

Trail Surface Aggregate Certification

Penn State University Center for Dirt and Gravel Road Studies

10/2013

Company: _____

Plant Location: _____

Parent Stone Type: _____

Tonnage Represented: _____

Project: _____

This record is to certify that the aggregate shipped to the above-referenced job site meets all TSA specifications and quality requirements.

Sieve Size	Specification Range	Gradation for This Lot
	% Passing	% Passing
1/2"	100	
3/8"	96-100	
#4	75-90	
#8	55-75	
#16	35-50	
#200	12-20	

pH: _____ L.A. Abrasion: _____ Plasticity Index: _____ Optimum Moisture %: _____

Authoring Agent Signature: _____ Date: _____

Print Name of Authorizing Agent: _____

Title of Authorizing Agent: _____

Note: The authorizing agent or responsible party should sign their name and print their name below their signature. If the signatory is a Penn-DOT certified Aggregate Technician add the certification number on title line and no notary is required.

Sworn and subscribed before me

This day _____

Notary Public

My commission expires: _____

Trail Surface Aggregate Specifications

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All Trail Surface Aggregate (TSA) is to be derived from natural stone formations. Stone is defined as rock that has been crushed; rock is defined as consolidated mineral matter. All components of the aggregate mix are to be derived from crushed rock material that meets specifications below for abrasion resistance, pH and freedom from contaminants.

Minus #200 fine composition:

The fines passing the #200 sieve must be rock material. No clay or silt soil may be added. Limestone material passing the #200 sieve may be used to make up a deficit in the distribution of sandstone aggregate rock, and vice versa. All added material passing the #200 sieve must be derived from rock material that conforms to program specifications. Lime kiln dust and cement kiln dust may be added to DSA to account for up to 50% of the fines passing the #200 sieve. The amount of particles passing the #200 sieve shall be determined using the washing procedures specified in PTM No. 100.

Size:

The required amounts and allowed ranges, determined by % weight, for various size particles are shown on page 1 of the certification.

LA Abrasion:

The acceptable limit as measured by weight loss is “less than 40% loss”. Los Angeles Abrasion test, AASHTO T-96 [ASTM C 131] shall be used to determine this property. Existing data obtained from tests made for and approved by PennDOT will be accepted.

pH:

Aggregate must be in the range of pH 6 to pH 12.45 as measured by EPA 9045C.

Optimum Moisture:

Material is to be delivered and placed at optimum moisture content +/- 1% as determined for that particular source. The optimum percentage moisture is to be determined using Proctor Test ASTM D698, Standard.

Plasticity Index:

Material must not exceed Plasticity Index (PI) rating of 6. The laboratory test required for these results is the ASTM D4318 – Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

Transportation:

Tarps are to be used to cover 100% of the load's exposed surface from the time of loading until immediately before dumping. This requirement includes standing time waiting to dump.