DONGJIN Soil Firm

Redesigning the Ground

Premium Eco Stabilizer

Brand Identity

Premium Quality

Setting a new standard for high-performance soil improvement. Our formula ensures maximum stability and long-lasting durability for any construction need.

Eco-Friendly

Zero waste construction. We utilize 100% of on-site soil, eliminating the need for waste disposal and reducing carbon emissions by up to 80%.

Product Lineup

Soil Firm-G (Ground Type)
General Purpose

Soil Firm-D (Dry Type)
High Moisture Specialist

Soil Firm-G (Ground Type)

- **Application:** General soft ground, embankment, clay, and silty soil.
- **Mixing Ratio:** 5-10% of soil weight.
- **Performance:** Achieving 500 kPa in just 3 days.
- **Ideal For:** Roadbeds, site preparation, and general land development.
- **Strength:** Reaches up to 1,200 kPa at 28 days.

For High Moisture Content

Specialized for difficult organic soils and high water content (>50%) environments. The Dry Type formula ensures rapid moisture absorption and immediate stabilization.

Key Specs:

- Mix Ratio: 8-15%
- 28-Day Strength: 1,000 kPa
- Applications: Dredged soil, sludge, swamps.

Stabilization Mechanism

1. Ettringite Formation

Rapid initial reaction (0-7 days). Needle-like crystals form a 3D network, physically filling voids and creating immediate strength.

2. Pozzolanic Reaction

Long-term strengthening (7-28 days). Reaction with soil silica creates C-S-H gel, permanently bonding soil particles.

3. Hydration

Continuous process. Generates heat to accelerate curing and maintains an alkaline environment (pH 12-13) for stability.

The Science

Ettringite Reaction

The core chemical reaction that drives the rapid stabilization of the soil matrix:

$$3CaO + Al_2O_3 + 3SO_3 + 32H_2O$$

Forms Ettringite Crystals

Construction Process

1. Analysis

Soil testing & mix design
(Determine G vs D)

