

U.S. Army Corps of Engineers (USACE)

TRIAxIAL COMPRESSION TEST

For use of this form, see EM 1110-2-1906; the Proponent agency is CECW-EC.

Purpose: This form is used to document triaxial compression tests using specimen data.

1. Project		2. Date	
3. Boring Number		4. Sample Number	
5. Type of Test:		6. Confining Pressure: T/sq. ft.	
7. Test Number		8. Classification:	

9.	PART I - Before Test				PART II - After Test	
	Specimen		Trimmings		Specimen	
a. Tare Number						
b. Weight in Grams	(1). Tare Plus Wet Soil					
	(2). Tare Plus Dry Soil					
	(3). Water	W _w	W _{wo}		W _{wf}	
	(4). Tare					
	(5). Wet Soil	W				
	(6). Dry Soil	W _s				
c. Water Content	w	%	w _o		w _f	%

SECTION I - INITIAL CONDITION OF SPECIMEN

1a. Diameter, cm.	D _o	b. Top	c. Center	d. Bottom	e. Average
2. Height in cm.	H _o			3. Volume of Solids in cc.	V _s
4. Area in sq. cm. = 0.7854 D _o ²	A _o			5. Void Ratio = (V _o - V _s) ÷ V _s	e _o
6. Volume in cc = A x H _o	V _o			7. Saturation, %	S _o
8. Specific Gravity of Solids	G _s			9. Dry Density in lb. / cu. ft.	Y _d

SECTION II - CONDITION OF SPECIMEN AFTER CONSOLIDATION (R and S Tests)

1. Change in Height During Consolidation, in.	ΔH _o			2. Volume in cc = A _c x H _c	V _c
3. Height in cm = H _o - 2.54 x ΔH _o	H _c			4. Void Ratio = (V _c - V _s) ÷ V _s	e _c
5. Area in sq. cm.	A _c			6. Void Ratio = (V _c - V _s) ÷ V _s	S _c

SECTION III - CONDITION OF SPECIMEN AFTER TEST (R and S Tests)

1a. Diameter, cm.	D _f	b. Top	c. Center	d. Bottom	e. Average
2. Change in Height During Shear Test, in.	ΔH			3. Volume in cc = A _f x H _f	V _f
4. Height in cm = H _c - 2.54xΔH	H _f			5. Void Ratio = (V _f - V _s) ÷ V _s	e _f
6. Area in sq. cm.	A _f			7. Saturation, %	S _f

$$W_s = W / w \quad V_s = W_s / G_s \quad S_o = (W_o / 100 \times W_s / \gamma_w) / (V_o - V_s) \times 100 \quad S_c = (W_c / 100 \times W_s / \gamma_w) / (V_c - V_s) \times 100$$

$$S_f = (W_f / 100 \times W_s / \gamma_w) / (V_f - V_s) \times 100 \quad Y_d = (W_s / V_o) \times 62.4 \quad A_c = A_o (H_o - 2H_o) / H_o$$

10. Remarks

11a. Technician (Last, First Mi)	b. Date	c. Technician's Signature
12a. Computed By (Last, First Mi)	b. Date	c. Computed By Signature
13a. Checked By (Last, First Mi)	b. Date	c. Checked By Signature