

## STATE HIGHWAY ADMINISTRATION

# Office of Materials Technology Aggregate Bulletin Test Data

Soils and Aggregate Technology Division 7450 Traffic Drive Hanover, Maryland 21076

## **Aggregate Bulletin Contacts**

## Dr. Intikhab Haider, Division Chief 443-572-5162 or <u>IHaider2@mdot.maryland.gov</u> Amanuel Welderufael, Assistant Division Chief - Lab 443-572-5276 or <u>AWelderufael@mdot.maryland.gov</u>

http://www.roads.maryland.gov/OMT/AggBlt.pdf

Toll Free: 866-926-8501

## Maryland State Highway Administration

## Aggregate Bulletin

## 1. Introduction

This bulletin contains the qualified list of aggregate producers with the physical test data. The bulletin will be updated on a quarterly basis. The last day of January, April, July and October of each year will be the publishing date. Published bulletin data will be valid for one year. For instance, if a test is required to be performed each year, for test data published in the 1<sup>st</sup> quarter, new test data will be due by the beginning of the 1<sup>st</sup> quarter of the next year. We encourage producers to keep track of their records, including due dates and submit their requests for aggregate testing on time. Producers are responsible for informing the Soils and Aggregate Technology Division (SATD) of any changes to producer information, such as producer name, quarry name, subsidiary producer's name, contact information, qualified use of aggregate.

The data listed in the aggregate bulletin are considered to be representative of material supplied by a particular source of aggregate. The materials contained within this document are not meant to represent all aggregate materials a particular quarry can produce or supply. It is emphasized that the listed data must not be interpreted in absolute terms. The information is provided as a guide for the expected quality of the material furnished by a listed source.

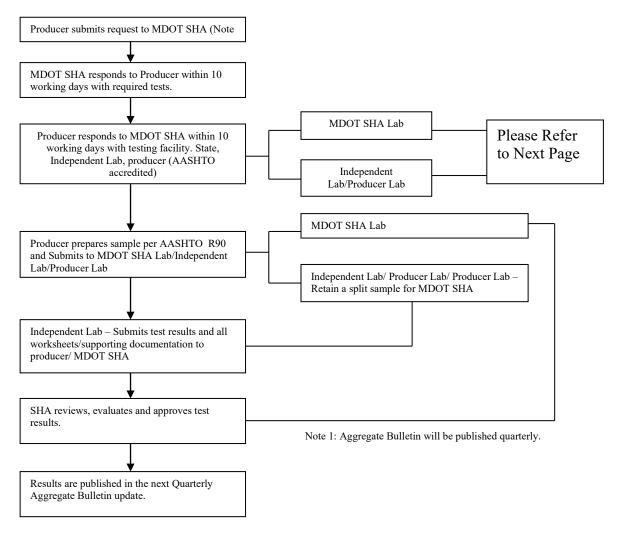
## 2. Process for Listing as a Qualified Aggregate Source in MDOT SHA Aggregate Bulletin

## I. Written Request

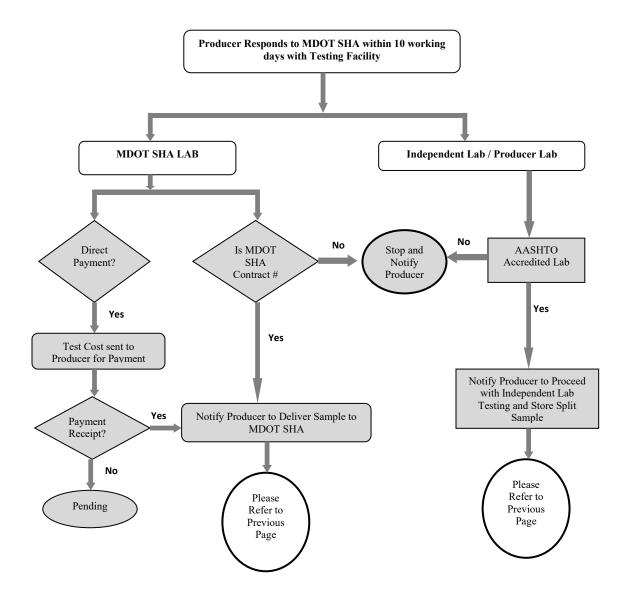
The aggregate producer shall submit a written request to:

Dr. Intikhab Haider, Division Chief Soils and Aggregate Technology Maryland State Highway Administration 7450 Traffic Drive Hanover, MD 21076 <u>IHaider2@mdot.maryland.gov</u>

- A. The SATD requires the producers to submit their written requests before the quarterly aggregate bulletin update. Please refer to the flow chart in Section II for "MDOT SHA Annual Quality Testing Process." If samples are tested at MDOT SHA lab, we are requesting the producers to deliver aggregate samples to the MDOT SHA laboratory 45 days prior to the next publishing date of the aggregate bulletin in order to publish the test data on time.
- B. Please refer to Appendix A for "Aggregate Quality Test Request" Form. Producers shall complete and submit this form for each material (i.e. No. 57, Concrete Sand, Mortar Sand, etc.) for each quarry.
- C. Safety Data Sheet (SDS): All requests must be accompanied by a Safety Data Sheet with **specific quarry location** with the effective date. No aggregate will be accepted prior to receipt of the SDS.



### II. MDOT SHA Annual Quality Testing Process



## 3. Aggregate Tests, Test Frequency and Sample Quantity Requirements

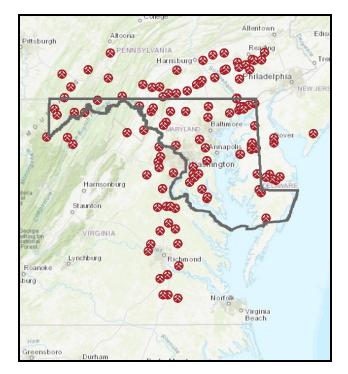
Aggregate Category	Use	Required Tests	Specifications	Test Frequency <sup>[1]</sup>	Material Quantity/Type
	General Use (HMA	Specific Gravity & Absorption	AASHTO T-85	1 year	
	Base,	Soundness	AASHTO T-104	3 years	2 hage of No
	GAB, Backfill, etc.)	Los Angeles Abrasion (LA)	AASHTO T-96	2 years	· 3 bags of No. 57 (at most 35 lbs. per bag)
		In additi	on to tests for General Use		
	PCC	Alkali-Silica Reaction (ASR)	ASTM C1260	3 years	
		In additi	on to tests for General Use	·	
Coarse	HMA Surface	Dynamic Friction Test	MSMT 215 & 216 <sup>[2]</sup>	2 years	1 bag of 35 lbs. material passing <sup>1</sup> / <sub>2</sub> " sieve and retained on 3/8" sieve
		In addition to tests	ofor General Use and HMA	A Surface	
	High Friction Materials	Petrography for non- carbonate aggregate	TBD	2 years	As required
		Acid Insoluble Residue (AIR) for carbonate aggregate	TBD	2 years	Independent Lab
	PCC	Specific Gravity and Absorption	AASHTO T-84	1 year	2 hage (at
		Soundness	AASHTO T-104	3 years	2 bags (at most 35 lbs.
Fine	Sand)	Alkali-Silica Reactivity (ASR)	ASTM C1260	3 years	per bag)
	e Mortar Sand and	Specific Gravity and Absorption	AASHTO T-84	1 year	2 bags (at most 35 lbs.
	No. 10 Dust	Soundness	AASHTO T-104	3 years	per bag)
		uarry requesting first time testing will be performed b	y MDOT SHA lab only.		

- A. Please note that, for quality assurance purposes, SATD has the right to request aggregate tests to be performed more frequently (i.e., Quality Assurance (QA) Testing) than the testing frequency specified above.
- B. If aggregate samples are tested at the MDOT SHA laboratory, upon the receipt of payment or confirmation of valid contract charge number, the SATD will send a notice to the producer for sampling. Also, SATD will provide "Aggregate Test for Quality," Form 12, Appendix B, to producers for logging each sample for each quarry. The producers are required to complete this form and submit back to the MDOT SHA lab along with samples at the address mentioned above. The sampling shall be in conformity with AASHTO R90.

