Chembase Treatment System (CTS)

Application and treatment of highway sub-base layers

Product: Chembase® C-SSSB1 | Research and development

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

Why highways matter

Economic growth

Roads make a crucial contribution to economic development and growth.

Access to services

A road network gives people access to employment, health, education and social services.

Fighting poverty

That access makes roads vital to a nation's development and to reducing poverty.

MODERN HIGHWAYS DELIVER

- **Higher speed**
- **Greater safety**
- **Comfort and convenience**
- **Lower vehicle operating costs**

Road, highway or freeway?

Road

A way for travelling between places, usually surfaced with asphalt or concrete. Rural and urban roads are designed to carry many vehicles in both directions.

Highway

A main, direct public road: typically a multi-lane, high-speed route with few stops, connecting major cities and their surrounds.

Freeway

A controlled-access highway. It generally has no intersections, and vehicles join and leave by ramps.

One product, supplied in two parts

PART A

Polymer-Stabiliser

+

PART B

Activator

Chembase®
C-SSSB1

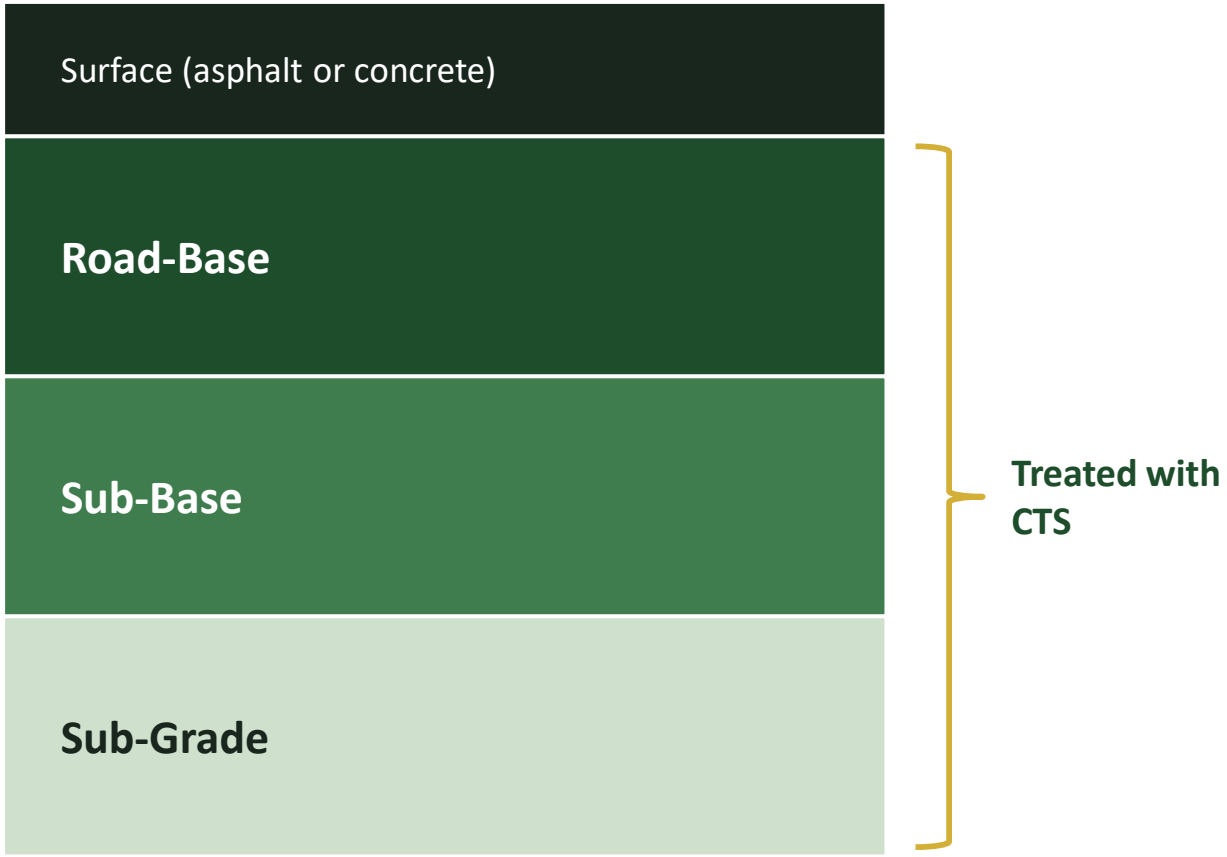
Five characteristics
combined in one product

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: beneath the road surface



Indicative pavement cross-section

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

- **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.

Road types suited to CTS treatment

Earth roads

Roads laid with soil.

Gravel roads

A step up in quality from earth roads.

Murrum roads

Surfaced with murrum, a gravelly laterite soil.

Kankar roads

Surfaced with kankar, a nodular limestone.

WBM roads

Water-bound macadam: compacted crushed stone.

Bituminous roads

Asphalt-surfaced pavements.

Concrete roads

Cement concrete pavements.

National highways

Major routes linking cities and regions.

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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