Tifton Physical Soil Testing Laboratory, Inc.
1412 MURRAY AVENUE
TIFTON, GEORGIA 31794
Phone: (229) 382-7292
Fax: (229) 382-7992
www.tiftonsoillab.com

ACCREDITED
1014.01

Date Received: April 6, 2010
Date Reported: April 8, 2010
Sample Number: L81B-10
Test Report For: Alliance Sand and Aggregates, LLC
P.O. Box 1945
Decatur, AL 35602
Attn: Rodney Terry

PHYSICAL ANALYSIS[1]

MIXES ANALYZED (% by Volume)			SATURATED HYDRAULIC CONDUCTIVITY in/hr	POROSITY (%)			BULK DENSITY g/cm³	WATER RETENTION AT FIELD CAPACITY %	CHEMICAL	
SOIL	SAND	AMENDMENT		NON-CAPILLARY (air-filled)	CAPILLARY (water-filled)	TOTAL			pH[2]	EC[3] mmhos/cm
105 Bama Premium Topdressing Sand			20.8	25.9	14.8	40.7	1.57	13.9	5.9	
USGA Recommendations for Root Zone Mix:			Minimum of 6 in/hr.	15 - 30	15 - 25	35 - 55				

PARTICLE DENSITY[4] 2.65 g/cm³

PARTICLE SIZE ANALYSIS

SAMPLES	GRAVEL 2 mm %	SAND FRACTIONS (% Retained)[5]					SAND[6] 0.05-2 mm %	SILT[6] .002-.05 mm %	CLAY[6] <.002 mm %	ORGANIC MATTER[7] % by wt.
		VERY COARSE 1 mm	COARSE 0.5 mm	MEDIUM 0.25 mm	FINE 0.15 mm	VERY FINE 0.05 mm				
105 Topdressing Sand	0.1	1.7	10.8	62.9	16.8	4.2	96.4	2.5	1.0	
			← Topdressing Sand →							
USGA Recommendations for Root Zone Mix	≤ 10% (≤3% gravel)		60% minimum		≤ 20%	≤ 5%		≤ 5%	≤ 3%	

Note: Total 'fines' (very fine sand, silt, and clay) in a root zone mix should be less than (<) 10%.
1. Determined at 30 cm tension by USGA testing protocol (ASTM F1815) 2. ASTM D4972 3. SSSA Soluble Salts 4. SSSA Particle Density
5. ASTM C136 and F1632 6. Bouyoucos, 1962 7. ASTM F1647 7th Revision 11/12/07

Tifton Physical Soil Testing Laboratory, Inc.

1412 MURRAY AVENUE
TIFTON, GEORGIA 31794
Phone: (229) 382-7292
Fax: (229) 382-7992
www.tiftonsoillab.com

ACCREDITED
1014.01

Date Received: April 6, 2010
Date Reported: April 8, 2010
Sample Number: L81B-10

Test Report For: Alliance Sand and Aggregates, LLC
P.O. Box 1945
Decatur, AL 35602
Attn: Rodney Terry

Revised 11/11/03

Recommendations:

The 105 Bama Premium Topdressing Sand from Alliance Sand and Aggregates, LLC was evaluated on April 7, 2010, to determine if it meets USGA recommendations for a topdressing sand. The condition of the sample as received was normal.

The Sand has 90.5% particles within the USGA range of 1.0 to 0.15mm for a topdressing sand. This is a very high percentage of particles within this range with a majority of the particles (62.9%) in the medium sand fraction range. The USGA has recognized for many years that the medium sand fraction is the best sand fraction for a topdressing sand. This topdressing sand had only 1.8% particles larger than 1.0mm and 7.7% "fines" (4.2% very fine sand, 2.5% silt, and 1.0% clay). This sand meets USGA particle size recommendations for a topdressing and rootzone mix (greensmix) sand.

The sand is a silica sand and not a calcareous sand with a pH of 5.9.

The sand had a water permeability rate of 20.8 in/hr. when compacted by USGA procedure ASTM F1815 to simulate a compacted golf green. This is an adequate rate for a topdressing sand.

Conclusion: According to USGA guidelines for selecting a topdressing sand, this is a very good topdressing sand. This topdressing sand will be compatible with any rootzone mix that meets USGA particle size recommendations.

Powell Haines