

AVERAGE VALUE OF PHYSICO - MECHANICAL PROPERTIES

Layer 4c : Medium dense, yellowish brown poorly graded SAND with SILT (SPSM)

Table : 7

No	Property	Sign	Average value.	Maximum value	Minimum value	Number of test
1	Sieve Analysis, % Passing					
	3/4" (19 mm)					
	1/2" (12.5 mm)					
	3/8" (9.5 mm)					
	#4 (4.75 mm)					
	#8 (2.36 mm)		100.0	100.0	100.0	2
	#16 (1.18 mm)		84.1	89.7	78.5	2
	#30 (0.6 mm)		63.8	79.6	57.0	2
	#50 (0.3 mm)		27.6	28.9	26.2	2
	#100 (0.15 mm)		14.6	15.1	14.1	2
	#200 (0.075 mm)		11.4	11.9	10.8	2
	< 0.005 mm		3.3	3.3	3.3	2
2	Natural moisture content (%)	w	13.79	14.78	12.80	2
3	Natural unit weight (g/cm ³)	γ	1.394	1.963	1.904	2
4	Dry unit weight (g/cm ³)	γ_d	1.700	1.740	1.659	2
5	Specific gravity	G _s	2.636	2.639	2.632	2
6	Porosity	n	0.36	0.37	0.34	2
7	Void ratio	e _o	0.552	0.591	0.512	2
8	Degree saturation (%)	S	65.9	66.0	65.7	2
9	Liquid limit (%)	LL				
10	Plastic limit (%)	LP				
11	Plastic index (%)	PI				
12	Water plasticity ratio (%)	B				
13	Unconfined compression (Kg/cm ²)	qu				
14	Compression index	C _c				
15	Coefficient of consolidation (cm ² /Kg)	C _v				
16	Preconsolidation pressure (kg/cm ²)	P _c				
17	Coefficient of volum compressibility (cm ² /g)	M _v				
18	Permeability (cm/sec)	k ₂₀				

AVERAGE VALUE OF PHYSICO - MECHANICAL PROPERTIES

Layer 4d : Medium dense, reddish brown well graded SAND with SILT (SWSM)

Table : 8

No	Property	Sign	Average value.	Maximum value	Minimum value	Number of test
1	Sieve Analysis, % Passing					
	3/4" (19 mm)					
	1/2" (12.5 mm)		100.0	100.0	100.0	3
	3/8" (9.5 mm)		99.7	100.0	99.1	3
	#4 (4.75 mm)		98.3	100.0	95.0	3
	#8 (2.36 mm)		95.0	100.0	84.9	3
	#16 (1.18 mm)		75.8	89.6	66.7	3
	#30 (0.6 mm)		53.5	72.6	38.9	3
	#50 (0.3 mm)		22.7	25.6	20.7	3
	#100 (0.15 mm)		11.1	11.5	10.4	3
	#200 (0.075 mm)		8.8	9.2	8.1	3
	< 0.005 mm		3.6	5.2	2.7	3
2	Natural moisture content (%)	w	13.97	15.86	11.76	3
3	Natural unit weight (g/cm ³)	γ	1.893	1.966	1.832	3
4	Dry unit weight (g/cm ³)	γ_d	1.662	1.759	1.584	3
5	Specific gravity	G _s	2.643	2.651	2.636	3
6	Porosity	n	0.37	0.40	0.33	3
7	Void ratio	e _o	0.593	0.664	0.502	3
8	Degree saturation (%)	S	62.2	62.6	61.9	3
9	Liquid limit (%)	LL				
10	Plastic limit (%)	LP				
11	Plastic index (%)	PI				
12	Water plasticity ratio (%)	B				
13	Unconfined compression (Kg/cm ²)	qu				
14	Compression index	C _c	0.3784			1
15	Coefficient of consolidation (cm ² /Kg)	C _v	5.35E-04			1
16	Preconsolidation pressure (kg/cm ²)	P _c	2.378			1
17	Coefficient of volum compressibility (cm ² /g)	M _v	2.68E-05			1
18	Permeability (cm/sec)	k ₂₀	1.37E-08			1

AVERAGE VALUE OF PHYSICO - MECHANICAL PROPERTIES
Layer 5 : Hard, high plasticit brownish greyCLAY (CH)

Table : 9

No	Property	Sign	Average value.	Maximum value	Minimum value	Number of test
1	Sieve Analysis, % Passing					
	3/4" (19 mm)					
	1/2" (12.5 mm)					
	3/8" (9.5 mm)					
	#4 (4.75 mm)					
	#8 (2.36 mm)					
	#16 (1.18 mm)		100.0	100.0	100.0	3
	#30 (0.6 mm)		99.9	100.0	99.8	3
	#50 (0.3 mm)		99.8	100.0	99.5	3
	#100 (0.15 mm)		99.5	100.0	98.4	3
	#200 (0.075 mm)		97.3	98.6	96.1	3
	< 0.005 mm		78.2	81.1	72.5	3
2	Natural moisture content (%)	w	20.73	22.60	18.96	3
3	Natural unit weight (g/cm ³)	γ	2.061	2.080	2.051	3
4	Dry unit weight (g/cm ³)	γ _d	1.708	1.726	1.673	3
5	Specific gravity	G _s	2.687	2.691	2.685	3
6	Porosity	n	0.36	0.38	0.36	3
7	Void ratio	e _o	0.574	0.605	0.556	3
8	Degree saturation (%)	S	97.0	100.0	91.5	3
9	Liquid limit (%)	LL				
10	Plastic limit (%)	LP				
11	Plastic index (%)	PI				
12	Water plasticity ratio (%)	B				
13	Unconfined compression (Kg/cm ²)	qu				
14	Compression index	C _c				
15	Coefficient of consolidation (cm ² /Kg)	C _v				
16	Preconsolidation pressure (kg/cm ²)	P _c				
17	Coefficient of volum compressibility (cm ² /g)	M _v				
18	Permeability (cm/sec)	k ₂₀				

2 . BORING LOGS