MINTEK RESOURCES

Calciment Performance on Sandy Lean Soils

3rd Party Test Results

Faster Moisture Reduction
Reduced Plasticity
Increased Strength
Longer Lasting Subgrades

Testing Objective

> Assess the potential benefits of amending soils with Calciment®

> Testing completed by a 3rd Party Accredited Geotechnical Lab

Unamended Soil Characteristics

Sample ID	Soil Classifications	Liquid Amount	Plastic Amount (PI)	% Passing 3/4 Sieve	% Passsing No. 4 Sieve	% Passsing No. 200 Sieve	Max. Dry Density (pcf)	Optimum Moisture	Unconfined Compressive Strength	CBR
1	Sandy Clay (CL)	38	24	100	94.4	66.3	107	18%	60 psi	-
2	Sandy Clay (CL)	36	21	100	99.4	52.7	113	15%	50 psi	10.4

Drying

- **Sample 1:** Every 1% Calciment added = **2% Moisture Reduction**
- **Sample 2:** Every 1% Calciment added = **1% Moisture Reduction**

Plasticity

Sample ID	Unamended PI	4% Application PI	6% Application PI
1	14	**11**	**11**
2	15	**10**	**7**

Strength

- **Sample 1:** 90 psi increase @ 6% Amendment; 125 psi @ 6%
- **Sample 2:** 100 psi increase @ 6% Amendment; 160 psi @ 6%

Sample ID	Unamended PSI	4% Application PSI Increase at 7 days	6% Application PSI Increase at 7 days
1	60	**150**	**185**

CBR Results

Sample ID	Unamended	4% Application	6% Application
2	10.4	**51.5**	**43.6**

Summary

> **1-2% Moisture Reduction** per 1% of Calciment® added *for faster drying*

> **Calciment decreased the plasticity index** (PI) – *an advantage when working with fine grain soils*
- Sample 1: 3% Decrease
- Sample 2: 8% Decrease

> **Soil strength reached up to 200 psi in 7 days** with a 6% dose rate & 150 psi with a 4% dose rate - *ideal for stabilization in buildings & pavement subgrades*

> **CBR = 37** with a 6% Calciment dose rate - *to allow for the reduction of graded aggregate base and/or asphaltic concrete thickness during pavement design*

calciment®