DYNAMIC MONITORS.COM

Toll Free 1-888-747-7645 (SOIL)

ETC SLOW SOILS PASK CONSTANT HEAD WELL PERMEAMETER SINGLE PONDED HEIGHT METHOD

Coarse and gravelly sands; may also include some highly structured soils with large cracks and /or macropores

d – well hole diameter (cm)	8.3	**α* - sat/unsat flow ratio (cm-1)**	0.12
H – height of water in well (cm)	15.0	**C – shape factor**	1.36

R(cm/min)	Kfs (inch/hr)
0.01	0.002
0.02	0.004
0.03	0.005
0.04	0.007
0.05	0.009
0.06	0.011
0.07	0.013
0.08	0.014
0.09	0.02
0.10	0.02
0.15	0.03
0.20	0.04
0.25	0.05
0.30	0.05
0.35	0.06
0.40	0.07
0.45	0.08
0.50	0.09
0.55	0.10
0.60	0.11
0.65	0.12
0.70	0.13
0.75	0.14
0.80	0.14
0.85	0.15
0.90	0.16
0.95	0.17
1.0	0.2
1.1	0.2
1.2	0.2
1.3	0.2
1.4	0.3
1.5	0.3
1.6	0.3
1.7	0.3
1.8	0.3
1.9	0.3
2.0	0.4
2.1	0.4
2.2	0.4
2.3	0.4
2.4	0.4
2.5	0.5
2.6	0.5

R(cm/min)	Kfs (inch/hr)
2.7	0.5
2.8	0.5
2.9	0.5
3.0	0.5
3.1	0.6
3.2	0.6
3.3	0.6
3.4	0.6
3.5	0.6
3.6	0.7
3.7	0.7
3.8	0.7
3.9	0.7
4.0	0.7
4.1	0.7
4.2	0.8
4.3	0.8
4.4	0.8
4.5	0.8
4.6	0.8
4.7	0.8
4.8	0.9
4.9	0.9
5.0	0.9
5.5	1.0
6.0	1.1
6.5	1.2
7.0	1.3
7.5	1.4
8.0	1.4
8.5	1.5
9.0	1.6
9.5	1.7
10.0	2
11.0	2
12.0	2
13.0	2
14.0	3
15.0	3
16.0	3
17.0	3
18.0	3
19.0	3
20.0	4

R(cm/min)	Kfs (inch/hr)
21.0	4
22.0	4
23.0	4
24.0	4
25.0	5
26.0	5
27.0	5
28.0	5
29.0	5
30.0	5
31.0	6
32.0	6
33.0	6
34.0	6
35.0	6
36.0	7
37.0	7
38.0	7
39.0	7
40.0	7
41.0	7
42.0	8
43.0	8
44.0	8
45.0	8
46.0	8
47.0	8
48.0	9
49.0	9
50.0	9
52.0	9
54.0	10
56.0	10
58.0	10
60.0	11
62.0	11
64.0	12
66.0	12
68.0	12
70.0	13
72.0	13
74.0	13
76.0	14
78.0	14

R – quasi steady-state rate of fall **Kfs – field saturated hydraulic conductivity**

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d – well hole diameter (cm)	8.3	**α* - sat/unsat flow ratio (cm-1)**	0.04
H – height of water in well (cm)	15.0	**C – shape factor**	1.35

R(cm/min)	Kfs (inch/hr)
0.001	0.0001
0.002	0.0002
0.003	0.0003
0.004	0.0004
0.005	0.0005
0.006	0.0006
0.007	0.0007
0.008	0.0009
0.009	0.0010
0.010	0.0011
0.015	0.0016
0.020	0.002
0.025	0.003
0.030	0.003
0.035	0.004
0.040	0.004
0.045	0.005
0.050	0.005
0.055	0.006
0.060	0.006
0.065	0.007
0.070	0.007
0.075	0.008
0.080	0.009
0.085	0.009
0.090	0.010
0.095	0.010
0.10	0.01
0.15	0.02
0.20	0.02
0.25	0.03
0.30	0.03
0.35	0.04
0.40	0.04
0.45	0.05
0.50	0.05
0.55	0.06
0.60	0.06
0.65	0.07
0.70	0.07
0.75	0.08
0.80	0.09
0.85	0.09
0.90	0.10

