Report No.: _____

Place / Date: _____

Project: _____

1. Test Equipment & Tools

Recommended equipment for TERRA-3000® water absorption test procedure
In case of questions or doubts, please contact us at terra.system@aon.at

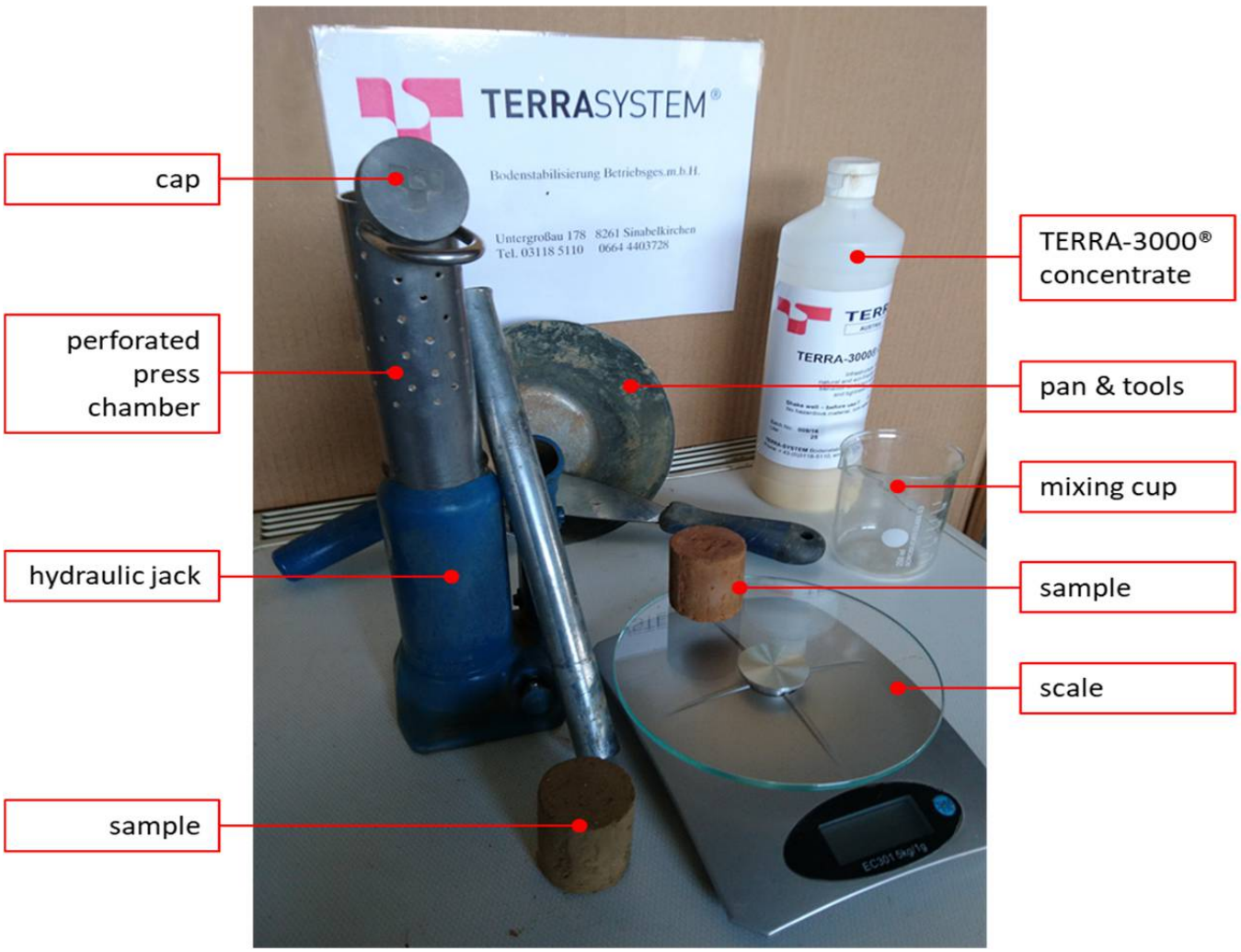
a) TERRA-3000® concentrate

b) Hydraulic jack with perforated press chamber tube - complete press unit can be ordered at TERRA-SYSTEM Bodenstabilisierung Betriebsges.m.b.H.

c) Laboratory scale

d) Mixing cup for mixing TERRA-3000® concentrate with water and for the OMC setting of the test material

e) Pan & tools



2. Soil selection

Suitable soils: for the optimal effect of TERRASYSTEM® is mixture of soil in the ratio of
1/3 fine (<0,063mm grain),
1/3 sand(0,063mm - 2mm grain), and 1/3 stones (2mm-30mm grain) .
Minimum 15% clay(<0,002mm) must be .
If there is not enough clay (<0,002mm) in the soil, the lack of clay content should be added to achieve the necessary clay content of 15%.

