



POWDERED SOILTAC®

Powder 6" (15cm) Mix-In Soil Stabilization Application Overview

1.) Prepare the Site:

Dry Soil: The site and must be at or below the optimum moisture level. Completely dry is optimal.

Weather: The site must be free from rain for a minimum of 72 hours after the application. Temperature must be at 40°F (4°C).

2.) Scarification:

Scarification: Scarify, till, disc or manipulate the soil (without clods) to the recommended 6" (15cm) depth.

Large Aggregate: Remove any large aggregate (4"+/10cm+) that could effect the final compaction.

3.) Prepare the Powdered Soiltac® Application Equipment:

Distributor: Set the powder distributors' spreader rate to the desired width, height and output rate.

Coverage: The powder distributor should provide an even coat over the treatment area with each pass.

Spread Rate: Set the spread rate high enough to allow even coverage with multiple coats and low enough to prevent airborne dust.

4.) Apply and Process the Powdered Soiltac®:

Application: Apply the Powdered Soiltac® evenly over the scarified treatment area.

Example: 6" (15cm) Deep Base Stabilization Average Rate (5 ft²/lb. = 275ft²/bag) (1.63L/m² = 26m²/bag),
 2,145 lbs. (975kg) (39 Bags = 1 Pallet) Powdered Soiltac® X 5 ft²/lb. = 10,725 ft² (1,014 m²) Treatment Area.

Processing: Till, disc or manipulate the treated soil until the Powdered Soiltac® is uniformly distributed into the soil.

5.) Prepare the Water Application Equipment:

Water Volume Calculation: The amount of water required to achieve optimum moisture must be field determined by comparing the in place moisture content to the optimum moisture content (OMC) (determined by a laboratory proctor test ASTM D2216-92). The in place moisture content can be determined by the average of four in place readings with a nuclear density gauge. Testing the native soil for OMC is **required** to accurately determine the appropriate volume of water to achieve OMC properly. *Not enough water will generate dry spots / too much water will create mud or "pumping". Optimum moisture is critical when compacting for maximum compressive strength.*

Example: 6" (15cm) Deep Base Stabilization Average
 Application Volume = ½ft. X 10,725 ft² = 5,362.5 ft³ (498 m³)
 Proctor Test Maximum Dry Density = 136.1 lbs/ft³ (2,180 kg/m³)
 Proctor Test Optimum Moisture Content (OMC) = 7.0% (by weight)
 In-Place Moisture Content = 3% (by weight)
 Water Density = 8.345404 lbs/gal. (1.000028 kg/L)
Calculation: 7% - 3% = 5% Moisture needed to achieve OMC
 5% of 136.1 lbs/ft³ = 6.805 lbs/ft³ (109 kg/m³)
 6.805 lbs/ft³ X 5,362.5 ft³ = 36,492 lbs (16,552 kg) of water
 36,492 lbs (16,552 kg) of water / 8.345404 lbs/gal. (1.000028 kg/L) = 4,373 gal (16,554 L) of water

Water: Fill the application equipment with the necessary volume of water.

Spray Nozzles: Set spray nozzles to the desired width, height and output rate. Test equipment (off-site) if necessary.

Coverage: The spray nozzles should provide an even coat over the treatment area with each pass.

Spray Rate: Set the spray rate high enough to allow even coverage with multiple coats and low enough to prevent water from draining away from the treatment area.

6.) Apply and Process Water into the Powdered Soiltac® Treatment Area:

Application: Apply the water evenly over the Powdered Soiltac® treatment area.

Processing: Till, disc or manipulate the treated soil until the water is uniformly distributed into the soil and OMC is achieved.

7.) Grade and Compact:

Grading: Contour, shape and crown the site to provide for proper drainage (recommend 2% to 4% minimum).

Compaction: Compact the site to a minimum of 95% (per ASTM D 698 D 1557 modified Proctor Density) while maintaining OMC. Optimally, use a pneumatic (rubber tire) compactor for initial compaction to prevent soil adhering to the drum followed by a vibratory smooth steel drum compactor and finalized without vibration (static compaction/roll).

8.) Clean the Application Equipment:

Rinse: Rinse off all application equipment thoroughly with water until clean. If Powdered Soiltac® is allowed to dry and cure, use a hot pressure washer or steam cleaner and brush to remove residue.

Traffic: Prevent any human activity over the treated area until the site has completely cured.

Curing: Allow the treated area to dry and cure for approximately 24 hours (@70°F/21°C).

Topical Wear Coarse: If the mix-in/processed area is not going be covered with an alternate topical wear coarse (example: asphalt, concrete, chip-seal, etc.), then a topical application of Soiltac® or Powdered Soiltac® must be applied as a topical sealer and surface wear coarse (see our "Standard Application Coverage Rates" for details).