



2018

Product Data Sheet
Plant: Rich Patch

I. GEOLOGICAL FORMATION: Egglestone, Edinburg, Lincolnshire, and New Market Limestone

II. CHEMICAL ANALYSIS (February 2018) :

Silica	as SiO ₂	9.4%	Calcium	43.9% as CaO	73.0% as CaCO ₃
Iron	as Fe ₂ O ₃	0.9%	Magnesium	4.0% as MgO	14.0% as MgCO ₃
Aluminum	as Al ₂ O ₃	3.1%	Calcium Carbonate Equiv.		85.0% CCE
Sulfur	as S	0.2%			

III. QUALITY DATA:			Product												
TEST	TEST DATE	ROCKFILL A	ROCKFILL B	1	2	357	57	68	78	8	10	B SAND	LIME	9	
* SPECIFIC GRAVITY *															
BULK (ASPHALT)	02/18	2.701	2.704	2.733	2.703	2.717	2.696	2.709	2.692	2.704	2.665	2.661	2.673	2.674	
BULK - SSD (CONCRETE)	02/18	2.712	2.713	2.740	2.709	2.729	2.707	2.721	2.706	2.723	2.688	2.683	2.688	2.690	
APPARENT	02/18	2.731	2.729	2.751	2.718	2.749	2.727	2.742	2.731	2.759	2.728	2.720	2.714	2.717	
% ABSORPTION	02/18	0.4%	0.3%	0.2%	0.2%	0.4%	0.4%	0.4%	0.5%	0.7%	0.9%	0.8%	0.6%	0.6%	
* UNIT WEIGHT *															
DRY RODDED (LBS/CUBIC FT)	02/18	90.7	94.3	99.5	101.4	100.0	97.9	97.3	97.9	94.4	107.1	100.4	95.4	98.1	
DRY RODDED (LBS/CUBIC YARD)	02/18	2449	2546	2687	2738	2700	2643	2627	2643	2549	2892	2711	2576	2649	
DRY RODDED (% VOIDS)	02/18	46.2%	44.6%	41.7%	39.9%	41.0%	41.8%	42.4%	41.7%	44.1%	35.6%	39.5%	42.8%	41.2%	
DRY RODDED (Kg/Cubic Meter)	02/18	1453	1511	1594	1624	1602	1568	1559	1568	1512	1716	1608	1528	1571	
VTM-5 % VOIDS IN STONE SAND	02/18										53.0%	52.5%			
ASTM C1252 % VOIDS (METH B)	02/18										51.8%	51.6%			
ASTM C1252 % VOIDS (METH C)	02/18										44.5%	43.1%			
ASTM D4791 % F & E (3:1)	02/18					9.5%	11.9%	16.5%	18.4%	14.6%					
* LOS ANGELES DEGRADATION *															
GRADING A % LOSS	02/18	19.3%													
GRADING B % LOSS	02/18	20.9%													
GRADING C % LOSS	02/18	21.5%													
SOUNDNESS % LOSS (Magnesium Sulfate)	02/18		0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.9%	1.0%	5.6%	8.0%	7.7%	
SOUNDNESS % LOSS (Sodium Sulfate)	02/18														
Surface Treatment Rate of Application															
Stone (lb/sq yd)															
Emulsion (gal/sq yd)															
* SUPERPAVE *															
ASTM C1252 % VOIDS (METH A)	02/18										47.2%	47.4%			
AASHTO T 176 SAND EQUIVALENT	02/18										72	87			
ASTM D4791 % F & E (5:1)	02/18					0.1%	0.0%	0.0%	0.2%	0.0%					

**VIRGINIA DEPARTMENT OF TRANSPORTATION
MATERIALS DIVISION
STATEMENT OF CENTRAL-MIX AGGREGATE JOB-MIX FORMULA**

2018
Part B
Approved

Submit to the District Administrator, Virginia Department of Transportation. Approval must be received by the contractor from the Materials Division before work is begun. The job-mix design is approved for all projects of the Department for the type of mix and the calendar year shown below.

Contractor: Boxley Materials Company Design Mix No.: 8025-2010-03
 Job Mix ID: 8025-2014-03 Production Year: 2018
 Design Type: Subbase and Aggregate base Type Mix / Size Aggregate: Aggregate Base Material-Type I 21B
 Plant Location: Lowmoor (Alleghany) Plant Phone: 540-862-4130 Orig Design: 2007

Materials		Kind		Source
Approval Phase	B*	Type	Size	
Aggregate	100 %	Limestone	#26	Boxley Aggregates - Lowmoor (Alleghany)

SIEVE		Total % Passing	TOLERANCE	Acceptance Range Average of 4 Test(s)		Design / Spec. Range	
Approval Phase		B	% + or -	B		Min	Max
ENGLISH	METRIC	Production JMF		Min	Max	Min	Max
2in	50mm	100 %	0.0 %	100 %	100 %	100 %	
1in	25mm	95 %	5.0 %	90.0 %	100.0 %	85 %	95 %
3/8in	9.5mm	61 %	9.5 %	51.5 %	70.5 %	50 %	69 %
#10	2mm	23 %	7.0 %	16.0 %	30.0 %	20 %	36 %
#40	.425mm	10 %	4.0 %	6.0 %	14.0 %	9 %	19 %
#200	0.075mm	7.0 %	2.0 %	5.0 %	9.0 %	4 %	7 %

Atterberg Limit Criteria Liquid Limit % 23 % Max. 23.0 % Plastic Index % 2 % Max. 2.0 %

Submission: Type: Submitter: Date:
 Part B Josh Wilson 12/29/2017
 9:09:47 AM

Producer Remarks:

MATERIALS DIVISION ONLY

VDOT Remarks: Original Mix Design Year 2007 / Added new Max Density -4s, Optimum moistures, Specific gravity +4s, Absorption +4s 1-24-2018 / ROLL OVER MIX / For Authentication and up to date Annual Quality Test Results Call VDOT 540-332-8657

Annual Quality Test Results Maximum Dry Density (-#4 Portion) (pcf) 136.7 Bulk Specific Gravity 2.730
 Optimum Moisture (-#4 Portion) (%) 7.7 % Absorption % 0.3 %

Approved tentatively subject to the production of material meeting all other applicable requirements of the specification.

Copies: State Materials Engineer District Materials Engineer Project Inspector Sub-Contractor and/or Producer	Approval: 2018	Type: Part B	Status: Approved	Approver: Robin McCullough on behalf of Chaz Weaver, PE, PEM	Date: 1/3/2018
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