SEZIONE 0

ANALISI DI STABILITÀ GLOBALE – FASE STATICA

1 Project Settings

Length(L) Units: meters
Time(t) Units: Seconds
Force(F) Units: kN
Pressure(p) Units: kPa
Strength Units: kPa
Unit Weight of Water: 9.807 kN/m³
View: 2D

2 Analysis Settings

3 SLOPE/W Analysis

Kind: SLOPE/W
Method: Morgenstern-Price
Settings
- Apply Phreatic Correction: No
- Side Function
  - Interslice force function option: Half-Sine
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

SlipSurface
- Direction of movement: Right to Left
- Allow Passive Mode: Yes
- Slip Surface Option: Grid and Radius
- Critical slip surfaces saved: 1
- Optimize Critical Slip Surface Location: No
- Tension Crack
  - Tension Crack Option: (none)

FOS Distribution
- FOS Calculation Option: Constant

Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 m
- Minimum Slice Width: 0.1 m
- Optimization Maximum Iterations: 2000
- Optimization Convergence Tolerance: 1e-007
- Starting Optimization Points: 8
- Ending Optimization Points: 16
- Complete Passes per Insertion: 1

4 Materials

5 FYN_1

Model: Mohr-Coulomb
Unit Weight: 20 kN/m³
Cohesion: 60 kPa
Phi: 13.3 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

6 FYN_2

Model: Mohr-Coulomb
Unit Weight: 21.5 kN/m³
Cohesion: 18.4 kPa
Phi: 30.6 °
Phi-B: 0 °
Pore Water Pressure
    Piezometric Line: 1

7 Slip Surface Grid

Upper Left: (1322.1154, 1516.1163) m
Lower Left: (1335.7925, 1403.74) m
Lower Right: (1467.9699, 1419.2543) m
Grid Horizontal Increment: 50
Grid Vertical Increment: 50
Left Projection Angle: 0 °
Right Projection Angle: 0 °

8 Slip Surface Radius

Upper Left Coordinate: (1399.9672, 1371.7855) m
Upper Right Coordinate: (1399.9672, 1371.7855) m
Lower Left Coordinate: (1399.9672, 1371.7855) m
Lower Right Coordinate: (1399.9672, 1371.7855) m
Number of Increments: 0
Left Projection: No
Left Projection Angle: 135 °
Right Projection: No
Right Projection Angle: 45 °
UsePoints: 0

9 Slip Surface Limits

Left Coordinate: (1300, 1384.7) m
Right Coordinate: (1500, 1426.006) m

10 Piezometric Lines

11 Piezometric Line 1

12 Coordinates

	X (m)	Y (m)
	1300	1384.7
	1400	1384.7
	1400.399	1388.904
	1401.35	1400
	1500	1409.225

13 Reinforcements

14 Reinforcement 1

Type: Anchor
Outside Point: (1400, 1394) m
Inside Point: (1428.5, 1394) m
Slip Surface Intersection: (1435.3, 1394) m
Total Length: 28.5 m
Reinforcement Direction: 180 °
Applied Load Option: Constant
F of S Dependent: No
Bond Length: 7 m
Bond Diameter: 0.192 m
Bond Safety Factor: 2.16
Bond Skin Friction: 200 kPa
Bond Resistance: 16.426628 kN/m
Anchor Spacing: 3.4 m
Bar Capacity: 0 kN
Bar Safety Factor: 1
Bar Load: 0 kN
Load Distribution: Conc. in 1 slice
Shear Capacity: 0 kN
Shear Safety Factor: 1
Shear Option: Parallel to Slip
Shear Load: 0 kN
Applied Load: 0 kN
Anchor Load Used: 0 kN
Resisting Force Used: 16.427 kN/m
Available Bond Length: 0 m
Required Bond Length: 0 m
Governing Component: Bond

