

# INSTALLATION OF ENVIROSEAL STABILIZERS: M10+50, LBS, LDC+12

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## Soil Qualities

1. Most important; is to know your soil moisture, both the liquid limit and the optimum moisture.
2. Then you must know the plasticity of the soil you are working with. If that soil rating is over 15 then you should add from 25 to 50% sand with particle content so you end up with a 50/50 ratio.
3. The percentage mixture of clay will determine the amount of LBS to use. The higher the plasticity the more LBS. With the plasticity of 50% use 5 liters p/m<sup>3</sup> and one liter less for each 10% drop.
4. To reduce the absorption of future water you must also add M10+50. The amount added is a direct relation to the necessary compaction and density that is required for your end result engineering. That add can range from 3 to 25 liters p/m<sup>3</sup>.
5. The size of the crushed aggregate is very important, depending on your end use. A road or airport will require different densities than a building foundation that has a concrete slab. Therefore, the size and amount of aggregate used will change in order to obtain maximum strength. The inserted graph will illustrate.

SIEVE SIZE	Metric	% PASSING	SIEVE SIZE	Metric	% PASSING
1"	25 mm	100%	#10	2.0mm	40 – 70 %
¾"	19mm	85 – 100%	#40	425um	24 – 45%
3/8"	9.50mm	65 – 95%	#100		6 to 15%
#4	4.75mm	55 – 85%	#200	75um	7 to 12%

6. Get from the building or highway engineers the desired densities that the project must have before stabilizing.
7. In many cases where there is major uncontrollable soil moisture you have several options: **a.** Use a geo-fabric **b.** Consider digging a drainage system below the level of the required stabilization and filling it with large 3 to 5cm rocks to the point of the foundation level or **c.** Consider using a soil stabilization machine and fly ash to densify the lower levels of the desired stabilization. We have found that the Bomag 122-2 or the Bomag 125 are excellent choices. These machines come ready equipped from the Bomag factory with water injection systems and are capable of installing up to 50m/p/minute (164' p/min) at 2.6m wide (8.45')

8. Make sure you make sample test cylinders to prove your mix will meet the desired compaction and density tests. Any competent soils laboratory can do this for you or you can buy your own test equipment.
9. Proving density is best with a nuclear density machine. An easy to use model can be found on our website "TROXLER". Depending on the model they will cost between \$15,000 and \$22,000 USD. This also includes the training.
10. We are now affiliated with the EXIM Bank and in many cases offer long term financing of our products for use around the world. This is done by offering payment terms set up through your banks and payments will be made to them and forwarded on to us over an agreed period of time. By using the EXIM and other International Banking resources we are able to offer a variety of financial arrangements that may fit your particular need. Virtually all responsible countries can qualify.

**[Below Is A List Of Questions One Might Want To Consider When Choosing A Soil Stabilizer](#)**

1. Do you need a Clay Stabilizer that can be made impermeable to water?
2. Do you need a stabilizer to repel water?
3. Do you need products that will not breakdown UV exposure?
4. Do you need a stabilizer that will hold up in heavy rain conditions?
5. Do you need a product that can withstand freeze thaw conditions in both liquid and in cured state?
6. Do you need a stabilizer that increases the density of your soil?
7. Do you need the option to use with salt as well as fresh water?
8. Do you need a stabilizer that is environmentally correct, being non toxic and non flammable?
9. Do you have crushed aggregate available?
10. Do you need to construct runways or helipads that have to last more than weeks or months for C130 or heavier aircraft with locally available soil?
11. How much traffic in frequency and weight do you expect your road or runway to handle?
12. Do you require a supplier that has the capacity custom blend the product to meet your engineering requirements so you will obtain maximum results?
13. Do you require your product to maintain exacting quality standards?
14. Does your supplier have staff available to consult with your engineers?

15. Does your supplier have a list of long term success'?
16. Does your supplier have over 75 years of soil stabilization background?
17. Do you need a stabilizer that will guarantee the results?

**IF YOU HAVE ANSWERED YES TO MOST OF THESE QUESTIONS, CONTACT  
ENVIROSEAL CORP TO DELIVER YOUR NEXT PURCHASE.**

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**THE WORLD LEADER IN SOIL STABILIZATION**  
**Because it Works**



Figure 1 Installing M10+50/2001 with Bomag 122-2 at 15cm with application rate of 20 to 50m<sup>3</sup>/p/minute. This machine adjusts the proper optimum moisture and stabilizer content for perfect blended applications. The 15 ton vibratory roller comes right behind the application providing the finished road. The material used for this road was 25% clay, 75% crusher run of 15mm – or ½”- . It rained all night after the installation and in the morning the road maintained its integrity and density. No other product can claim this; **“Guaranteed”**.