



Search

Search

Logged in as: sgwill@uark.edu | Logout

[Home](#) [My Tab](#) [About Us](#) [AASHTO Accreditation](#) [Laboratory Assessments](#) [Proficiency Samples](#) [FWD](#) [Library](#) [Resources](#) [50 Years](#)


Coarse Aggregate 189/190
Final Report Date: 11/6/2015

PSP Enrollment #3879
University of Arkansas
Fayetteville, Arkansas USA

Submitted by sgwill@uark.edu on 9/29/2015 at 11:45 AM

[View Your Data Submission Details](#)

The Z-Score indicates the number of standard deviations from the average value. The Z-Score is determined by the following calculation:

$$Z\text{-Score} = (\text{Laboratory Test Result} - \text{Average Value}) / (\text{Standard Deviation})$$

The laboratory Rating calculation is based on the absolute value of the Z-Score (or number of standard deviations from the average). The following describes the laboratory Rating system:

- If Z-Score <= 1 Then Rating = 5
- If Z-Score > 1 And <= 1.5 Then Rating = 4
- If Z-Score > 1.5 And <= 2 Then Rating = 3
- If Z-Score > 2 And <= 2.5 Then Rating = 2
- If Z-Score > 2.5 And <= 3 Then Rating = 1
- If Z-Score > 3 Then Rating = 0

A negative sign on a Z-Score or Rating indicates that the laboratory's result was below the average, while a positive Z-Score or Rating indicates that the laboratory's result was above the average.

For more information on ratings, please review [Proficiency Sample Ratings: Being Average Has Never Been So Good](#).

Material Finer Than 75-µm (No. 200) Sieve
Percentage Finer than the 75-µm sieve by washing (0.01 percent) - T11/C117
[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)			
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
1	1720	0.24	0.210	0.042	0.71	5	0.23	0.213	0.041	0.41	5	0.015	-0.60	-5	

Sieve Analysis of Aggregates
Total Material Passing the 25.0-mm (1-in.) Sieve (0.1 percent) - T27/C136
[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)			
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
2	1736	100	100.00	**	**	**	100	100.00	**	**	**	**	**	**	**

Sieve Analysis of Aggregates
Total Material Passing the 19.0-mm (3/4-in.) Sieve (0.1 percent) - T27/C136
[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)			
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
3	1737	88.1	88.01	0.80	0.11	5	88.1	88.00	0.81	0.13	5	0.48	0.02	5	

Sieve Analysis of Aggregates
Total Material Passing the 12.5-mm (1/2-in.) Sieve (0.1 percent) - T27/C136
[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)			
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
4	1737	52.2	51.27	1.01	0.92	5	53.0	51.91	1.00	1.10	4	0.49	0.23	5	

Sieve Analysis of Aggregates
Total Material Passing the 9.5-mm (3/8-in.) Sieve (0.1 percent) - T27/C136
[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)			
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
5	1736	18.2	17.88	0.78	0.41	5	19.1	18.23	0.80	1.08	4	0.42	0.91	5	

Sieve Analysis of Aggregates
Total Material Passing the 4.75-mm (No. 4) Sieve (0.1 percent) - T27/C136
[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)			
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
6	1737	0.7	0.51	0.14	1.34	4	0.7	0.54	0.15	1.08	4	0.08	-0.28	-5	

Coarse Aggregate Specific Gravity and Absorption
Bulk Specific Gravity [or Relative Density, OD for C127] - T85/C127
[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)			
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
7	1603	2.842	2.8396	0.0057	0.42	5	2.841	2.8390	0.0053	0.39	5	0.0030	-0.08	-5	

Coarse Aggregate Specific Gravity and Absorption
Bulk Specific Gravity, SSD [or Relative Density, SSD for C127] - T85/C127
[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)			
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
8	1604	2.848	2.8466	0.0047	0.29	5	2.847	2.8460	0.0042	0.24	5	0.0026	-0.10	-5	

Coarse Aggregate Specific Gravity and Absorption
Apparent Specific Gravity [or Apparent Relative Density for C127] - T85/C127
[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)			
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating	
9	1603	2.859	2.8599	0.0038	-0.24	-5	2.859	2.8593	0.0035	-0.08	-5	0.0022	0.20	5	

Coarse Aggregate Specific Gravity and Absorption
Absorption (0.01 percent) - T85/C127

[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)		
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating
10	1601	0.21	0.250	0.051	-0.78	-5	0.22	0.251	0.051	-0.60	-5	0.021	0.30	5

Abrasion of Coarse Aggregate

Percentage of Loss by Abrasion and Impact (0.01 percent) - T96/C131

[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)		
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating
11	596	--	15.575	0.744	--	--	--	15.578	0.718	--	--	--	--	--

Sulfate Soundness of Aggregates

Sodium Sulfate-Percentage of 19.0 to 9.5-mm fraction passing 8.0-mm sieve (0.01 percent) - T104/C88

[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)		
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating
12	340	--	0.149	0.112	--	--	--	0.153	0.116	--	--	--	--	--

Sulfate Soundness of Aggregates

Sodium Sulfate-Percentage of 9.5 to 4.75-mm fraction passing 4.0-mm sieve (0.01 percent) - T104/C88

[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)		
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating
13	340	--	0.226	0.154	--	--	--	0.226	0.157	--	--	--	--	--

Sulfate Soundness of Aggregates

Magnesium Sulfate-Percentage of 19.0 to 9.5-mm fraction passing 8.0-mm sieve (0.01 percent) - T104/C88

[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)		
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating
14	149	--	0.271	0.227	--	--	--	0.271	0.201	--	--	--	--	--

Sulfate Soundness of Aggregates

Magnesium Sulfate-Percentage of 9.5 to 4.75-mm fraction passing 4.0-mm sieve (0.01 percent) - T104/C88

[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)		
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating
15	149	--	0.429	0.312	--	--	--	0.434	0.324	--	--	--	--	--

Resistance to Abrasion by Micro-Deval (Coarse Aggregate)

Percentage of Loss in the Micro-Deval (0.01 percent) - T327/D6928

[View Youden Diagram](#) | [View Performance Chart](#)

Sample 189							Sample 190					Repeatability(within-lab)		
	Total Labs	Lab Data	Avg	1S	Z-Score	Rating	Lab Data	Avg	1S	Z-Score	Rating	1S	Z-Score	Lab Rating
16	79	--	4.869	0.744	--	--	--	4.848	0.738	--	--	--	--	--

** Ratings Suppressed

-- No Data Submitted or Data Out of Accepted Range

**** Suppressed Items:**

Sieve Analysis of Aggregates (Total Material Passing the 25.0-mm (1-in.) Sieve) - For informational purposes only.



© 2015 AASHTO Materials Reference Laboratory. All Rights Reserved.
[Contact Us](#) | [Terms of Use](#) | [Privacy Policy](#)

