

Soils Field Testing Technician

KT-12 Standard Compaction Test (Fine)

Revised July 2024

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 Fine						
1.	<u>Obtain a 60 to 80 lb (30 to 35 kg) sample, dry at 140°F (60°C) if necessary. Break it down to pass the No. 4 (4.75 mm) sieve. Discard granular particles retained on the sieve. (4.1.1.)</u>	PASS	FAIL	PASS	FAIL	PASS	FAIL
2.	<u>Mix thoroughly and weigh out six portions, each weighing 5 lb (2200 g). (4.1.2.)</u>	PASS	FAIL	PASS	FAIL	PASS	FAIL
3.	<u>Add a measured amount of water (approximately 12% by dry mass) to one 5 lb (2200 g) portion and thoroughly mix it into the sample. (4.2.1.)</u>	PASS	FAIL	PASS	FAIL	PASS	FAIL
4.	<u>The sample of soil water mixture shall be placed in a closed container to minimize moisture loss. The sample shall then be allowed to stand for a minimum of 12 hours before conducting the moisture density test. (4.2.2.)</u>	PASS	FAIL	PASS	FAIL	PASS	FAIL
	Test Procedure						
5.	<u>Obtain the mass of both the mold and base attached together. (It is suggested that the mold and collar be lightly coated with a light lubricant). (4.2.3.)</u>	PASS	FAIL	PASS	FAIL	PASS	FAIL
6.	<u>Place the assembled mold on the rigid base and fill the mold so that the compacted layer will equal 1/3 of the mold volume. (4.2.4.)</u>	PASS	FAIL	PASS	FAIL	PASS	FAIL

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7.	Compact the material with 25 blows of the rammer dropped from a height of 12 in (304.8 mm) above the surface of the material. Distribute the blows of the rammer evenly over the surface. (4.2.5.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
8.	Place two more layers of the material in the mold and compact each layer as stipulated above. (4.2.6.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
9.	Remove the top collar and trim the excess material level with the top of the mold. (4.2.7.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
10.	<u>Weigh the sample to the nearest 5 g while it is in the mold and still attached to the base. (4.2.9.)</u>	PASS	FAIL	PASS	FAIL	PASS	FAIL
11.	Remove the material from the mold and slice vertically through the center. Take a representative sample, weighing a minimum of 100 g, of the material from one of the cut faces, determine the mass immediately and dry in accordance with KT-11 to determine moisture content. (4.2.11.)	PASS	FAIL	PASS	FAIL	PASS	FAIL
12.	<u>Repeat the compaction procedure using the other 5 lb (2200 g) increments of the sample to which different measured amounts of water have been added. (4.2.10.)</u>	PASS	FAIL	PASS	FAIL	PASS	FAIL
13.	<u>This procedure will be continued with varying moisture contents until at least three points are obtained on the dry side of “optimum moisture” and at least two points are obtained on the wet side of “optimum moisture”. (4.2.10.)</u>	PASS	FAIL	PASS	FAIL	PASS	FAIL

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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