



Anaheim Office  
May 5, 2023  
Report 23-121-0033

Zanker Landscape Materials  
675 Los Esteros Road  
San Jose, CA 95134

Attn: Marin & Beto

RE: ZZ Top Soil processed on 05/01/2023

The first sheet is the actual test data and the second sheet is a calculated table showing the percent of each required nutrient that is readily available compared to the total present. Further decomposition of the organic fraction will release additional nutrients as available for plant utilization. The third sheet evaluates the potential rate limiting factors in the top table and in this case, there are no chemical characteristics that would limit the rate to less than normally employed for amendments. The bottom table on that sheet uses an example rate of 42% that is based on the amount of organic matter generally required to amend soils of low organic content. At the example rate, the degree to which the material would satisfy the immediate requirement for each required nutrient is indicated.

Approximately 0.5% of the material is retained on a 1/2 inch screen. Of the material passing the 1/2 inch screen 96.8% of the amendment passes the 6.4 mm (1/4 inch) screen and 74.5% passes the 2.36 mm (about 1/8 inch). Actual organic matter content is 185 pounds per cubic yard. Organic matter comprises 25.3% of product by dry weight.

The carbon to nitrogen ratio at 56.1 indicates there will be some nitrogen draw as the microbes break down the less resistant organic matter. To ensure that this does not compete with the plants for nitrogen this could be dealt with at the time of use by simultaneously incorporating Ureaform 38-0-0 (27% water insoluble nitrogen) at a rate of 1 pound per cubic yard of amendment. There is a low level of available nitrogen.

At the example rate of 43% by volume this amendment would provide a favorable amount of organic matter to benefit soil structure and satisfy the organic matter need for most soil types. At this rate the amendment would also provide a significant nutrient contribution of immediately available magnesium, sulfate and iron and a moderate amount of phosphorus and copper. These contributions at the example rate are noted on the last page. This volume rate is equivalent to 8 cubic yards per 1000 square feet for blending to a 6 inch depth. This would be adding 1480 pounds of organic matter, which would increase organic content of a sandy loam soil by about 5.3% on a dry weight basis.

Reaction is slightly acidic at a pH of 6.8. Salinity and soluble levels of sodium, chloride and boron are safely low for use at the recommended rate or for direct planting.

The table that follows the data page shows what nutrients are present in total amounts as well as what portion is immediately available. For convenience these results are expressed both on a cubic yard basis and as weight of nutrient and organic matter per as-received ton of ZZ Top Soil. Further release from the organic complex will continue to help satisfy plant needs for many of the nutrients.

The first nutrient that will probably require supplementation for routine maintenance purposes is nitrogen and maintenance levels of nitrogen can be applied starting 30-45 days after planting.



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If we can be of any further assistance, please feel free to contact us.

A handwritten signature in black ink, appearing to read "J. Kiefer".

Joe Kiefer, CCA  
[jkiefer@waypointanalytical.com](mailto:jkiefer@waypointanalytical.com)

Emailed 5 pages: [marin.villalpando@greenwaste.com](mailto:marin.villalpando@greenwaste.com) & [beto.choa@greenwaste.com](mailto:beto.choa@greenwaste.com)

**COMPOST / AMENDMENT EVALUATION**

Send To : Zanker Landscape Materials 675 Los Esteros Road San Jose CA 95134	Project : ZZ Top Soil	Report Number : <b>23-121-0033</b> Customer Number : 01002 Date printed : 05/04/2023 Date received : 05/01/2023 Page : 1 of 3 Lab Number : 59402
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Sample Id : **ZZ Top Soil**

Nutrient	Total - Dry Weight	Extractable - Dry Weight	Saturation Extract	Sufficiency Factor
Nitrogen (N)	0.27 %	36 ppm		0.3
NH <sub>4</sub> -N		26 ppm		
NO <sub>3</sub> -N		10 ppm		
Phosphorus (P )	0.08 %	78 ppm		1.2
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	0.18 %	179 ppm		
Potassium (K)	0.13 %	285 ppm	2.0 meq/L	1.0
Potassium (K <sub>2</sub> O )	0.16 %	345 ppm		
Calcium (Ca)	2.87 %	1921 ppm	13.6 meq/L	0.9
Magnesium (Mg)	1.77 %	493 ppm	9.8 meq/L	1.7
Sodium (Na)	0.04 %		3.9 meq/L	
Sulfur (S)	0.1 %			
Sulfate (SO <sub>4</sub> )			18.0 meq/L	6.0
Chloride (Cl)			2.8 meq/L	
Copper (Cu)	31.7 ppm	1.9 ppm		1.2
Zinc (Zn)	53.4 ppm	3 ppm		0.5
Manganese (Mn)	383 ppm	5 ppm		0.4
Iron (Fe)	3470 ppm	178 ppm		3.1
Dilute Acid Fe		0.18 %		
Boron (B)	14.6 ppm		0.13 ppm	0.4

