



Turf & Soil Diagnostics



MATERIALS TEST REPORT FOR
Agresource, Inc.

REPORT TO: Agresource, Inc.
Mike Carignan
100 Main Street
Amesbury, MA 01913

DATE RECEIVED: Oct-17-2016
REPORT DATE: Oct-20-2016
CONDITION OF SAMPLE: Normal

PARTICLE SIZE (ASTM F1632)

Lab ID#	Sample Name	Soil Separate* %			Sieve Size / Sand Fraction Sand Particle Diameter % Retained						
		Sand	Silt	Clay	No. 5 Gravel 4.0 mm	No. 10 Gravel 2.0 mm	No. 18 V. Coarse 1.0 mm	No. 35 Coarse 0.50 mm	No. 60 Medium 0.25 mm	No. 100 Fine 0.15 mm	No. 270 V. Fine 0.05 mm
42092-2	Agresport Carver 2mm Topdressing	98.1	1.1	< 1.0	0.0	0.0	8.8	40.3	36.2	8.6	4.5
USGA Recommendations for Greens		≥ 92%	≤ 5%	≤ 3%	≤ 3% Gravel ≤ 10% Combined			≥ 60% Combined	≤ 20%	≤ 5%***	
Greens Topdress Guidelines [‡]			≤ 3%		0%	≤ 5%	≥ 60% Combined	≤ 20%	≤ 5%		

[‡] Guidelines Developed by Hummel & Co.

PARTICLE SHAPE / pH / PARTICLE SIZE PARAMETERS

Lab ID#	Sample Name	Shape Sphericity	Shape Angularity	pH ¹ 1:1	Uniformity Coefficient Cu	D15 mm	D85 mm	% Organic Matter Dry Wt. **
42092-2	Agresport Carver 2mm Topdressing	High to Low	Rounded to Angular		3.1	0.25	0.90	

*ASTM F1632 and Determination of Size Factors SOP

¹ ASTM D4972, method A, CaCl₂, 25 g sample used

**ASTM F1647 Method A

***Maximum of 10% combined on Very Fine Sand, Silt, and Clay fractions.

Samples were tested as received and comments pertain only to the samples shown.

This report may not be reproduced except in full without written permission from Turf & Soil Diagnostics, Inc.

Samples were received with a transmittal letter.

Reviewed by Duane K. Otto



Turf & Soil Diagnostics

October 20, 2016

Agresource, Inc.
TSD File #42092

Comments:

The Agresport Carver 2mm Topdressing sample was tested as received and is being evaluated for potential use as a greens topdressing. Guidelines for topdressing sand selection are included for your information and comparison.

The sample is a clean sand with minimal silt and clay. The sand fraction is uniform in particle size, with the majority of the sand falling into the coarse and medium sand fractions.

This sample has a gradation that meets USGA recommendations for greens but is slightly coarser than the greens topdress guidelines. The very coarse sand fraction is higher than the greens topdress guidelines and most of these particles will be removed through mowing.

We recommend topdressing with a material that is compatible with the existing greens mix/rootzone. Using a topdress sand that is compatible with the rootzone can minimize the risk of layering caused by placing a finer sand over a coarser sand. Compatibility should be verified by comparing these results to the particle size of the existing root zone.

Please let us know if you have any questions or are in need of further assistance. Thank you for using Turf & Soil Diagnostics, Inc.

Sincerely,

Duane K. Otto
Vice President

Page 2 of 2