- C. All information provided by a Producer, Fabricator or Supplier will be kept confidential by SHA and OMT. An exception could occur when the Producer, Fabricator or Supplier makes it publicly available or when agreed upon with SHA and OMT. If the need arises for the release of confidential information by either law or contractual requirements, the Producer, Fabricator or Supplier would be informed of the release of information unless prohibited by law. This confidentiality includes information obtained from sources other than the Producer, Fabricator or Supplier (e.g., complainant, regulators).
- D. Samples submitted to SATD, have to labeled properly with the following information.
  - Organization's Name
  - Quarry Name
  - Contract/ Charge No.
  - Aggregate Size
  - Date Sampled
  - Test Purpose

Example Stone Materials Hanover Quarry AA123B21 #57, #67, GAB, Concrete Sand...etc. 01/01/2022 GAB-QA, Aggregate Bulletin...etc.

## **Map of Quarry Locations**



# Appendix A Aggregate Quality Test Request Form

## Office of Materials Technology Soils and Aggregate Technology Division Aggregate Quality Test Request Form Aggregate Producer's Data Sheet Date Submitted: \_\_\_\_\_

office / Facility's Name (Subsidiary A	ggregate Producer): S	ame as above	or
Supervising Office's Mailing Ac	dress:		
Street or P.O. Box:	JUI ESS.		
Town / City:			
State:			•
E-Mail Address:	210		
Phone No(s):			
Fax No.:			
Quarry Name's (If Applicable):			
Town / City:	State:	Zip:	
Entitled Point of Contact:			
Title / Position:			
Phone No(s):			
Fax No.:			
SDS Provided: Yes No			
Testing Charges: Bill Direct (Yes or No	 o) If No,		
MDOT SHA Contract #/Charge			
MDOT SHA Project # (if availab			
Please provide the following informat	ion if applicable:		
Testing Facility: MDOT SHA Lab	Independent Lab	If yes, Lab Name_	
Aggregate Category (ies) for Testing:	CoarseFine	Other	
Aggregate Type (s) for Testing: #57 #10 DustOther	Concrete Sand	Mortar Sand	
Aggregate Use(s): HMA Surface H Other General	HMA BasePCC	GAB	

## Appendix B Aggregate Test for Quality (Form 12)

### **Testing Completed – Reporting Results.**

Upon request, the producer will be notified of the <u>preliminary</u> test results once the testing is completed. Subsequently, the test results will be entered into SATD's aggregate database for the next quarterly Aggregate Bulletin update. 8.H.A. 73.0-12 10/10/2018

### STATE OF MARYLAND STATE HIGHWAY ADMINISTRATION OFFICE OF MATERIALS TECHNOLOGY

### AGGREGATE TEST REPORT

Date Sampled	Da	ate of Production	Da	te Delivered to LA	в_			Log No.	
Contract No.		Charge No							ISDS
Type of Construction		(Description of E)	act Use of Material)			Item	No		
Type of Material		Quantit	y Represented				Size of \$	Sample	
Type of Sample:	Quality	Job Control	Other			(Experimenta	il, Resample	, Re-Stock, Etc.)	
Produced By				Name and Address)					
Source of Supply			(Ful	Name and Address)					
Sample Taken From						Source	🗌 Sou	rce of Supply	Job Site
Sample By (Full Name)				Witnessed By _		Federal	, County, M	unicipal Representati	e's Name
Remarks									

						TEST	RESUL	rs						
Gradatio	n:													
	3 1/2	3	2 1/2	2	1%	1%	1%	1	%	5/8	1/2	3/8	#4	#8
Prod.														
Lab.														
	5/8	%	3/8	#4	#8	#10	#16	#20	#30	#40	#50	#80	#100	#200
Prod.	5	/1	5/6		***	#10	#10	#20	#00		100	100	#100	#200
Lab.														

Test						
	Los Angeles Abrasion, % Loss		Absorption, %		Petro	
	Sodium Sulfate, % Loss		Washing over #200, % Loss		Flat and Elongated, %	
	Unit Wt. Loose (lbs/ft3)		ASR		Acid Insoluble Residue(AIR),%	
	Unit Wt. Rodded (lbs/ft3)		BPN		Color	
	Specific Gravity		DFV		Micro Deval, % Loss	
	рН		Other		СТМ	

The material represented – does \_\_\_\_\_ / does not \_\_\_\_\_ - meet the MDSHA's Standard Specifications for Construction and Materials, Table 901 B, Aggregate Physical Property Requirements.

Remarks:

## Appendix C - Procedures of Quality Aggregate Testing by Independent Laboratories

## Submittal Requirements to Independent Laboratory

The submission package by each producer shall contain the following:

- A. Aggregate Quality Test Request Form (Appendix A)
- B. Safety Data Sheet (SDS) for each test material per each quarry location
- C. Independent laboratory package including name, address, a list of aggregate tests the lab is qualified to perform, experience, AASHTO accreditation and AMRL Proficiency sample ratings for the last two years.
- D. The independent lab organization chart and technician's qualification including point of contact for manager, resumes, training records and experience.

The submittal package shall be provided to SATD via mail or electronically to the following address 45 days prior to the Quarterly Aggregate Bulletin update otherwise the SATD does not guarantee the test data to be included to the next published Aggregate Bulletin:

Attn: Dr. Intikhab Haider, Division Chief Soils and Aggregate Technology Maryland State Highway Administration Office of Materials Technology 7450 Traffic Drive Hanover, MD 21076 <u>IHaider2@mdot.maryland.gov</u>

After reviewing the submittals, we will inform you whether the independent lab is accepted or not. If the lab is accepted, the independent lab shall be valid for one (1) year from the date of the acceptance letter.

## Aggregate Tests for Independent Laboratory

The accepted independent lab shall comply with the following aggregate test procedures and specification for aggregate testing.

- AASHTO T11 Materials Finer Than 75-μm (No. 200) Sieve by Washing
- AASHTO T27 Sieve Analysis of Fine and Coarse Aggregate

- AASHTO T84 Specific Gravity (Relative Density) and Absorption of Fine Aggregate
- AASHTO T85 Specific Gravity (Relative Density) and Absorption of Coarse Aggregate
- AASHTO T96 Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
- AASHTO T104 Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate
- AASHTO R76 Reducing Samples of Aggregate to Testing Size
- AASHTO T255 Total Evaporable Moisture Content of Aggregate by Drying
- ASTM C 1260 Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars due to Alkali-Silica Reaction Aggregate or Aggregate/Pozzolan Combinations
- A. AASHTO accredited laboratories shall meet R-18 requirements and participate in the AMRL proficiency testing program. In addition, the laboratories should possess or have access to the equipment, facilities, personnel, and calibrated instruments, which are necessary to test material.
- B. The producers are encouraged to minimize the number of laboratories used per quarry to minimize errors of precision due to technicians and laboratories to ensure the test quality.
- C. The producers shall be submitting the independent lab submittal package to MDOT SHA rather than the independent lab submitting their information directly to us.

## Split Samples

The producers shall have a split sample for each quarry before submitting samples to the independent lab.

The SATD will require the split samples as needed to ensure the test quality. The SATD Quality Assurance team may witness and pick the split sample during their normal plant visit. The aggregate producers are required to pay for sampling and reviewing test results in case they do not provide an approved/active contract number and a project charge number.

## **Test Results Submission by the Independent Laboratory**

The independent lab shall submit the final test results along with raw data to the MDOT SHA lab. The raw data sheet shall include the laboratory letterhead with the technician's name, test date, address, contact information, and manager signature. The MDOT SHA will review and verify the test data before publishing in the Aggregate Bulletin.