2. Mixing

Spreading & Mixing
with excavator

3. Compaction

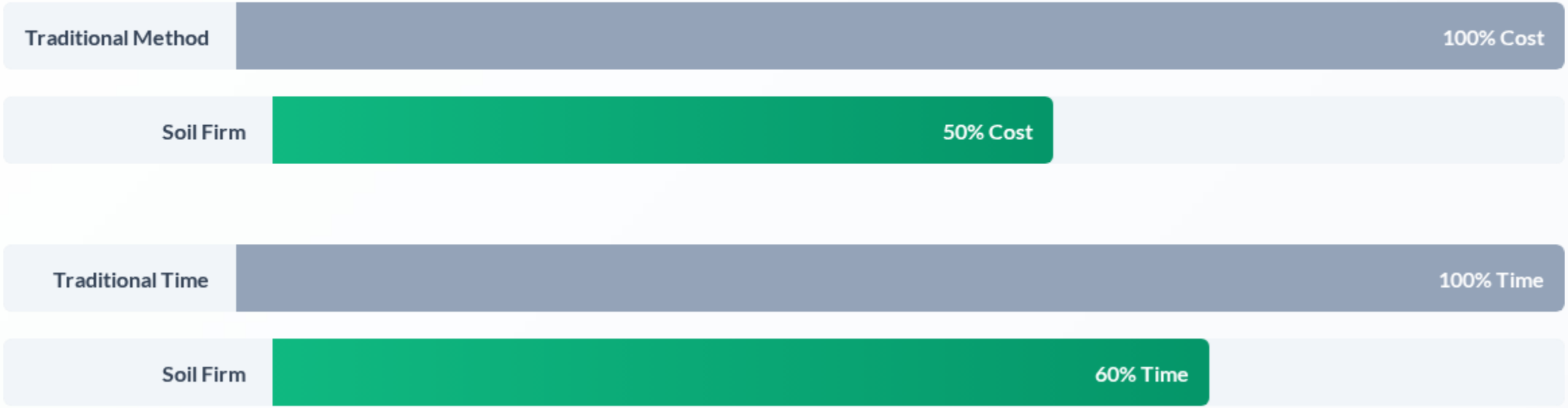
Roller compaction
at optimum moisture

4. Curing

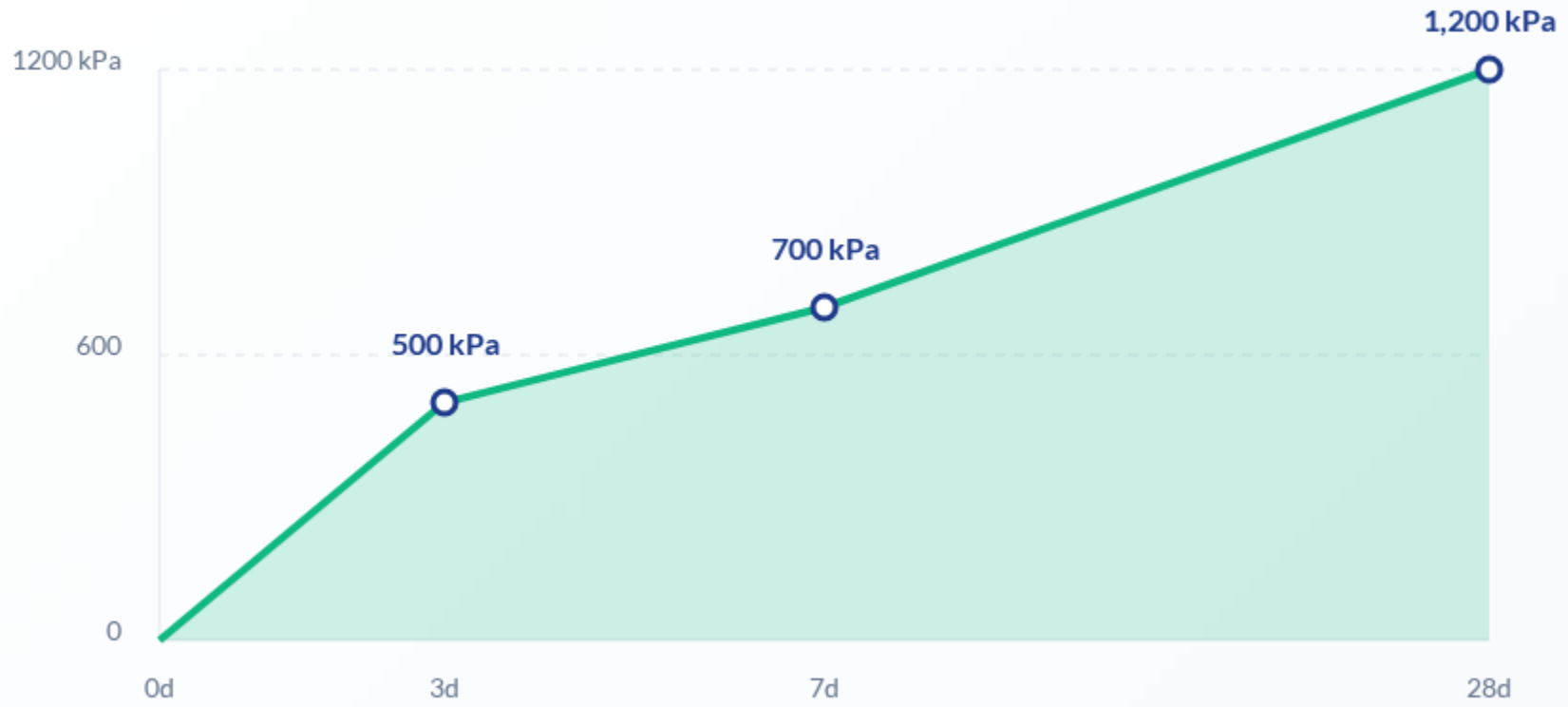
3-7 Days curing
for max strength

Efficiency Comparison

Soil Firm significantly reduces costs and construction time compared to traditional soil replacement methods.



Strength Development (G-Type)



Applications

Road & Highway
Sub-base

Industrial &
Factory Sites

Environmental
Restoration

Chemical Composition

Component	Formula	Content (%)	Function
Calcium Oxide	CaO	48.3%	Main hydration reaction, Strength
Sulfur Trioxide	SO3	16.1%	Ettringite formation accelerator
Silicon Dioxide	SiO2	8.81%	Pozzolanic reaction (Long term)
Aluminum Oxide	Al2O3	5.77%	Forms C-A-H gel
Magnesium Oxide	MgO	4.01%	Volume stability

Questions?

Thank you for considering DONGJIN ECO.

Dongjin Eco
010-2643-1215

Image Sources

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