Aggregate Field Testing Technician
KT-50 Uncompacted Void Content Of Fine Aggregate
Revised August 2021

Two attempts may be made by the applicant. The applicant may stop themselves once and not have that count as one of the two attempts. If the applicant stops voluntarily, draw a line at that point and note that the applicant stopped themselves then restart at the top of the next attempt.

Applicant: _____ **CIT #:** _____

Employer: _____

		1st Test		Stopped Test		Re-Test	
	Sample Preparation						
1.	Wash the sample over the No. 200 (75 µm) sieve. Dry the plus No. 200 (75 µm) material to a constant mass. (5.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
2.	Sieve the dry aggregate over the No. 8 (2.36 mm), No. 16 (1.18mm), No. 30 (600 µm), No. 50 (300 µm), and No. 100 (150 µm). Discard all material retained on the No. 8 (2.36 mm) and passed through the No. 100 (150 µm). (5.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
3.	Weigh and combine the quantities of dry aggregate from each of the sizes shown on the chart. (5.2)	PASS	FAIL	PASS	FAIL	PASS	FAIL
4.	Prepare two test samples from the recipe. (5.3.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
	Test Procedure						
5.	Mix the test sample until it is homogenous. (6.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
6.	Using a finger to block the opening of the funnel, pour the test sample into the funnel. (6.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
7.	Level the material in the funnel with the spatula. Center the measure under the funnel, remove finger and allow the sample to fall freely into the measure. (6.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL

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8.	Exercise care to avoid vibration or disturbance that could cause compaction of the fine aggregate in the measure. (6.2.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
9.	After the funnel empties, remove excess aggregate from the measure by a single pass of the spatula with the blade vertical using the straight part of its edge in light contact with the top of the measure. (6.2.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
10.	After strike off, tap the measure lightly to compact the sample. Brush adhering grains from the outside of the measure. (6.2.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
11.	Pour contents of measure into 200 mL volumetric flask using a funnel to assure total transfer of aggregate. (6.3.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
12.	Weigh the flask and sample, record as A. (6.4.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
13.	Add distilled water (deionized water can be substituted). Rotate the flask in an inclined position to eliminate all air bubbles. Do not shake. (6.5.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
14.	Allow the flask to sit for several minutes then roll flask again. Continue the process until there is no visible air bubbles present or for a maximum of 15 minutes, whichever comes first. Distilled water (and entire test) should be at 77 ± 2°F (25 ± 1°C). (6.5.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
15.	Adjust distilled water to the calibrated volume mark on the neck of the flask. (6.6.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
16.	Weigh flask and contents, record as B. (6.7.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
17.	Repeat procedure for the second test sample and record results. (6.8.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
	Calculations						
18.	Calculate the uncompacted voids. (7.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL

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Overall Score

Circle One

1st Test	Stopped Test	Re-Test
PASS	PASS	PASS
FAIL	FAIL	FAIL

Witness Examiner: _____ _____

(First Try) Signature Date

Witness Examiner: _____

(Stopped Try) Signature Date

Witness Examiner: _____ _____

(Re-Test) Signature Date