## **Aggregate Bulletin**

## Keys

(-) Under test/under evaluation

- (#) In accordance with the Standard Provision Insert (SPI) of Standard Specifications for Construction and Materials, July 2008, Table 901 D, and Aggregate Physical Property Requirements for Asphalt Mixes (Note (e)): when carbonate rock is used, it shall have a minimum of 25 percent insoluble residue retained on the No. 200 sieve. Otherwise, the aggregate source does not qualify for use as a high friction aggregate.
- (\*\*) ASR determined in accordance with ASTM C 1293, Determination of length change of concrete due to Alkali Silica Reaction.
- DFV Dynamic Friction Value is defined as a coefficient of friction multiplied by 100. Accordingly, coarse aggregate is categorized as three broad categories: high, standard, and low DFVs, designated as HDFV, SDFV, and LDFV. These categories are presented below in detail:

### HDFV:

- Category I (HDFV I): DFV is equal to 50
- Category II (HDFV II): DFV is equal to 45
- Category III (HDFV III): DFV is equal to 40

SDFV:

- Category IV (SDFV IV): DFV is equal to 30
- Category V (SDFV V): DFV is equal to 25

LDFV:

• Category VI (LDFV VI): DFV is less than 25

	Aggregate		Specific Gravity	ABS	LA	Friction Rating <sup>[1]</sup>	ASR	Soundness		Material Test	ed For	
Desideration	Category	Туре	(SSD)	(%)	(%)		(%)	(%)				
Producer			T-84	& 85	T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
<b>Allan Myers Materials, Inc.</b> Cedar Hill Quarry Peach Bottom, PA												
	Coarse	#57	2.638	1.0	13	SDFV IV	0.02	0.5		✓		✓
	Fine	#10	2.642	1.2			0.02	3.1	$\checkmark$	✓		
<b>Allan Myers Materials, Inc.</b> Elk Mills Quarry Elk Mills, MD												
	Coarse	#57	2.639	0.5	27	HDFV II	0.06	0.1	$\checkmark$	✓	✓	✓
	Fine	#10	2.654	0.2				1.0	$\checkmark$	✓		
Allan Myers Materials, Inc. Paradise Quarry Paradise, PA												
	Coarse	#57	2.820	0.3	28	SDFV V	0.05	0.1	✓	✓		✓
Allan Myers Materials, Inc. Talmage Quarry Talmage, PA												
	Coarse	#57	2.805	0.3	20	SDFV V	0.13	2.2		✓		✓
Allegany Aggregates, Inc. Bedrock Quarry Flintstone, MD												
	Coarse	#57	2.710	0.9	21	SDFV V	0.06	1.2		✓		✓
	Fine	#10	2.703	1.1				1.0	$\checkmark$	✓		
<b>Allegany Aggregates, Inc.</b> Short Gap Quarry Keyser, WV												
	Coarse	#67	2.709	0.5	20	SDFV V	0.08	1.3		✓		✓
	Fine	#10	2.670	1.2				3.0		$\checkmark$		
<b>Byler Quarries</b> Fiddler Elbow South Middletown, PA												
	Coarse	#57	2.722	0.2	22		0.02	1.9	✓			✓
	Fine	#10	2.725	0.2				1.7	✓	✓		
Iote [1]: Category I (HDI	FV I): DFV-50		Category II	(HDFV II)	: DFV-45	C	ategory III (HD	FV III): DFV-40		Updated	<u>.</u>	

Producer	Aggregate Category	Aggregate Type	Gravity			Rating [1]						
Producer	j,	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				Rating <sup>[1]</sup>				Material Teste	ed For	
			(SSD)	(%)	(%)		(%)	(%)				
			T-84	& 85	T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
Carolina Stalite Company Gold Hill Gold Hill, NC												
	Coarse	#57	1.474	3.4	30		0.11(-)	0.2	$\checkmark$			✓
	Fine	Concrete Sand	1.995	1.7			0.10(-)	1.4	✓			✓
Chaney Enterprises, Inc. Harwood Harwood, MD												
	Coarse	#57	2.601	1.1	35		0.17	0.2	$\checkmark$			✓
	Fine	Concrete Sand	2.633	0.8			0.02**	1.8	$\checkmark$	✓		✓
Chaney Enterprises, Inc. Henderson Henderson, MD												
	Coarse	#57	2.569	1.4	36		0.34	0.03	$\checkmark$			
	Fine	Concrete Sand	2.614	0.8			0.01**	1.1	$\checkmark$			✓
Chaney Enterprises, Inc. Loveville Quarry Loveville, MD												
	Coarse	# 67	2.561	1.9	36		0.04**	0.1	$\checkmark$			✓
	Fine	Concrete Sand	2.593	1.3			0.03**	1.5	$\checkmark$	✓		✓
Chaney Enterprises, Inc. Mardela Springs Mardela Springs, MD												
	Fine	Concrete Sand	2.583	0.6			0.11	2.0	$\checkmark$			✓
Chaney Enterprises, Inc. Mechanicsville Quarry Mechanicsville, MD												
	Coarse	#67	2.567	1.2	35		0.05**	0.3	$\checkmark$			✓
	Fine	Concrete Sand	2.611	0.8			0.02**	0.5	✓	✓		✓

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Note [1]:	Category I	(HDFV I):	DFV-50	Category II	(HDFV II): DFV-45	Category III	(HDFV III): DFV-40	Updated:	ĺ
	Category IV	(SDFV IV):	DFV-30	Category V	(SDFV V): DFV-25	Category VI	(LDFV VI): DFV is less than 25.	April 30, 2025	

		Aggregate	Specific Gravity	ABS	LA	Friction Rating [1]	ASR	Soundness		Matarial Taat	ad Far	
	Category	Туре	(SSD)	(%)	(%)	Rating	(%)	(%)		Material Test	ed For	
Producer			T-84 8		T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
Chaney Enterprises, Inc. Seaford Seaford, DE												
	Fine	Concrete Sand	2.605	0.9			0.02**	2.0	✓	$\checkmark$		✓
	Fine	Mortar	2.603	1.0				1.3				
Chaney Enterprises, Inc. Waldorf Quarry Waldorf, MD												
	Coarse	#67	2.578	1.1	31		0.04**	0.0	$\checkmark$			✓
	Fine	Concrete Sand	2.627	0.4			0.02**	2.0		✓		✓
Chaney Enterprises, Inc. Winchester Plant Clear Brook, VA												
	Coarse	#57	2.709	0.4	21	LDFV VI	0.08**	3.5	$\checkmark$	$\checkmark$		✓
Chaney Enterprises, Inc. Woodford Woodford, VA												
	Coarse	# 67	2.635	0.3	32		0.10**	3.9				✓
	Fine	Concrete Sand	2.620	1.0			0.02**	1.3	$\checkmark$	✓		✓
Clayton Sand Co. Clayton Sand Woodmansie Browns Mills, NJ												
	Fine	Concrete Sand	2.642	0.3			0.06	1.3	$\checkmark$			✓
David A. Bramble, Inc. Bridgetown Sand & Gravel Ridgely, MD												
	Fine	HMA Sand	2.595	1.1				2.0	✓	✓		
<b>David A. Bramble, Inc.</b> Dudley Pit Wye Mills, MD												
	Fine	HMA Sand	2.601	0.9				1.4	✓	✓		
•••••	V I): DFV-50 V IV): DFV-30		Category II Category V	(HDFV II): (SDFV V):				FV III): DFV-40 FV VI): DFV is less	than 25.	Updated April 3	: 0, 2025	

	Aggregate		Specific Gravity	ABS	LA	Friction Rating [1]	ASR	Soundness		Material Test	ed For	
	Category	Туре	(SSD)	(%)	(%)	U	(%)	(%)				
Producer			T-84 8		T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
Disney Sand & Gravel, LLC Hebron Quarry Hebron, MD												
	Fine	Concrete Sand	2.616	0.6			0.09	1.5	✓			✓
	Fine	Mortar	2.647	0.2				0.6	<			
<b>DunRite Sand &amp; Gravel</b> Vineland NJ Vineland, NJ												
	Fine	Concrete Sand	2.633	0.3			0.11	1.0	$\checkmark$			✓
<b>Dyer Quarry, Inc.</b> Dyer Quarry Birdsboro, PA												
	Coarse	#57	2.935	0.5	15	HDFV III	0.07	0.2		$\checkmark$	✓	✓
	Fine	#10	2.854	1.0				4.6	$\checkmark$	✓		
Fairfax Materials Inc. Ours Quarry Petersburg, WV												
	Coarse	#57	2.706	0.8	24		0.14	4.3	$\checkmark$			✓
Fairfax Materials Inc. Scherr Quarry New Creek, WV												
	Coarse	#67	2.731	0.3	24		0.09	4.6	✓			✓
Fairfax Materials Inc. Thomas Quarry Thomas, WV												
	Fine	Concrete Sand	2.632	0.6			0.23	1.1	✓			✓
George's Creek Stone and G Barton Quarry Barton, MD	iravel, Inc.											
	Coarse	#57: Limestone	2.775	0.6	26		0.14	0.5	✓			✓
	Fine	#10: Limestone	2.601	2.4				5.5	✓	✓		
Note [1]: Category I (HDF) Category IV (SDF)	V I): DFV-50 / IV): DFV-30		Category II Category V		DFV-45 DFV-25			FV III): DFV-40 FV VI): DFV is less	than 25.	Updated April 3		