15 Reinforcement 2

Type: Anchor
Outside Point: (1400, 1392) m
Inside Point: (1427, 1392) m
Slip Surface Intersection: (1433.9, 1392) m
Total Length: 27 m
Reinforcement Direction: 180 °
Applied Load Option: Constant
F of S Dependent: No
Bond Length: 7 m

Bond Diameter: 0.196 m
Bond Safety Factor: 2.16
Bond Skin Friction: 200 kPa
Bond Resistance: 16.76885 kN/m
Anchor Spacing: 3.4 m
Bar Capacity: 0 kN
Bar Safety Factor: 1
Bar Load: 0 kN
Load Distribution: Conc. in 1 slice
Shear Capacity: 0 kN
Shear Safety Factor: 1
Shear Option: Parallel to Slip
Shear Load: 0 kN
Applied Load: 0 kN
Anchor Load Used: 0 kN
Resisting Force Used: 16.769 kN/m
Available Bond Length: 0 m
Required Bond Length: 0 m
Governing Component: Bond

16 Reinforcement 3

Type: Anchor
Outside Point: (1400, 1390) m
Inside Point: (1425.5, 1390) m
Slip Surface Intersection: (1432.6, 1390) m
Total Length: 25.5 m
Reinforcement Direction: 180 °
Applied Load Option: Constant
F of S Dependent: No
Bond Length: 7 m
Bond Diameter: 0.196 m
Bond Safety Factor: 2.16
Bond Skin Friction: 200 kPa
Bond Resistance: 16.76885 kN/m
Anchor Spacing: 3.4 m
Bar Capacity: 0 kN
Bar Safety Factor: 1
Bar Load: 0 kN
Load Distribution: Conc. in 1 slice
Shear Capacity: 0 kN
Shear Safety Factor: 1
Shear Option: Parallel to Slip
Shear Load: 0 kN
Applied Load: 0 kN
Anchor Load Used: 0 kN
Resisting Force Used: 16.769 kN/m
Available Bond Length: 0 m
Required Bond Length: 0 m
Governing Component: Bond

17 Reinforcement 4

Type: Anchor
Outside Point: (1400, 1388) m

Inside Point: (1424, 1388) m
Slip Surface Intersection: (1431, 1388) m
Total Length: 24 m
Reinforcement Direction: 180 °
Applied Load Option: Constant
F of S Dependent: No
Bond Length: 7 m
Bond Diameter: 0.196 m
Bond Safety Factor: 2.16
Bond Skin Friction: 200 kPa
Bond Resistance: 16.76885 kN/m
Anchor Spacing: 3.4 m
Bar Capacity: 0 kN
Bar Safety Factor: 1
Bar Load: 0 kN
Load Distribution: Conc. in 1 slice
Shear Capacity: 0 kN
Shear Safety Factor: 1
Shear Option: Parallel to Slip
Shear Load: 0 kN
Applied Load: 0 kN
Anchor Load Used: 0 kN
Resisting Force Used: 16.769 kN/m
Available Bond Length: 0 m
Required Bond Length: 0 m
Governing Component: Bond

18 Regions

	Material	Points	Area (m²)
Region 1	FYN_1	23,19,6,7,9,8,22	1487.2015
Region 2	FYN_2	18,5,1,2,3,15,16,17,10,22,23	14973.999

19 Points

	X (m)	Y (m)
Point 1	1300	1317.244
Point 2	1300	1384.7
Point 3	1400	1384.7
Point 4	1400	1371.8
Point 5	1500	1317.244
Point 6	1500	1426.006
Point 7	1400	1402.794
Point 8	1400	1400
Point 9	1400	1400.8
Point 10	1400	1394
Point 11	1428.5	1394
Point 12	1427	1392
Point 13	1425.5	1390

Point 14	1424	1388
Point 15	1400	1388
Point 16	1400	1390
Point 17	1400	1392
Point 18	1500	1390
Point 19	1500	1409.225
Point 20	1401.35	1400
Point 21	1400.399	1388.904
Point 22	1400	1399.5459
Point 23	1500	1399.51