Test	Result
pH (sat paste)	6.8 s.u.
% Half Sat.	55
TEC	119 meq/kg
Qualitative Lime	None
Salinity (EC of sat ext.)	2.1 dS/m
SAR (Sodium adsorption ratio)	1.13
Sodium as % of ECe	16 %
Bulk Density - Dry	730 lbs/yd <sup>3</sup>
Bulk Density - As Received	994 lbs/yd <sup>3</sup>
Moisture - As Received	26.6 %
Organic	25.3 %
Weight of organic / yd <sup>3</sup>	185 lbs/yd <sup>3</sup>
Weight of mineral / yd <sup>3</sup>	545 lbs/yd <sup>3</sup>
C/N Ratio	56.1

Gradation	
Wt Percent Retained 1"	0.0 %
Wt Percent Retained 1/2"	0.5 %
<b>Fraction Passing 1/2 inch Screen - Dry Weight Basis</b>	
<b>Screen Opening</b>	<b>% Passing</b>
Passing 9.5mm	99.7 %
Passing 6.4mm ( 1/4")	96.8 %
Passing 4.75mm	90.7 %
Passing 2.36mm	74.5 %
Passing 1.00mm	48.4 %
Passing 0.50mm	26.6 %

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Sample Id : **ZZ Top Soil**

**NUTRIENT SUMMARY**

Test	Amount Per Cubic Yard		Amount Per Ton, As Rec'd		Available as a % Of Total
	Total	Available	Total	Available	
Nitrogen	1.97 lbs	0.03 lbs	3.96 lbs	0.05 lbs	1
Phosphorus (P)	0.61 lbs	0.06 lbs	1.23 lbs	0.11 lbs	9
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	1.41 lbs	0.13 lbs	2.83 lbs	0.26 lbs	9
Potassium (K)	0.97 lbs	0.21 lbs	1.96 lbs	0.42 lbs	21
Potassium (K <sub>2</sub> O)	1.18 lbs	0.25 lbs	2.37 lbs	0.51 lbs	22
Calcium	20.94 lbs	1.4 lbs	42.1 lbs	2.82 lbs	7
Magnesium	12.95 lbs	0.36 lbs	26.05 lbs	0.72 lbs	3
Sulfur	0.76 lbs	0.23 lbs	1.54 lbs	0.47 lbs	31
Copper	0.37 ozs	0.02 ozs	0.74 ozs	0.04 ozs	5
Zinc	0.62 ozs	0.03 ozs	1.25 ozs	0.06 ozs	5
Manganese	4.47 ozs	0.06 ozs	9 ozs	0.12 ozs	1
Iron	40.53 ozs	2.08 ozs	81.5 ozs	4.18 ozs	5
Boron	0.17 ozs	0 ozs	0.34 ozs	0 ozs	0
Organic Matter	185 lbs		371 lbs		

**COMPOST / AMENDMENT EVALUATION**

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Sample Id : **ZZ Top Soil**

**POTENTIAL RATE LIMIT FACTORS**

Test	% Volume rate limit	Cubic yard amendment per 1000 sf to 6"							
		1	2	3	4	5	6	7	8
		Volume % amendment blend with sandy loam							
		5	11	16	22	27	32	38	43
EC sat. ext.	No Limit								
Sodium sol.	No Limit								
Chloride sol.	No Limit								
Boron sol.	No Limit								
NH <sub>4</sub> -N	No Limit								
Available Nitrogen	No Limit								
PO <sub>4</sub> P	No Limit								
Copper	No Limit								
Zinc	No Limit								

Rate limit estimates based on amending a non-problematic sandy loam

**RELATIVE IMMEDIATE NUTRIENT AND ORGANIC VALUE**

* Example Rate 43 %	Slight	Moderate	Abundant
Nitrogen			
Phosphorus			
Potassium			
Calcium			
Magnesium			
Copper			
Zinc			
Manganese			
Iron			
Sulfate			
Organic Matter			

\* If no chemical characteristics are rate limiting, the example rate is based on organic content of the amendment (up to a max of 43%).

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Phosphorus	██████████		
Potassium	██████████		
Calcium	██████████		
Magnesium	██████████	██████████	
Copper	██████████		
Zinc	████		
Manganese	████		
Iron	██████████	██████████	██████████
Sulfate	██████████	██████████	██████████
Organic Matter	██████████	██████████	

\* If no chemical characteristics are rate limiting, the example rate is based on organic content of the amendment (up to a max of 43%).