	Aggregate	Aggregate	Specific Gravity	ABS	LA	Friction Rating <sup>[1]</sup>	ASR	Soundness		Material Teste	ed For	
Duaduaan	Category	Туре	(SSD)	(%)	(%)		(%)	(%)				
Producer			T-84	& 85	T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
<b>Greer Industries, Inc.</b> Buckeye Limestone Company Morgantown, WV												
	Coarse	#57	2.724	0.6	18			2.4	✓			
	Fine	#10	2.603	2.0				1.0				
Gudelsky Group Chantilly Crushed Stone Chantilly, VA												
	Coarse	#57	2.935	2.0	15	HDFV II	0.04	0.1	$\checkmark$	✓	✓	✓
	Fine	#10	3.004	0.6				1.9	$\checkmark$			
Gudelsky Group Gudelsky Materials Brandywine, MD												
	Coarse	#67	2.580	0.9	26		0.25	0.02	$\checkmark$			✓
	Fine	Concrete Sand	2.615	0.8			0.14	1.0	$\checkmark$			✓
Haines & Kibblehouse, Inc. Birdsboro Materials Birdsboro, PA												
	Coarse	#57	2.974	0.4	17	HDFV III	0.04	0.1	$\checkmark$	$\checkmark$	✓	✓
	Fine	#10	2.877	2.0				1.6	$\checkmark$	✓		
Haines & Kibblehouse, Inc. Douglassville Quarry Douglassville, PA												
	Coarse	#57 Argillite	2.720	0.9	12	HDFV II	0.03	2.3	$\checkmark$	✓	✓	✓
	Coarse	#57 Diabase	3.120	0.3	16	HDFV II	0.02	0.7	✓	✓	✓	✓
	Fine	#10 Argillite	2.675	1.8				3.6		✓		
	Fine	#10 Diabase	2.953	2.2				3.6	✓	✓		
Haines & Kibblehouse, Inc. Easton Quarry Easton, PA												
	Coarse	#57	2.803	0.2	15	SDFV IV	0.25	0.1	$\checkmark$	✓		✓
	Fine	#10	2.773	0.4				0.9		✓		
Note [1]: Category I (HDF)	/ I): DFV-50		Category II	(HDFV II):	DFV-45	Ci	ategory III (HD	FV III): DFV-40		Updated		

	Aggregate Category		Specific Gravity	ABS	LA	Friction Rating <sup>[1]</sup>	ASR	Soundness		Material Test	ed For	
Producer	Calegory	Туре	(SSD)	(%)	(%)		(%)	(%)				
Producer			T-84 a	& 85	T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
Haines & Kibblehouse, Inc Penn/MD Materials Peach Bottom, PA												
	Coarse	#57	2.656	0.8	18	SDFV IV	0.01	0.1	✓	✓		✓
	Fine	#10	2.511	3.9				2.9	<	✓		
Haines & Kibblehouse, Inc Silver Hill Quarry Narvon, PA												
	Coarse	#57	3.023	0.3	22	HDFV II	0.01	0.1	$\checkmark$	✓	✓	✓
	Fine	#10	2.962	1.0				3.1		✓		
Heidelberg Materials North Glen Mills Glen Mills, PA	east LLC.											
	Coarse	#57	2.938	0.3	21	HDFV II(-)		0.3	✓	✓		
Heidelberg Materials North Newport Sand & Gravel Newport, NJ	east LLC.											
	Fine	Concrete Sand	2.620	0.7			0.08(-)	3.2	✓			✓
Heidelberg Materials North St. Thomas St. Thomas, PA	east LLC.											
	Coarse	#57	2.704	0.4	24	LDFV VI	0.13(-)	0.8	$\checkmark$	✓		✓
	Fine	#10	2.655	1.3				2.1	$\checkmark$	✓		
Holcim Accokeek Sand and Gravel - Brandywine, MD	Formerly Aggr	egate Industries										
	Coarse	#57	2.578	1.0	36		0.00	0.6	✓			✓
	Fine	Concrete Sand	2.616	0.8			0.24	1.4		✓		✓
Holcim Hayfield Sand & Gravel - For Fredericksburg, VA	merly Aggrega	te Industries										
	Coarse	#57	2.641	0.5	35		0.11	0.5	$\checkmark$			✓
	Fine	Concrete Sand	2.630	1.2			0.06	1.5	✓			✓
					DFV-45			) FV III): DFV-40		Updated		

	Aggregate Category		Specific Gravity	ABS	LA	Friction Rating <sup>[1]</sup>	ASR	Soundness		Material Test	ed For	
Dreducer	Calegory	Туре	(SSD)	(%)	(%)		(%)	(%)				
Producer			T-84	& 85	T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
Holcim Hickory Hill Sand and Gravel Gloucester, VA	- Formerly Ago	gregate Industries										
	Fine	Concrete Sand	2.625	0.4			0.11	0.6		$\checkmark$		✓
Holcim King William Sand and Grave Manquin, VA	9l											
	Fine	Concrete Sand	2.638	0.7			0.07	1.3	✓	✓		✓
Holcim Kirby Road Sand & Gravel - F Clinton, MD	Formerly Aggre	gate Industries										
	Coarse	#57	2.584	0.9	35		0.05	0.1	✓			✓
	Fine	Concrete Sand	2.618	0.7			0.20	1.3	✓	$\checkmark$		✓
Holcim La Plata Sand & Gravel - For La Plata , MD	merly Aggrega	te Industries										
	Fine	Concrete Sand	2.620	0.7			0.15	0.9	✓	✓		✓
Holcim Mattaponi Sand & Gravel - Fo Aylett, VA	ormerly Aggreg	ate Industries										
	Coarse	#57	2.613	0.5	34		0.29	0.3				✓
	Fine	Concrete Sand	2.638	0.3			0.08	1.0	✓	✓		✓
Holcim Millville Quarry - Formerly Age Millville, WV	gregate Industi	ries										
	Coarse	#57	2.843	0.4	18	SDFV V	0.02	0.01	✓	✓		✓
	Fine	Concrete Sand	2.808	0.7			0.03	0.3	✓	✓		✓
Holcim New Kent Sand and Gravel New Kent, VA												
	Fine	Concrete Sand	2.613	0.7			0.07	0.7	✓			✓
	FV I): DFV-50 FV IV): DFV-30		Category II Category V		: DFV-45 : DFV-25		0, (	DFV III): DFV-40 FV VI): DFV is less	than 25.	Updated April 3	l: 0, 2025	

