



Anaheim Office  
November 5, 2024  
Report 24-299-0013

Zanker Landscape Materials  
675 Los Esteros Road  
San Jose Ca 95134

Attn: Marin

**RE: Black Mini Mulch**

The product submitted is from recycled wood that has not been fully composted. Visually, this material has a nice black color and is free of contaminants.

100% of the material passes through a 1 inch screen and approximately 2.6% is retained in the 1/2" screen. Of the material passing the 1/2-inch screen 85.5% of the amendment passes the 6.4 mm (1/4 inch) screen and 24.8% passes the 2.36 mm (about 1/8 inch). The particle size distribution is favorable for an incorporated amendment and is a little finer than average for a surface mulch.

The product is comprised of 64% organic matter by weight with 128 lbs. of organic matter per cubic yard.

The product is slightly alkaline with pH 7.3. Soluble salts are favorably low. Potassium, calcium, and sulfate are well supplied. While nitrogen and magnesium are moderately supplied. Boron is safely low yet nutritionally adequate.

The carbon to nitrogen ratio is higher than a well composted material but should pose no risk if nitrogen is supplemented accordingly. If this material is incorporated into the soil, there will be potential for shrinkage. A slow release form of nitrogen may be needed to mitigate any nitrogen draw as ammonium is converted. The carbon nitrogen ratio and shrinkage can be reduced by composting.

If no composting is anticipated, then the best use is as a surface mulch. The current grind has a nice appearance but it is a little finer than ideal if the goal is to reduce surface water evaporation and to suppress weed germination.

Finer material passing through a 1/4" (6.4mm) screen can be and marketed as a turf topper that contains sufficient nitrogen and would be expected to provide moderate water holding capacity along with a good initial boost of fertility.

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

A handwritten signature in black ink, appearing to read "M. Schwebel", is written over a light blue horizontal line.

Matt Schwebel  
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(714)-552-5228

**COMPOST / AMENDMENT EVALUATION**

|  |                               |   |
|--|-------------------------------|---|
| Send To :<br>Greenwaste-Zanker Landscape<br>Materials<br>675 Los Esteros Road<br>San Jose CA 95134 | Project :<br>Black Mini Mulch | Report Number : <b>24-299-0013</b><br>Customer Number : 01002<br>Date printed : 10/31/2024<br>Date received : 10/25/2024<br>Page : 1 of 2<br>Lab Number : 71086 |
|--|-------------------------------|---|

Sample Id : **Black Mini Mulch**

| Nutrient                                    | Total - Dry Weight | Extractable - Dry Weight | Saturation Extract | Sufficiency Factor |
|---|--------------------|--------------------------|--------------------|--------------------|
| Nitrogen (N)                                | 0.52 %             | 431 ppm                  |                    | 0.9                |
| NH <sub>4</sub> -N                          |                    | 427 ppm                  |                    |                    |
| NO <sub>3</sub> -N                          |                    | 4 ppm                    |                    |                    |
| Phosphorus (P )                             |                    | 80 ppm                   |                    | 0.3                |
| Phosphorus (P <sub>2</sub> O <sub>5</sub> ) |                    | 183 ppm                  |                    |                    |
| Potassium (K)                               |                    | 325 ppm                  | 2.0 meq/L          | 0.5                |
| Potassium (K <sub>2</sub> O )               |                    | 393 ppm                  |                    |                    |
| Calcium (Ca)                                |                    | 848 ppm                  | 2.0 meq/L          | 0.4                |
| Magnesium (Mg)                              |                    | 132 ppm                  | 0.8 meq/L          | 0.4                |
| Sodium (Na)                                 |                    |                          | 5.4 meq/L          |                    |
| Sulfur (S)                                  |                    |                          |                    |                    |
| Sulfate (SO <sub>4</sub> )                  |                    |                          | 6.8 meq/L          | 2.3                |
| Chloride (Cl)                               |                    |                          |                    |                    |
| Copper (Cu)                                 |                    | 0.9 ppm                  |                    | 1.0                |
| Zinc (Zn)                                   |                    | 7 ppm                    |                    | 1.9                |
| Manganese (Mn)                              |                    | 19 ppm                   |                    | 2.3                |
| Iron (Fe)                                   |                    | 39 ppm                   |                    | 1.1                |
| Dilute Acid Fe                              |                    | 0.04 %                   |                    |                    |
| Boron (B)                                   |                    |                          | 0.59 ppm           | 2.0                |

| Test                                | Result                  |
|-------------------------------------|-------------------------|
| pH (sat paste)                      | 7.3 s.u.                |
| % Half Sat.                         | 233                     |
| TEC                                 | 74 meq/kg               |
| Qualitative Lime                    | None                    |
| Salinity (EC of sat ext.)           | 1.4 dS/m                |
| SAR (Sodium adsorption ratio)       | 4.59                    |
| Sodium as % of ECE                  | 34 %                    |
| Bulk Density - Dry                  | 200 lbs/yd <sup>3</sup> |
| Bulk Density - As Received          | 371 lbs/yd <sup>3</sup> |
| Moisture - As Received              | 46.1 %                  |
| Organic                             | 64.0 %                  |
| Weight of organic / yd <sup>3</sup> | 128 lbs/yd <sup>3</sup> |
| Weight of mineral / yd <sup>3</sup> | 72 lbs/yd <sup>3</sup>  |
| C/N Ratio                           | 73.7                    |

| Gradation  |                  |
|--|------------------|
| Wt Percent Retained 1"                                     | 0.0 %            |
| Wt Percent Retained 1/2"                                   | 2.6 %            |
| <b>Fraction Passing 1/2 inch Screen - Dry Weight Basis</b> |                  |
| <b>Screen Opening</b>                                      | <b>% Passing</b> |
| Passing 9.5mm  | 98.7 %           |
| Passing 6.4mm ( 1/4")                                      | 85.5 %           |
| Passing 4.75mm   | 64.2 %           |
| Passing 2.36mm   | 24.8 %           |
| Passing 1.00mm   | 6.5 %            |
| Passing 0.50mm   | 2.6 %            |



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**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.      |                     |  |    |    |    |    |    |    |    |
| 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%).