



Performance Examination - Aggregate

Standard Method of Test for Specific Gravity and Absorption of Coarse Aggregate (AASHTO T 85-14) [ASTM C127-15]

Candidate Name: _____ NICET ID: _____

Apparatus	Trial 1	Trial 2
Balance Class G5		
Sieves 4.75 mm (No. 4) or other sizes as needed		
Oven Maintains uniform temperature of 110 ± 5 °C (230 ± 9 °F)		
Water Tank Watertight tank equipped with overflow outlet		
Sample Container Wire basket of 3.35-mm (No. 6) mesh or finer		
Immersion Water Temperature is 23.0 ± 1.7 °C (73.4 ± 3 °F)		

Procedure	Trial 1	Trial 2
1. The sample is obtained by R 76		
2. Screened on 4.75-mm (No. 4 sieve) (or 2.36-mm (No. 8 sieve) if sample contains No. 4 material)		
3. Sample mass as follows: ½ in. or less - 2 kg; ¾ in. - 3 kg; 1 in. - 4 kg; 1 ½ in. - 5 kg		
4. Wash sample to clean surfaces of particles		
5. Sample dried to constant mass at 110 ± 5°C (230 ± 9°F) and cooled to room temperature for 1 to 3 hours (for up to 1 ½ in. nominal maximum size, longer for larger sizes) <i>Note: Oven drying not necessary if naturally moist condition is desired.</i>		
6. Cover sample with water for 15 to 19 hours		
7. Roll sample in cloth to remove visible films of water (<i>A moving stream of air may be used to assist in the drying operation.</i>)		
8. Wipe larger particles individually and avoid evaporation		
9. SSD sample mass in air determined; All masses determined to nearest 1 g or 0.1% of sample mass (whichever is greater)		
10. Immediately place sample in the sample container		
11. Before weighing, remove entrapped air by shaking container while immersed		
12. Mass determined in water at 23 ± 2°C		
13. Dried to constant mass at 110 ± 5°C (230 ± 9°F) and cooled to room temperature for 1 to 3 hours (or until aggregate has cooled to comfortable handling temperature, approximately 50°C)		
14. Oven dried sample mass determined		
15. Bulk specific gravity calculated using the following formulas and reported to the nearest 0.001		

Examiner Name: _____ Examiner Signature: _____ Date: _____



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Type	Formula
Bulk Specific Gravity (G_{sb})	$\frac{A}{(B - C)}$
Bulk Specific Gravity (by SSD Mass)	$\frac{B}{(B - C)}$
Apparent Specific Gravity (G_{sa})	$\frac{A}{(A - C)}$
Absorption (in Percent)	$\left[\frac{(B - A)}{A} \right] \times 100$

First Attempt: Pass: _____ Fail: _____ Second Attempt: Pass: _____ Fail: _____

Exam Administration: Remote _____ In-Person _____

Comments:

Examiner Name: _____ Examiner Signature: _____ Date: _____