Coarse Fine	Type erly Aggregate Indus #57 Concrete Sand ate Industries #57 Concrete Sand	2.650 2.615 2.745	(%) & 85 0.4 1.0	<b>(%)</b> <b>T-96</b> 37	MSMT 215 & 216	(%) ASTM C1260 0.11 0.07	<b>(%)</b> <b>T-104</b> 0.1 1.2	General (HMA Base, GAB, Backfill, etc.) ✔ ✔	Material Teste HMA Surface	High Friction Materials	PCC
Coarse Fine merly Aggrega Coarse Fine	#57 Concrete Sand ate Industries #57	t. 2.650 2.615 2.745	0.4			<b>C1260</b>	0.1	Base, GAB, Backfill, etc.) ✔	Surface	Friction Materials	✓
Coarse Fine merly Aggrega Coarse Fine	#57 Concrete Sand ate Industries #57	2.650 2.615 2.745		37				<b>v</b>			<ul><li></li><li></li></ul>
Fine nerly Aggrega Coarse Fine	Concrete Sand ate Industries #57	2.615		37							<ul> <li>✓</li> </ul>
nerly Aggrega Coarse Fine	ate Industries #57	2.745	1.0			0.07	1.2		✓		
Coarse Fine	#57										V
Fine											
-	Concrete Sand		0.6	16	SDFV IV	0.03	0.1	$\checkmark$			✓
regate Indust		2.585	2.6			0.03	0.9	$\checkmark$	✓		✓
regute made	ries										
Fine	#10	1.771	1.8			0.05	3.4	<			✓
Coarse	#57 - Loyalhanna	2.697	0.4	16	HDFV III	0.42	0.1	$\checkmark$	✓	✓	
Fine	#10 - Loyalhanna	2.650	1.5				1.3		$\checkmark$		
Coarse	#57	2.785	0.4	28	LDFV VI	0.01	0.6	✓	✓		✓
Fine	#10	2.721	1.0				1.3		$\checkmark$		
Coarse	#57	2.751	0.5	15	SDFV IV	0.03	0.3	$\checkmark$	✓		✓
Fine	#10	2.734	1.9				1.3		✓		
(1): DFV-50		Category II	(HDFV II):	DFV-45	c	ategory III (HD	FV III): DFV-40		Updated		
· · · · · · · · · · · · · · · · · · ·	Coarse Fine Coarse Fine Coarse Fine	Coarse #57 - Loyalhanna Fine #10 - Loyalhanna Coarse #57 Fine #10 Coarse #57 Fine #10	Coarse         #57 - Loyalhanna         2.697           Fine         #10 - Loyalhanna         2.650           Coarse         #57         2.785           Fine         #10         2.721           Coarse         #57         2.751           Fine         #10         2.734	Coarse       #57 - Loyalhanna       2.697       0.4         Fine       #10 - Loyalhanna       2.650       1.5         Coarse       #57       2.785       0.4         Fine       #10       2.721       1.0         Coarse       #57       2.751       0.5         Fine       #10       2.734       1.9         I):       DFV-50       Category II       (HDFV II):	Coarse       #57 - Loyalhanna       2.697       0.4       16         Fine       #10 - Loyalhanna       2.650       1.5         Coarse       #57       2.785       0.4       28         Fine       #10       2.721       1.0       10         Coarse       #57       2.751       0.5       15         Fine       #10       2.734       1.9       15         I):       DFV-50       Category II       (HDFV II):       DFV-45	Coarse       #57 - Loyalhanna       2.697       0.4       16       HDFV III         Fine       #10 - Loyalhanna       2.650       1.5       1.5         Coarse       #57       2.785       0.4       28       LDFV VI         Fine       #10       2.721       1.0       10       10         Coarse       #57       2.751       0.5       15       SDFV IV         Fine       #10       2.734       1.9       15       SDFV IV         I):       DFV-50       Category II       (HDFV II):       DFV-45       C	Coarse       #57 - Loyalhanna       2.697       0.4       16       HDFV III       0.42         Fine       #10 - Loyalhanna       2.650       1.5       0.4       28       LDFV VI       0.01         Coarse       #57       2.785       0.4       28       LDFV VI       0.01         Fine       #10       2.721       1.0       0.5       15       SDFV IV       0.03         Coarse       #57       2.751       0.5       15       SDFV IV       0.03         Fine       #10       2.734       1.9       1.9       Coarse       #50       Category II       (HDFV II): DFV-45       Category III       (HDPV III): DFV-45	Coarse       #57 - Loyalhanna       2.697       0.4       16       HDFV III       0.42       0.1         Fine       #10 - Loyalhanna       2.650       1.5       1.5       1.3       1.3         Coarse       #57       2.785       0.4       28       LDFV VI       0.01       0.6         Fine       #10       2.721       1.0       1.0       1.3         Coarse       #57       2.751       0.5       15       SDFV IV       0.03       0.3         Fine       #10       2.734       1.9       15       SDFV IV       0.03       0.3         I):       DFV-50       Category II       (HDFV II):       DFV-45       Category III       (HDFV III):       DFV-40	Coarse       #57 - Loyalhanna       2.697       0.4       16       HDFV III       0.42       0.1       ✓         Fine       #10 - Loyalhanna       2.650       1.5       1.3       ✓         Coarse       #57       2.785       0.4       28       LDFV VI       0.01       0.6       ✓         Fine       #10       2.721       1.0       1.3       ✓         Coarse       #57       2.751       0.5       15       SDFV IV       0.03       0.3       ✓         Coarse       #57       2.751       0.5       15       SDFV IV       0.03       0.3       ✓         Fine       #10       2.734       1.9       15       SDFV IV       0.03       0.3       ✓         I):       DFV-50       Category II       (HDFV II):       DFV-45       Category III       (HDFV III):       DFV-40	Coarse       #57 - Loyalhanna       2.697       0.4       16       HDFV III       0.42       0.1       Image: Coarse       Image: Coarse       1.3       Image: Coarse       1.3       Image: Coarse       1.3       Image: Coarse       Image: Coarse </td <td>Coarse       #57 - Loyalhanna       2.697       0.4       16       HDFV III       0.42       0.1       V       V       V         Fine       #10 - Loyalhanna       2.650       1.5       1.3       V       Image: Coarse imag</td>	Coarse       #57 - Loyalhanna       2.697       0.4       16       HDFV III       0.42       0.1       V       V       V         Fine       #10 - Loyalhanna       2.650       1.5       1.3       V       Image: Coarse imag

	Aggregate		Specific Gravity	ABS	LA	Friction Rating [1]	ASR	Soundness		Material Test	ed For	
Producer	Category	Туре	(SSD)	(%)	(%)		(%)	(%)				
Fioducei			T-84	& 85	T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
Laurel Sand & Gravel, Inc. Laurel Hill Quarry Woodsboro, MD												
	Coarse	#57	2.679	0.5	17	HDFV II	0.30	0.2		✓	✓	✓
	Fine	#10	2.645	1.4				1.9	✓	✓		
	Fine	Manufactured Sand	2.643	1.4			0.4	2.3				
Laurel Sand & Gravel, Inc. S.W. Barrick & Sons Woodsboro Quarry Woodsboro, MD												
	Coarse	#57	2.744	0.3	21	SDFV V	0.13	2.9	$\checkmark$	$\checkmark$		✓
	Fine	#10	2.680	1.4				1.6	✓	✓		
	Fine	Manufactured Sand	2.684	0.9			0.13	1.4	✓	✓		✓
Luck Stone Corporation Bealeton Bealeton, VA												
	Coarse	#57	2.986	0.4	14	HDFV III	0.04	0.3		✓	✓	✓
	Fine	#10	2.805	3.5				4.0	$\checkmark$	✓		
Luck Stone Corporation Boscobel Boscobel, VA												
	Coarse	#57	2.604	0.6	34		0.09	1.9	✓			✓
	Fine	Manufactured Sand	2.504	2.8			0.11	1.9	$\checkmark$			✓
Luck Stone Corporation Bull Run Chantilly, Virginia												
	Coarse	#57	2.927	0.7	15	HDFV III	0.16	0.6	✓	✓	✓	✓
	Fine	#10	2.825	2.4				2.1	✓	$\checkmark$		
Note [1]: Category I (HDF			Category II		: DFV-45		Category III (HD	FV III): DFV-40		Updated		
	V IV): DFV-30		Category II Category V		DFV-45			FV III): DFV-40 FV VI): DFV is less	than 25.	-	0, 2025	

### Maryland Department of Transportation - State Highway Administration: Coarse and Fine Aggregate Test Data

	Aggregate Category	Aggregate Type	Specific Gravity	ABS	LA	Friction Rating [1]	ASR	Soundness		Material Test	ed For	
Producer	Calegory	туре	(SSD)	(%)	(%)		(%)	(%)				
Flouter			T-84	& 85	T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
Luck Stone Corporation Culpeper Culpepper, VA												
	Coarse	#57	2.755	0.8	12	SDFV IV	0.02	0.8	✓	✓		✓
Luck Stone Corporation Goose Creek Plant Leesburg (Goose Creek Plan	t), VA											
	Coarse	#57	2.965	0.6	13	HDFV III	0.06	0.6		✓	✓	✓
	Fine	#10	2.896	1.7				1.7		✓		
Luck Stone Corporation Leesburg Leesburg (Leesburg Quarry),	VA											
	Coarse	#57	2.982	0.7	18	HDFV II	0.05	0.2	✓	✓	✓	✓
	Fine	#10	2.713	0.9				3.1		✓		
Luck Stone Corporation Spotsylvania - VA Spotsylvania, VA												
	Coarse	#57	2.733	0.5	34	HDFV III	0.07	0.6	$\checkmark$	✓	✓	✓
	Fine	#10	2.776	0.4				2.8		✓		
Martin Marietta Materials Anderson Creek Quarry Rockville, VA												
	Coarse	#57	2.723	0.6	16		0.14	0.5	✓			✓
Martin Marietta Materials Boonsboro Quarry Boonsboro, MD												
	Coarse	#57	2.876	0.3	16	SDFV V	0.03	0.1	$\checkmark$	✓		✓
	Fine	#10	2.834	0.5				0.4		✓		
Martin Marietta Materials Churchville Quarry Bel Air, MD												
	Coarse	#57	3.032	0.3	20	HDFV III	0.02	0.0		✓	✓	✓
	Fine	#10	3.057	0.2				0.8		✓		
Note [1]: Category I (HDF	V I): DFV-50		Category II	(HDFV II)	: DFV-45		Category III (HD	FV III): DFV-40		Updated	•	