R(cm/min)	Kfs (inch/hr)
0.95	0.10
1.00	0.11
1.10	0.12
1.20	0.13
1.30	0.14
1.40	0.15
1.50	0.16
1.60	0.17
1.70	0.18
1.80	0.19
1.90	0.20
2.00	0.21
2.10	0.2
2.20	0.2
2.30	0.2
2.40	0.3
2.50	0.3
2.60	0.3
2.70	0.3
2.80	0.3
2.90	0.3
3.00	0.3
3.10	0.3
3.20	0.3
3.30	0.4
3.40	0.4
3.50	0.4
3.60	0.4
3.70	0.4
3.80	0.4
3.90	0.4
4.00	0.4
4.10	0.4
4.20	0.4
4.30	0.5
4.40	0.5
4.50	0.5
4.60	0.5
4.70	0.5
4.80	0.5
4.90	0.5
5.00	0.5
5.10	0.5
5.20	0.6

R(cm/min)	Kfs (inch/hr)
5.30	0.6
5.40	0.6
5.50	0.6
5.60	0.6
5.70	0.6
5.80	0.6
5.90	0.6
6.00	0.6
6.10	0.6
6.20	0.7
6.30	0.7
6.40	0.7
6.50	0.7
6.60	0.7
6.70	0.7
6.80	0.7
6.90	0.7
7.00	0.7
7.50	0.8
8.00	0.9
8.50	0.9
9.00	1.0
9.50	1.0
10.0	1.1
11.0	1.2
12.0	1.3
13.0	1.4
14.0	1.5
15.0	1.6
16.0	1.7
17.0	1.8
18.0	1.9
19.0	2.0
20.0	2.1
25.0	3
30.0	3
35.0	4
40.0	4
45.0	5
50.0	5
55.0	6
60.0	6
65.0	7
70.0	7

R – quasi steady-state rate of fall **Kfs – field saturated hydraulic conductivity**

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H – height of water in well (cm)	15.0	**C – shape factor**	1.27

R(cm/min)	Kfs (inch/hr)
0.001	0.0000
0.002	0.0001
0.003	0.0001
0.004	0.0001
0.005	0.0002
0.006	0.0002
0.007	0.0002
0.008	0.0003
0.009	0.0003
0.010	0.0004
0.015	0.0005
0.020	0.001
0.025	0.001
0.030	0.001
0.035	0.001
0.040	0.001
0.045	0.002
0.050	0.002
0.055	0.002
0.060	0.002
0.065	0.002
0.070	0.002
0.075	0.003
0.080	0.003
0.085	0.003
0.090	0.003
0.095	0.003
0.10	0.004
0.15	0.005
0.20	0.007
0.25	0.009
0.30	0.011
0.35	0.012
0.40	0.014
0.45	0.016
0.50	0.018
0.55	0.019
0.60	0.021
0.65	0.023
0.70	0.025
0.75	0.027
0.80	0.028
0.85	0.030
0.90	0.032

R(cm/min)	Kfs (inch/hr)
0.95	0.03
1.00	0.04
1.10	0.04
1.20	0.04
1.30	0.05
1.40	0.05
1.50	0.05
1.60	0.06
1.70	0.06
1.80	0.06
1.90	0.07
2.00	0.07
2.10	0.07
2.20	0.08
2.30	0.08
2.40	0.08
2.50	0.09
2.60	0.09
2.70	0.10
2.80	0.10
2.90	0.10
3.00	0.11
3.10	0.11
3.20	0.11
3.30	0.12
3.40	0.12
3.50	0.12
3.60	0.13
3.70	0.13
3.80	0.13
3.90	0.14
4.00	0.14
4.10	0.14
4.20	0.15
4.30	0.15
4.40	0.16
4.50	0.16
4.60	0.16
4.70	0.17
4.80	0.17
4.90	0.17
5.00	0.18
5.10	0.18
5.20	0.18

R(cm/min)	Kfs (inch/hr)
5.30	0.19
5.40	0.19
5.50	0.19
5.60	0.20
5.70	0.20
5.80	0.20
5.90	0.21
6.00	0.21
6.10	0.22
6.20	0.22
6.30	0.22
6.40	0.23
6.50	0.23
6.60	0.23
6.70	0.24
6.80	0.24
6.90	0.24
7.00	0.25
7.50	0.27
8.00	0.28
8.50	0.30
9.00	0.32
9.50	0.34
10.0	0.4
11.0	0.4
12.0	0.4
13.0	0.5
14.0	0.5
15.0	0.5
16.0	0.6
17.0	0.6
18.0	0.6
19.0	0.7
20.0	0.7
25.0	0.9
30.0	1.1
35.0	1.2
40.0	1.4
45.0	1.6
50.0	1.8
55.0	1.9
60.0	2.1
65.0	2.3
70.0	2.5

R – quasi steady-state rate of fall

Kfs – field saturated hydraulic conductivity

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