

Procedure Checklist

FM 1-T085 Specific Gravity & Absorption of Coarse Aggregate

		P	F	N/A
1.	Sample the aggregate in accordance with FM 1-T002.			
2.	Thoroughly mix the sample and reduce to the approximate quantity needed per FM 1-T248 or by FM 5-538 for Rip Rap Material.			
3.	Reject all material passing the No. 4 sieve by dry sieving and thoroughly wash the +No. 4 material to remove dust or other coatings from the surface.			
4.	Dry the test sample to constant weight at $110 \pm 5^{\circ}\text{C}$ (230 ± 9) and cool in air for 1 to 3 hours.			
5.	Immerse the aggregate in water at room temperature for 15 to 19 hours.			
6.	Remove sample from water; roll it in a large absorbent cloth until all visible film of water is removed. Take care to avoid evaporation of water from pores of aggregate.			
7.	Weigh the sample in the SSD condition. Record the mass to nearest 1.0 g or 0.1% of sample mass. (B)			
8.	After determining SSD mass, place the SSD sample in the sample container and determine its mass in water at $23.0 \pm 1.7^{\circ}\text{C}$ ($73.4 \pm 3^{\circ}\text{F}$) Take care to remove all entrapped air.			
9.	Remove sample from water and sample container. Dry to constant mass at $110 \pm 5^{\circ}\text{C}$ cool in air for 1 to 3 hours, and determine the mass. (A)			
10.	Calculate the specific gravity and absorption using the following formulas: Bulk Specific Gravity = $A/(B - C)$ Bulk Specific Gravity (SSD) = $B/(B - C)$ Apparent Specific Gravity = $A/(A - C)$ Absorption, percent = $[(B - A)/A] \times 100$			
11.	Report specific gravity results to nearest 0.001 and absorption to nearest 0.1%.			

Remarks:

Comparison Criteria:

Bulk Specific Gravity (dry) = 0.038
Bulk Specific Gravity (SSD) = 0.032
Apparent Specific Gravity = 0.032
Absorption, percent = 0.41

Date: _____ Technician: _____ IA Observer: _____

Technician's E-mail Address: _____

Employer's/ Supervisor's E-mail Address: _____