	Aggregate	Aggregate	Specific	ABS	LA	Friction [1]	ASR	Soundness				
	Category	Type	Gravity			Rating [1]				Material Teste	ed For	
Producer			(SSD)	(%)	(%)		(%)	(%)				
			T-84	& 85	T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
<b>Martin Marietta Materials</b> Doswell Doswell, VA												
	Coarse	#57	2.723	0.9	19		0.17	1.6	$\checkmark$			✓
<b>Martin Marietta Materials</b> Frederick Quarry - Frederick (Martin Marietta), M	ID											
	Coarse	#57	2.721	0.3	24	SDFV IV	0.09	0.1	$\checkmark$	✓		✓
	Fine	#10	2.625	2.0				2.1	$\checkmark$	✓		
Martin Marietta Materials Kent Sand & Gravel, LLC Massey, MD												
	Fine	Concrete Sand	2.630	0.6			0.04	2.8	$\checkmark$			✓
Martin Marietta Materials Medford Quarry New Windsor, MD												
	Coarse	#67 Limestone	2.721	0.4	46	SDFV V	0.01	0.1	$\checkmark$	✓		✓
	Fine	Manufactured Sand Limestone	2.700	0.6			0.02	1.3	✓	✓		✓
<b>Martin Marietta Materials</b> Midlothian Quarry Midlothian, VA												
	Fine	#10	2.796	0.2				1.2	✓			
Martin Marietta Materials North East Quarry North East, MD												
	Coarse	#57	2.940	0.3	18	HDFV III	0.07	0.1	$\checkmark$	✓	✓	✓
	Fine	#10	2.824	0.4				3.2	✓	✓		

Maryland Department of Trans	portation - State Highway Administrati	on: Coarse and Fine Aggregate Test Data

Note [1]:	Category I (HDF	FV I): DFV-50	Category II	(HDFV II): DFV-45	Category III	(HDFV III): DFV-40	Updated:
	Category IV (SDF	FV IV): DFV-30	Category V	(SDFV V): DFV-25	Category VI	(LDFV VI): DFV is less than 25.	April 30, 2025

	Aggregate		Specific Gravity	ABS	LA	Friction Rating <sup>[1]</sup>	ASR	Soundness		Material Test	ed For	
Producer	Category	Туре	(SSD)	(%)	(%)		(%)	(%)				
Floducei			T-84	& 85	T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
Martin Marietta Materials Pinesburg Quarry Williamsport, MD												
	Coarse	#57	2.802	0.4	17	LDFV VI	0.11	0.2	✓	✓		✓
	Fine	#10	2.737	1.8				1.2	✓			
	Fine	Manufactured Sand	2.750	0.9			0.11	0.8				✓
Martin Marietta Materials Texas Quarry Cockeysville, MD												
	Coarse	#57	2.809	0.5	39	SDFV V	0.04	0.6	✓	✓		✓
	Fine	Concrete Sand	2.837	0.3			0.03	4.0	✓			✓
Martin Marietta Materials Warfordsburg Warfordsburg, PA												
	Coarse	#57	2.702	0.4	21	SDFV V		2.5	$\checkmark$	✓		
	Fine	#10	2.640	1.9				3.0	$\checkmark$			
Martin Stone Quarries Bechtelsville Bechtelsville, PA												
	Coarse	#57	2.788	0.5	15	HDFV III	0.12	0.1	$\checkmark$	$\checkmark$	✓	✓
Maryland Minerals, Inc. Sang Run Quarry McHenry, MD												
	Fine	Concrete Sand	2.610	0.9			0.13	1.5				✓
Maryland Minerals, Inc. Thayerville Quarry Oakland, MD												
	Coarse	#67	2.665	1.1	22		0.39	0.4				

Maryland Department of Transportation - S	tate Highway Administration:	Coarse and Fine Aggregate Test Data
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Note [1]:	Category I (HDFV I): DFV-50	Category II (HDFV II): DFV-45	Category III (HDFV III): DFV-40	Updated:
	Category IV (SDFV IV): DFV-30	Category V (SDFV V): DFV-25	Category VI (LDFV VI): DFV is less than 25.	April 30, 2025

	Aggregate		Specific Gravity	ABS	LA	Friction Rating [1]	ASR	Soundness		Material Test	ed For	
Desideren	Category	Туре	(SSD)	(%)	(%)		(%)	(%)				
Producer			T-84		T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
Melvin L. Joseph Sand and Georgetown Quarry Georgetown, DE	Gravel, Co.											
	Fine	Concrete Sand	2.614	0.6			0.23	1.6	✓	✓		✓
	Fine	Mortar Sand	2.623	0.6				2.1	✓			
Merrick Sand & Gravel Ingleside Plant Ingleside, MD												
	Fine	Concrete Sand	2.587	1.3			0.03**	1.0	✓	✓		✓
	Fine	Mortar Sand	2.574	0.8				1.5	$\checkmark$			
New Enterprise Stone & Lim Ashcom Plant Everett, PA	ne Co Inc											
	Coarse	#57	2.807	0.3	14	LDFV VI	0.13	0.0	$\checkmark$	✓		✓
	Fine	#10	2.734	1.9				0.9	✓	✓		
New Enterprise Stone & Lim Bakersville Plant Somerset, PA	ne Co Inc											
	Coarse	#57	2.674	0.4	13	HDFV II		1.4	✓	✓	✓	
New Enterprise Stone & Lim Denver Quarry Denver, PA	ne Co Inc											
	Coarse	#57	2.769	0.3	17	SDFV V	0.17	0.4	✓	✓		✓
	Fine	#10	2.715	1.0				1.2	✓	✓		
New Enterprise Stone & Lim Hinkletown Quarry Hinkletown, PA	ne Co Inc											
	Coarse	#57	2.807	0.3	19	LDFV VI	0.02	0.05	$\checkmark$	✓		✓
	Fine	Concrete Sand	2.780	0.6			0.01	1.2	$\checkmark$			✓
New Enterprise Stone & Lim Honey Brook Quarry Honey Brook, PA	ne Co Inc											
	Fine	Concrete Sand	2.632	0.6			0.05	1.1	✓			✓
	V I): DFV-50 V IV): DFV-30		Category II Category V	(HDFV II) (SDFV V):	DFV-45 DFV-25		8, (	FV III): DFV-40 FV VI): DFV is less	than 25.	Updated April 3	: 0, 2025	

	Aggregate	Aggregate	Specific Gravity	ABS	LA	Friction Rating [1]	ASR	Soundness		Material Test	ed For	
Draduaar	Category	Туре	(SSD)	(%)	(%)		(%)	(%)				
Producer			T-84	& 85	T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
New Enterprise Stone & L Vintondale Quarry Johnstown, PA	ime Co Inc											
	Fine	Concrete Sand	2.632	0.3			0.12	1.4	✓			✓
New Enterprise Stone & L Valley Quarries, Inc. Chambersburg Quarry Chambersburg, PA	ime Co Inc											
	Coarse	#57	2.709	0.4	22	SDFV V	0.11	0.02				✓
	Fine	#10	2.672	0.9				0.7	✓	✓		
New Enterprise Stone & L Valley Quarries, Inc. Gettysburg Quarry Gettysburg, PA	ime Co Inc											
	Coarse	#57	2.774	0.8	10	HDFV I	0.28	0.1	$\checkmark$	✓	✓	✓
	Fine	#10	2.689	2.5				1.2		✓		
New Enterprise Stone & L Valley Quarries, Inc. Mt. Cydonia, Plant I Fayetteville, PA	ime Co Inc											
	Coarse	# 8	2.605	1.0	30	HDFV III		2.0		✓	✓	
	Fine	Concrete Sand	2.600	1.1			0.05**	1.7	$\checkmark$	✓		✓
New Enterprise Stone & L Valley Quarries, Inc. Roaring Spring Plant Roaring Spring, PA	ime Co Inc											
	Coarse	#57	2.812	0.2	16	SDFV V	0.10**	0.04	✓	✓		✓
	Fine	Concrete Sand	2.793	0.5			0.14	2.0	$\checkmark$	✓		✓
Northeast Solite Corporati Mount Marion Mine Saugesties, NY	on											
	Coarse	#57	1.463	9.5	28		0.05	2.9	$\checkmark$			✓
	Fine	Concrete Sand	1.864	2.7			0.10	0.4				✓
	DFV I): DFV-50 DFV IV): DFV-30		Category II Category V	(HDFV II)	: DFV-45 DFV-25			PFV III): DFV-40 FV VI): DFV is less	than 25	Updated April 3		