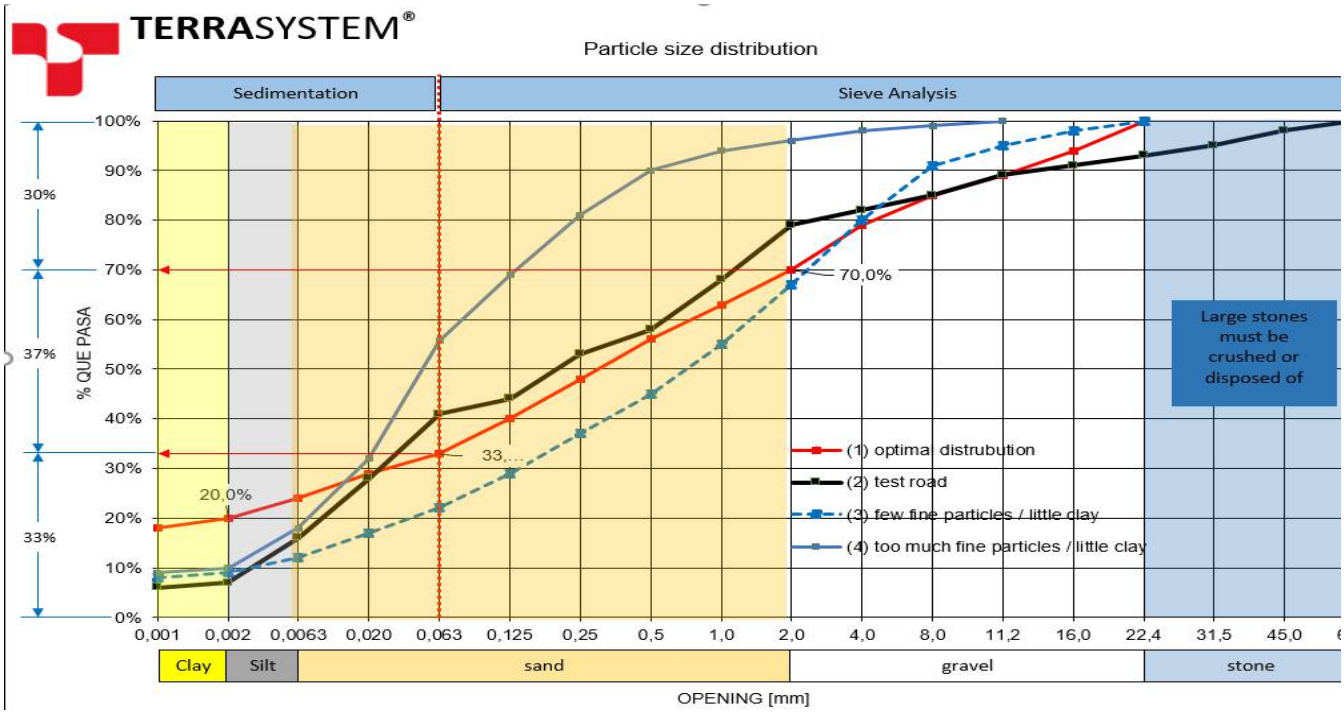
If the clay content is greater than 40%, the base material can easily be emaciated by adding sand in the ratio.

3. Particle Size Distribution

Soil:	
Classification:	

Sample material		Basic material				Additional material			
Sample mass	Sieve analyses		g	-			g	-	
Gravel	> 2mm ≤ 25mm (1 inch)		g		%		g		%
Sand	> 0,075mm ≤ 2mm		g		%		g		%

Sample mass	Hydrometer analyses		g	-			g	-	
Silt	> 0,002mm ≤ 0,075mm		g		%		g		%
Clay	< 0,002mm		g		%		g		%



4. Moisture determination of the entire sample mass

Measurement of the natural moisture content (NMC) for the final test material
(basic material only or mixed withadditional material) >> Tolal material mass = 300 g

Natural moisture content (NMC)

5. Setting of optimum moisture content (OMC)

a) The entire sample mass must be split into two equal portions
b) The OMC-setting must be done individually for each portion (treated and untreated material)

Sample condition
Sample material
Optimum moisture content (OMC)
Required moisture correction (NMC > OMC)

6. Sample material to be pressed to cylindrical test specimen

a) The tube of the press chamber will be filled with 250 g of each test mateial (treated and untreated material) - if necessary, slightly compact the material from top to avoid material overflow of the tube
b) The top of the tube must be locked up savely
c) The sample will be pressed until a pessure of ____ bars is indicated at the preassure gauge (if available) or until the press lever is locked by the compaction forces
d) The pressing force should remain approx. 30 - 60 seconds (dwell time) and will be briefly released before a new press cycle = c) + d) will be proceeded
e) The "press - dwell - release" sequence should be repaeted min. 3 times, or as often as required, that no more water outlet is observed at the drain bores of the press chamer tube
f) The lock from the press chamber tube can be removed and the compacted test specimen will be ejected by means of the stamp of the hydraulic cylinder

Diameter of press chamber tube
Length of press chamber tube

7. Determination of sample properties - dry condition

Sample condition
Sample weight - wet (OMC)
Sample weight after compaction
Sample height after compaction
Sample weight after 12 hours (dry)
Sample weight after 24 hours (dry)

8. Water Storage Test

a) The samples will be stored 4 days in water of 10 mm depth
b) Sample weight check (treated and untreated samples)

Sample condition
Initial weight
Sample weight after 24 hours
Sample weight after 48 hours
Sample weight after 72 hours
Sample weight after 96 hours

after 30 min

after 3 hours

after 72 hours