

# KT-55 Plastic Fines In Combined Aggregates By Use Of The Sand Equivalent Test

Revised: March 2020

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	
<b>Sample Preparation</b>							
1.	<u>Sample pulverized and passed through No. 4 (4.75mm) sieve. (5.1.)</u>	PASS	FAIL	PASS	FAIL	PASS	FAIL
2.	<u>Clean all fines from the particles retained on the No. 4 (4.75 mm) sieve and include with the material passing the No. 4 (4.75 mm) sieve. (5.1)</u>	PASS	FAIL	PASS	FAIL	PASS	FAIL
3.	Split or quartered to yield slightly more than four-3 oz (85 mL) tin measures of material passing the No. 4 (4.75 mm) sieve. Dampen the material to avoid loss or segregation of the fines if necessary. (5.2.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
4.	Use enough minus No. 4 (4.75 mm) material to fill the tin measure so it is slightly rounded above the brim. (5.3.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
5.	Tap the bottom edge of the tin measure on a hard surface to cause consolidation of the material as it is being filled. (5.3.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
6.	Strike off the tin measure level full with a spatula or straightedge. (5.3.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
7.	<u>Dry the test sample to constant mass at 230 +/- 9°F (110 +/- 5°C), cool to room temperature before testing. (5.3.2.)</u>	PASS	FAIL	PASS	FAIL	PASS	FAIL
<b>Procedure</b>							

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8.	For each test sample siphon 4 +/- 0.1 in (101.6 +/- 2.5mm) of working calcium chloride solution into the plastic cylinder. (6.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
9.	Pour sample from the measuring tin into the plastic cylinder using the funnel to avoid spillage. (6.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
10.	Tap the bottom of the cylinder sharply on the heel of the hand several times to release air bubbles and to promote thorough wetting of the sample. (6.1.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
11.	Allow the wetted sample to stand undisturbed for 10 +/- 1 minutes. (6.2.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
12.	Stopper the cylinder and loosen the material from the bottom by partially inverting the cylinder and shaking simultaneously. (6.2.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
13.	Place stoppered cylinder in the mechanical shaker and set timer for 45 seconds. (6.3.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
14.	Following shaking, set cylinder upright on worktable and remove stopper. (6.4.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
15.	Insert irrigator tube in the cylinder and rinse material from the cylinder walls as the irrigator is lowered. Force the irrigator through the material to the bottom of the cylinder by gentle stabbing and twisting action while solution flows from tip. (6.5)	PASS	FAIL	PASS	FAIL	PASS	FAIL
16.	Apply stabbing and twisting motion until the cylinder is filled to the 15 in. (381mm) mark. (6.5.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
17.	Raise the irrigator slowly without shutting off the flow so that the liquid level is maintained at 15 in (381 mm) while the irrigator is being withdrawn. Adjust the final level to 15 in. (381 mm) (6.5.)	PASS	FAIL	PASS	FAIL	PASS	FAIL

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18.	Start timing immediately after withdrawing the tube. Allow the cylinder and contents to stand undisturbed for 20 minutes +/- 15 seconds. (6.6.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
19.	After sedimentation period, read and record the top level of the clay suspension. (6.7.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
20.	Place the weighted foot assembly over the cylinder and gently lower the assembly toward the sand. Do not allow the indicator to hit the mouth of the cylinder. As the weighted foot assembly comes to rest on the sand, tip it until the indicator touches the inside of the cylinder. Subtract 10 in (254 mm) from the level indicated by the extreme top edge of the indicator and record this value as the sand reading. (6.8.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
21.	If clay/sand readings fall between 0.1 in (2.5 mm) graduations, record the level of the higher graduation as the reading. (6.9.)	PASS	FAIL	PASS	FAIL	PASS	FAIL

### Overall Score

Circle One

**1st Test**

PASS

FAIL

**Stopped Test**

PASS

FAIL

**Re-Test**

PASS

FAIL

**Witness Examiner:**

(First Try)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**Witness Examiner:**

(Stopped Try)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**Witness Examiner:**

(Re-Test)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date