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	Aggregate Category	Aggregate Type	Specific Gravity	ABS	LA	Friction Rating <sup>[1]</sup>	ASR	Soundness		Material Teste	ed For	
Producer	oategory	туре	(SSD)	(%)	(%)		(%)	(%)				
Floutei			T-84	& 85	T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCO
Patuxent Materials, Inc. Goldsboro Sand and Gravel/P Goldsboro, MD	Perry Corner											
	Fine	Concrete Sand	2.608	0.6			0.13	0.5	✓	✓		✓
	Fine	Mortar Sand	2.577	1.5			0.10	3.4				
PAX-Shore Aggregates Bridgetown Sand and Gravel Ridgely, MD												
	Fine	Concrete Sand	2.616	0.7			0.14	2.1	$\checkmark$	✓		✓
	Fine	Mortar Sand	2.593	1.3				3.5	✓			
PAX-Shore Aggregates Faulkner Plant Goldsboro, MD												
	Fine	Concrete Sand	2.621	0.4			0.15	1.3	$\checkmark$	✓		✓
	Fine	Mortar Sand	2.636	0.4				5.6				
<b>Pennsy Supply, Inc.</b> Bay Road Plant Dover , DE												
	Fine	Concrete Sand	2.632	0.1			0.09	2.1	$\checkmark$			✓
Pennsy Supply, Inc. East Petersburg/East Hempfie Manheim, PA	eld TWP											
	Coarse	#57	2.808	0.2	16	SDFV IV	0.03	0.1	✓	✓		✓
	Fine	#10	2.680	2.3				1.2	✓	✓		
Pennsy Supply, Inc. Landisville/ West Hempfield T Mount Joy, PA	WP											
	Coarse	#57	2.765	0.3	18	SDFV IV	0.02	0.1	✓	✓		✓
	Fine	#10	2.737	0.7				3.7	✓	✓		
Note [1]: Category I (HDF	VI): DFV-50		Category II	(HDFV II):	DFV-45	Са	tegory III (HD	FV III): DFV-40		Updated	:	

Category IV (SDFV IV): DFV-30

Category VI (LDFV VI): DFV is less than 25.

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Category V (SDFV V): DFV-25

	Aggregate		Specific Gravity	ABS	LA	Friction Rating <sup>[1]</sup>	ASR	Soundness		Material Test	ed For	
	Category	Туре	(SSD)	(%)	(%)	5	(%)	(%)		Waterial lest	euror	
Producer			T-84	k 85	T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
<b>Pennsy Supply, Inc.</b> Millard Quarry Annville, PA												
	Coarse	#57	2.788	0.5	15	LDFV VI	0.03	0.0	✓	✓		✓
	Fine	#10	2.735	1.4				1.8	✓	✓		
Pennsy Supply, Inc. Mt. Holley / Dickinson Townsh Mount Holly Springs, PA	lip											
	Coarse	#8	2.601	1.2	32	HDFV II		0.2		✓	✓	
	Fine	Concrete Sand	2.632	0.7			0.04**	2.8	$\checkmark$			✓
Pennsy Supply, Inc. Prescott/South Lebanon Towr Lebanon, PA	nship											
	Coarse	#57	2.805	0.4	19	LDFV VI	0.03	0.1	$\checkmark$	✓		✓
	Fine	#10	2.669	2.9				1.4	$\checkmark$	✓		
<b>Pennsy Supply, Inc.</b> Tarburton Plant Dover, DE												
	Fine	Concrete Sand	2.608	0.6			0.10	1.0	$\checkmark$			✓
	Fine	Mortar	2.614	0.4				1.3				
Rockville Fuel & Feed												-
Marshyhope Operations, LLC Rosser Pit Federalsburg, MD												
	Fine	Concrete Sand	2.623	0.6			0.13	1.7	$\checkmark$	✓		✓
	Fine	Mortar Sand	2.600	1.2				1.0	$\checkmark$			
<b>Rohrer Quarry</b> Lititz - PA Lititz, PA												
	Coarse	#57	2.788	0.2	20		0.16	0.0	✓			✓
	Fine	#10	2.749	0.4				2.6	<ul> <li>Image: A start of the start of</li></ul>	✓		
Note [1]: Category I (HDF Category IV (SDF)	V I): DFV-50 / IV): DFV-30		Category II Category V	· · ·	: DFV-45 : DFV-25			FV III): DFV-40 FV VI): DFV is less	than 25.	Updated April 3		

	Aggregate Category		Specific Gravity	ABS	LA	Friction Rating <sup>[1]</sup>	ASR	Soundness		Material Test	ed For	
Producer	Category	Туре	(SSD)	(%)	(%)		(%)	(%)				
Flouice			T-84	& 85	85 T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
Savage Stone, LLC Savage Quarry Jessup, MD												
	Coarse	#57	2.989	0.5	23	HDFV III	0.03	8.6		$\checkmark$	✓	✓
	Fine	# 10	2.949	0.5				4.5		✓		
<b>Shelly Materials, Inc.</b> Reedsville Reedsville, OH												
	Fine	Concrete Sand	2.638	1.0			0.24	1.2	$\checkmark$			✓
<b>Silvi Materials</b> Port Norris Port Norris, NJ												
	Fine	Concrete Sand	2.612	0.8			0.12	2.0	$\checkmark$	$\checkmark$		✓
Sloan Materials, LLC Leonardtown MD Leonardtown, MD												
	Fine	Concrete Sand	2.613	0.8			0.25	2.4	$\checkmark$	$\checkmark$		✓
<b>Specialty Granules</b> Charmian Plant Blue Ridge Summit, PA												
	Coarse	#57 Mixed Metabasalt	2.953	0.4	18	HDFV I	0.33	0.7		✓	✓	
	Fine	#10 Mixed Metabasalt	2.810	3.0				2.0	$\checkmark$	$\checkmark$		
The Naceville Group Naceville Quarry Sellersville, PA												
	Coarse	#57	2.747	0.6	12	SDFV IV	0.16	1.3		$\checkmark$		✓
	Fine	#10	2.705	1.9				4.2	✓	$\checkmark$		

Maryland Department of	Transportation -	- State Highway Administration:	Coarse and Fine Aggregate Test Data

Note [1]:	Category I (HDFV I): DFV-50	Category II (HDFV II): DFV-45	Category III (HDFV III): DFV-40	Updated:	
	Category IV (SDFV IV): DFV-30	Category V (SDFV V): DFV-25	Category VI (LDFV VI): DFV is less than 25.	April 30, 2025	

	Aggregate	Aggregate	Specific Gravity	ABS	LA	Friction Rating <sup>[1]</sup>	ASR	Soundness		Material Test	ed For	
Des des se	Category	Туре	(SSD)	(%)	(%)		(%)	(%)				
Producer			T-84	& 85	T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
The Naceville Group Plumstead Quarry Doylestown, pa												
	Coarse	#57	2.719	0.5	14	HDFV III	0.15	0.2	✓	✓	✓	✓
	Fine	#10	2.682	1.3				1.0	$\checkmark$	✓		
<b>Titan Mid-Atlantic Aggrega</b> Branchville Sand Plant Branchville, VA	tes											
	Fine	Concrete Sand	2.628	0.5			0.16	1.2	$\checkmark$			✓
Titan Mid-Atlantic Aggrega Waverly Sand Plant Waverly, VA	tes											
	Fine	Concrete Sand	2.618	0.7			0.12	0.7	✓			✓
<b>Tuckahoe Sand &amp; Gravel</b> Tuckahoe NJ Tuckahoe, NJ												
	Fine	Concrete Sand	2.645	0.2			0.15	0.3	✓			✓
<b>U.S. Silica Company</b> U.S Silica Quarry Berkeley Springs, WV												
	Coarse	#57 Limestone	2.702	0.5	41	SDFV IV	0.22	0.7	$\checkmark$	✓		✓
Vulcan Materials Company Frederick Plant Frederick (Vulcan), MD	, Inc.											
	Coarse	#57	2.745	0.3	22	SDFV IV	0.14	3.7	$\checkmark$	✓		✓
	Fine	Concrete Sand	2.698	1.0			0.16	5.6	$\checkmark$	✓		✓
Vulcan Materials Company Glen Gardner Glen Gardner, NJ	, Inc.											
	Coarse	#57	2.717	0.5	18	HDFV II(-)	0.18	3.4	✓	✓		✓
	Fine	Manufactured Sand	2.690	0.6			0.25	2.3				✓
•• • • •	FV I): DFV-50 FV IV): DFV-30		Category II Category V	(HDFV II) (SDFV V)		(		FV III): DFV-40 FV VI): DFV is less		Updated	: 0, 2025	

