



500 Farmers Market Rd. #18
 Fort Pierce, FL, 34982
 Phone 772-323-5400



Email: info@enviroseal.com Web: <http://www.enviroseal.com>

Enviroseal Trail and Path Construction Guidelines

The gradation and uniformity of the soil or stone mix is an important factor to ensure the overall quality and end results. Naturally occurring materials with high plasticity or that do not have uniform gradation of granular and fines are not acceptable. Each project is different and requires careful evaluation for all aspects including design, equipment, and site conditions.

Trail Base

Placement of 4" to 6" of road base material compacted to +95% density to produce a sound foundation for the trail is recommended unless the natural soil is sufficient for overall trail stability.

Crushed Stone

Enviroseal recommends 1/2" minus crushed aggregate or recycled concrete with hard, durable, sharp-edged fragments that are free from dirt and organic matter. Soils that do not meet gradation requirements can be modified by importing sand or gravel and blended with the soil beforehand.

The crushed aggregate blend should conform to the following gradation:

Sieve Size	Percent Passing
1/2 Inch (12.5 mm)	90-100
3/8 Inch (9.5 mm)	75-90
1/4 Inch (6.3 mm)	60-75
No. 30 (600 Um)	60-40
No. 100 (150 Um)	15-40
No. 200 (75 Um)	5-15

Crushed Stone Placement

Six inches of stone mix is spread in the area to be stabilized to a 4" depth allowing for a 2" buffer between the road base and stone mix. This will help ensure the two different materials do not mix together and avoid a marbled appearance. Edges can taper off, be constructed with wood, or have steel edging installed after compaction.

Estimated M10+50 Dosage Rate

M10+50 cannot be used without mixing with water first. Dosage rates are calculated as a percentage of the soil dry density weight. The recommended dosage rate for estimating purposes is Ten Gallons per cubic yard which equals about 3% of the soils dry density weight. The amount of water to mix with M10+50 will depend on two factors, the In-Situ Moisture content (ISM) and the Optimum Moisture Content (OMC) required for compaction. On average, most soils require about 10% moisture for proper compaction. Knowing the OMC and the IMC is necessary before beforehand since the addition of moisture includes both M10+50 and water. The amount of water to mix with M10+50 is the difference between ISM and OMC.

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Apply M10+50 to surface

Spray about 80% of the M10+50 with water evenly over the surface at the pre-determined dosage rates per cubic area of soil being careful to avoid liquid runoff along the edges or down slopes.

Mixing M-10+50

M10+50 is mechanically mixed with the aggregate by tilling full depth resulting in a homogeneous mixture. Do not construct more area than can be completed before the area dries. If the surface begins to dry prior to completion, lightly mist the surface with water to prevent M10+50 from drying.

Compaction

A single or double drum vibratory roller sufficient in size to compact the depth of the treated surface, normally seven ton or less. The first pass with the roller should be static rolling only without vibration. After the first pass, inspect the surface to verify proper slope and there are no surface irregularities or pockets of gravel without fines. Small areas can be remixed by hand and compacted again. After inspection compact with 5 to 10 vibratory passes to achieve +95% compaction being careful to not over-compact in vibratory mode which could crack the surface. Any roller lines left by the drum should be cleaned up by static rolling only. Do not use plate compactors without a rubber mat or plywood between the treated surface and plate, rapid vibration can damage M10+50 polymers as they cure.

Topcoat Sealing

After final compaction, a topical application of the remaining 20% M10+50/water mixture is required. Mix one-part M10+50 with three parts water and test on a small area to verify the adsorption into the compacted surface. The mixture should disappear in less than one minute, add water for faster adsorption if necessary. Spray the topcoat uniformly until pathway is completely saturated without puddling and repeat this process until the surface no longer adsorbs liquid. For increased strength and durability, additional top coat applications may be done after a 24-hour cure.

Installation Tips

- Do not install during, prior to, or immediately following rainfall or when temperatures are below 40° F and falling within a 24-hour period.
- Use diaphragm pumps for spraying M10+50, centrifugal water pumps will malfunction resulting in pump damage.

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