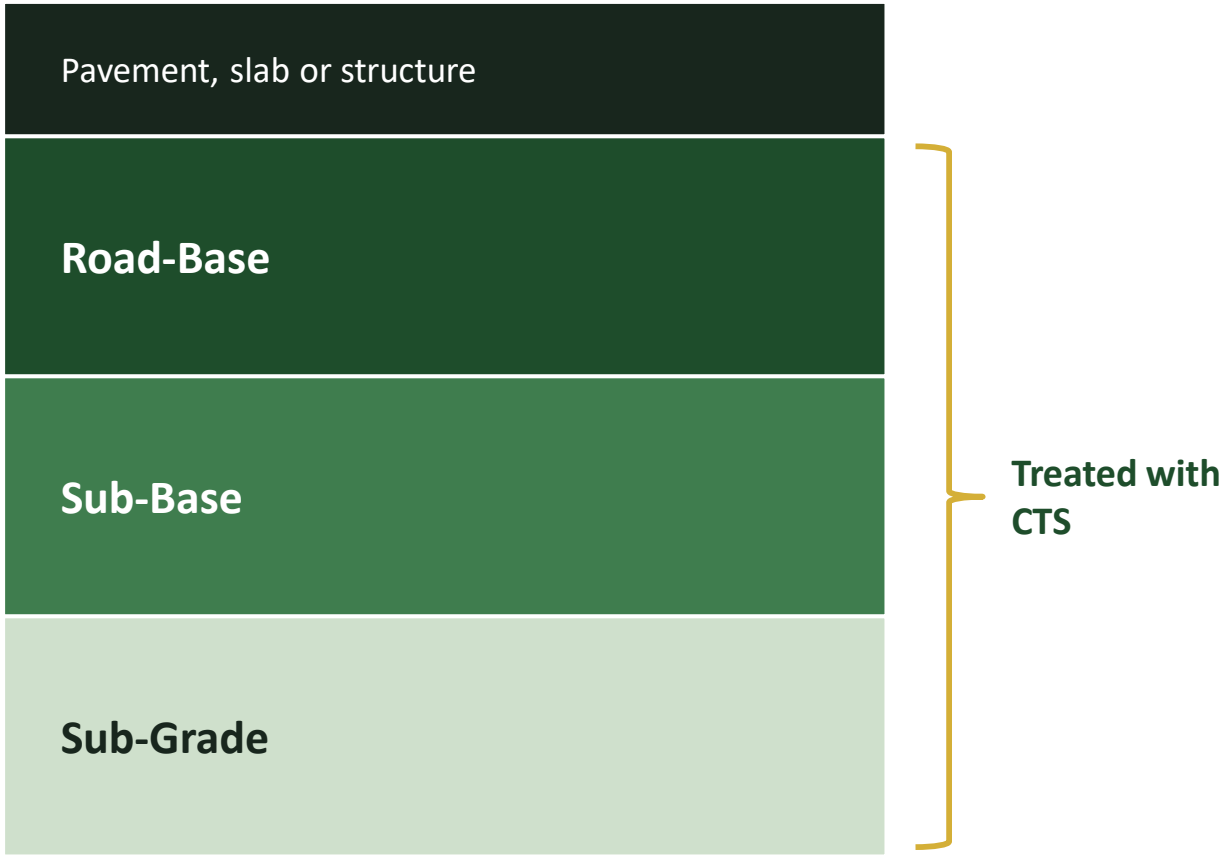
Five characteristics
combined in one product

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



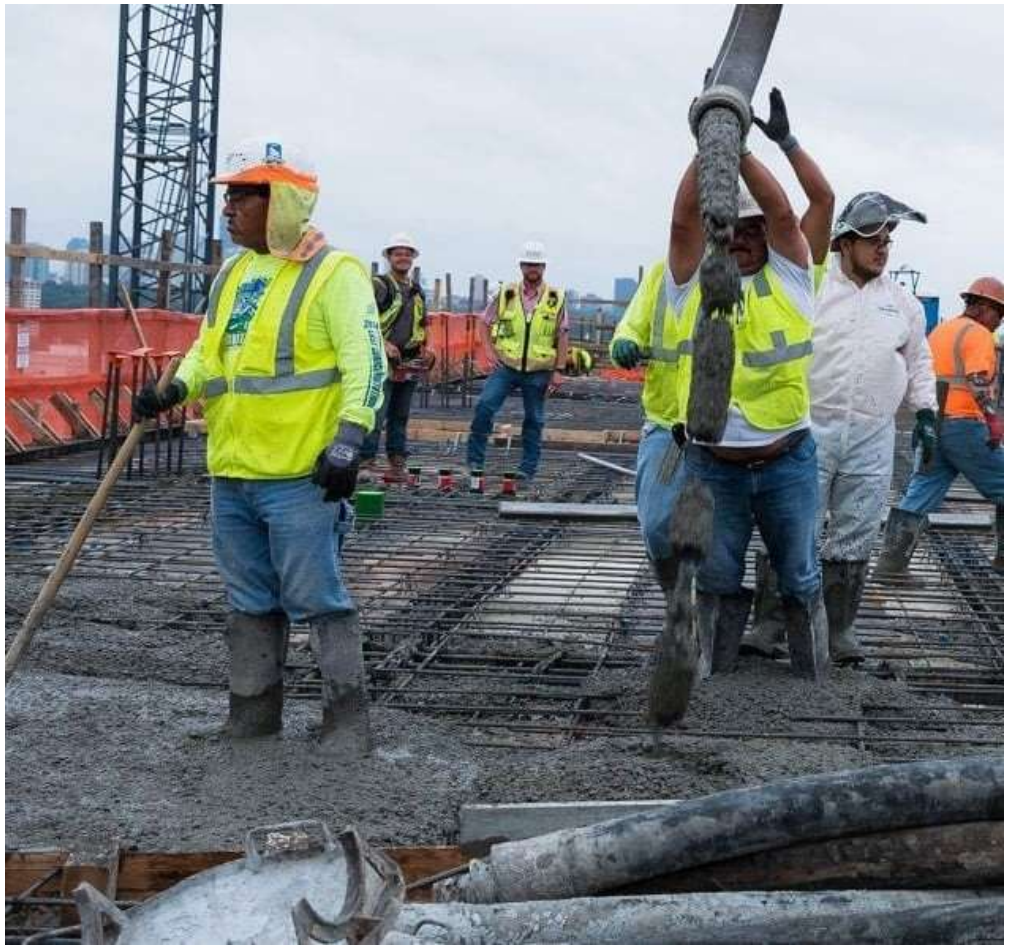
Indicative cross-section

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.

Safe to handle, safe for the site

- Non-hazardous
- Non-flammable
- Non-corrosive
- Safe for handling
- Biodegradable and miscible in water
- Environmentally safe for all flora and fauna

Performance in numbers

38+ years

Product longevity: lasts over 38 years

CBR 8 → 100

Result at Middle Dural: an increase of 1,150%

5,233%

CBR increase in new Construction Science test results, May 2025

A standard road normally requires a CBR of 16, and a road with busy traffic a CBR of 22. CTS is also water resistant and suitable for liquefaction-prone ground.

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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