	Aggregate		Specific Gravity	ABS	LA	Friction Rating <sup>[1]</sup>	ASR	Soundness		Material Test	ed For	
Producer	Category	Туре	(SSD)	(%)	(%)		(%)	(%)				
Producer			T-84 & 85		85 T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
Vulcan Materials Compar Graham Quarry Lorton, VA	ny, Inc.											
	Coarse	#57	2.664	0.6	30	HDFV II	0.06	1.5	✓	✓	$\checkmark$	✓
	Fine	#10	2.671	0.4				3.1	$\checkmark$			
<b>Vulcan Materials Compar</b> Hanover Plant Hanover, PA	ıy, Inc.											
	Coarse	#57	2.798	0.3	22	SDFV V	0.01	1.1	$\checkmark$	$\checkmark$		✓
	Fine	Manufactured Sand	2.714	0.8			0.02	1.3	✓	$\checkmark$		✓
Vulcan Materials Compar Havre de Grace Quarry Havre de Grace, MD	ıy, Inc.											
	Coarse	#57	2.852	0.2	16	HDFV III	0.13	0.2	✓	✓	✓	✓
	Fine	#10	2.817	0.3				1.8	✓	$\checkmark$		
Vulcan Materials Compar Jack Quarry Petersburg, VA	ıy, Inc.											
	Coarse	#57	2.643	0.5	22		0.07	0.5	$\checkmark$			✓
Vulcan Materials Compar Manassas Quarry Manassas, VA	ıy, Inc.											
	Coarse	#57	2.794	0.7	11	HDFV III	0.05	0.6	$\checkmark$	✓	$\checkmark$	✓
	Fine	#10	2.766	2.1				1.7	$\checkmark$	✓		
Vulcan Materials Compar Puddledock Prince George, VA	ıy, Inc.											
	Fine	Concrete Sand	2.584	1.1			0.05	3.0	✓			✓

Maryland Department of Transportation -	<ul> <li>State Highway Administration</li> </ul>	n: Coarse and Fine Aggregate Test Data	
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Note [1]:	Category I (HDFV I): DFV-50	Category II (HDFV II): DFV-45	Category III (HDFV III): DFV-40	Updated:
	Category IV (SDFV IV): DFV-30	Category V (SDFV V): DFV-25	Category VI (LDFV VI): DFV is less than 25.	April 30, 2025

	Aggregate	Aggregate	Specific Gravity	ABS	LA	Friction Rating <sup>[1]</sup>	ASR	Soundness				
	Category	Туре	(SSD)	(%)	(%)	Raung	(%)	(9/)		Material Test	ed For	
Producer			T-84 & 85 T-96 & 216 C1260		(%) T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PC			
<b>Vulcan Materials Company,</b> Quinton Sand Pit Salem, NJ	Inc.								Backini, etc.y		Waterials	
	Fine	Concrete Sand	2.642	0.3			0.09	1.4	✓	✓		✓
	Fine	Mortar Sand	2.638	0.6				0.8	$\checkmark$			
Vulcan Materials Company, Sanders Quarry Warrenton, VA	Inc.											
	Coarse	#57	2.954	0.8	10	HDFV I	0.04	0.3	$\checkmark$	✓	$\checkmark$	✓
	Fine	#10	2.843	2.6				1.2	$\checkmark$			
Vulcan Materials Company, Seaford Terminal Seaford, DE	Inc.											
	Fine	Concrete Sand	2.595	2.8			0.13	2.8	✓			✓
Vulcan Materials Company, Stafford Quarry Garrisonville, VA	Inc.											
	Coarse	#57	2.924	0.4	14		0.06	0.7	✓			✓
	Fine	#10	2.814	0.9				0.6				
Vulcan Materials Company, Wolman Sand Seaford , DE	Inc.											
	Fine	Concrete Sand	2.598	1.1			0.09	3.6	✓	✓		✓
	Fine	Mortar Sand	2.568	1.6				2.6	✓			
<b>Vulcan Materials Company,</b> York Plant York, PA	Inc.											
	Coarse	#57	2.812	0.4	29	SDFV V	0.01	0.2	✓	✓		✓
	Fine	Manufactured Sand	2.779	1.0			0.01	2.5	✓			✓
•• • • •	·V I): DFV-50 V IV): DFV-30		Category II Category V	• •	DFV-45 DFV-25			FV III): DFV-40 FV VI): DFV is less	than 25.	Updated April 3	: 0, 2025	

	Aggregate Category	Aggregate Type	Specific Gravity	ABS	LA	Friction Rating <sup>[1]</sup>	ASR	Soundness		Material Test	ed For	
Producer	Category	гуре	(SSD)	(%)	(%)		(%)	(%)				
Producer			T-84	& 85	5 T-96	MSMT 215 & 216	ASTM C1260	T-104	General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
<b>Whibco of NJ, Inc</b> Port Elizabeth - Plant #1 Port Elizabeth, NJ												
	Fine	Concrete Sand	2.638	0.4			0.04	1.4	✓	✓		✓
York Building Products Eastern Shore Sand and Gra Henderson, MD	avel, Ingleside F	Plant										
	Coarse	#57	2.503	2.5	34			0.0	✓			
	Fine	Concrete Sand	2.595	1.1			0.04**	1.7	✓	✓		✓
	Fine	Mortar Sand	2.536	1.7				0.9	$\checkmark$			
York Building Products Lincoln Stone Division Tho Thomasville, PA	masville Quarry											
	Coarse	#57	2.796	0.4	18	LDFV VI	0.06	0.1	$\checkmark$			✓
	Fine	#10	2.698	2.5				2.8	$\checkmark$			
York Building Products Principio Quarry Port Deposit, MD												
	Coarse	#57 Granite	2.673	0.4	16	HDFV I	0.12	0.1	$\checkmark$	$\checkmark$	$\checkmark$	✓
	Coarse	#57 Metabasalt	2.885	0.8	15	HDFV II	0.03	2.1		$\checkmark$	$\checkmark$	✓
	Fine	#10 Granite	2.650	0.3				4.5		✓		
	Fine	#10 Metabasalt	2.898	0.9				3.9	✓	✓		
York Building Products Roosevelt Quarry York, PA												
	Coarse	#57	2.774	0.4	24	LDFV VI	0.02	3.9	$\checkmark$	✓		✓
	Fine	#10	2.752	0.5				1.0	$\checkmark$	$\checkmark$		
York Building Products Mason-Dixon Materials Belvedere Plant Port Deposit , MD												
	Fine	Concrete Sand	2.613	1.2			0.08	1.2	✓	✓		✓
	Fine	Mortar Sand	2.622	0.8				0.8	✓			
•• • • •	DFV I): DFV-50 DFV IV): DFV-30		Category II Category V	(HDFV II) (SDFV V)	: DFV-45 : DFV-25		0 / (	DFV III): DFV-40 DFV VI): DFV is less	than 25.	Updated April 3	: 0, 2025	

Maryland Department of Transportation - State Highway Administration: Coarse and Fine Aggregate Test Data												
Producer	Aggregate Category	Aggregate Type	Specific Gravity	ABS (%) 4 & 85	LA (%) T-96	Friction Rating [1] MSMT 215 & 216	ASR (%) ASTM C1260	Soundness (%) T-104	Material Tested For			
			(SSD)									
			T-84						General (HMA Base, GAB, Backfill, etc.)	HMA Surface	High Friction Materials	PCC
York Building Products Mason-Dixon Materials Cecil Plant Port Deposit, MD												
	Fine	Concrete Sand	2.611	0.8			0.05	2.8	$\checkmark$	✓		✓
York Building Products Mason-Dixon Materials Perryville Plant Perryville, MD												
	Fine	Concrete Sand	2.643	0.2			0.04**	1.5	$\checkmark$	✓		✓
	Fine	Mortar	2.643	0.3				1.5	✓			

### Maryland Department of Transportation - State Highway Administration: Coarse and Fine Aggregate Test Data

Note [1]:	Category I	(HDFV I): DFV-50	Category II	(HDFV II): DFV-45	Category III	(HDFV III): DFV-40	Updated:
	Category IV	(SDFV IV): DFV-30	Category V	(SDFV V): DFV-25	Category VI	(LDFV VI): DFV is less than 25.	April 30, 2025