20 Critical Slip Surfaces

	Number	FOS	Center (m)	Radius (m)	Entry (m)	Exit (m)
1	177	1.505	(1395.77, 1417.62)	46.025	(1441.51, 1412.43)	(1363.61, 1384.7)

21 Slices of Slip Surface: 177

	Slip Surface	X (m)	Y (m)	PWP (kPa)	Base Normal Stress (kPa)	Frictional Strength (kPa)	Cohesive Strength (kPa)
1	177	1364.9075	1383.5235	11.538913	52.897619	24.45947	18.4
2	177	1367.507	1381.3345	33.006285	115.23673	48.630948	18.4
3	177	1370.1065	1379.448	51.508807	169.29749	69.660035	18.4
4	177	1372.7055	1377.8205	67.468078	215.37131	87.469729	18.4
5	177	1375.305	1376.4215	81.189223	253.57593	101.94921	18.4
6	177	1377.9045	1375.228	92.894172	284.00696	113.02379	18.4
7	177	1380.504	1374.2225	102.75178	306.86911	120.71465	18.4
8	177	1383.1035	1373.393	110.88675	322.47912	125.13538	18.4
9	177	1385.703	1372.729	117.39967	331.2986	126.49947	18.4
10	177	1388.3025	1372.2235	122.35701	333.89487	125.10314	18.4
11	177	1390.902	1371.8715	125.8114	330.92197	121.30205	18.4
12	177	1393.5015	1371.6685	127.79765	323.06936	115.48336	18.4
13	177	1396.101	1371.6135	128.33908	311.02665	108.04113	18.4
14	177	1398.7005	1371.706	127.43355	295.43945	99.35841	18.4
15	177	1400.1995	1371.808	147.04712	681.31375	315.96441	18.4
16	177	1400.855	1371.8775	219.15684	672.69414	268.22121	18.4
17	177	1402.643	1372.1295	274.52882	656.60623	225.95995	18.4
18	177	1405.287	1372.608	272.24258	634.99909	214.5336	18.4
19	177	1407.9115	1373.244	268.41173	611.29286	202.77933	18.4
20	177	1410.5365	1374.048	262.93436	585.83418	190.96242	18.4
21	177	1413.161	1375.0285	255.72876	558.83677	179.25758	18.4
22	177	1415.7855	1376.198	246.66353	530.43191	167.82015	18.4
23	177	1418.4105	1377.574	235.57612	500.52504	156.69035	18.4
24	177	1421.0355	1379.1785	222.2484	468.77786	145.79712	18.4
25	177	1423.66	1381.0415	206.38822	434.69448	135.01994	18.4

26	177	1426.2845	1383.2055	187.5714	397.32237	124.04638	18.4
27	177	1428.9095	1385.733	165.19175	355.29567	112.42715	18.4
28	177	1431.534	1388.7205	138.29909	306.52244	99.487009	18.4
29	177	1434.1585	1392.3365	105.2392	247.3751	84.058935	18.4
30	177	1436.7835	1396.9305	62.593813	170.71555	63.943015	18.4
31	177	1438.85	1401.5545	19.14289	74.941303	13.190186	60
32	177	1440.5545	1408.0025	-42.528983	-55.742794	-13.177038	60

SEZIONE 1

ANALISI DI STABILITÀ GLOBALE – FASE STATICA

Project Settings

Length(L) Units: meters
Time(t) Units: Seconds
Force(F) Units: kN
Pressure(p) Units: kPa
Strength Units: kPa
Unit Weight of Water: 9.807 kN/m³
View: 2D

Analysis Settings

SLOPE/W Analysis

Kind: SLOPE/W
Method: Morgenstern-Price
Settings
    Apply Phreatic Correction: No
    Side Function
        Interslice force function option: Half-Sine
    PWP Conditions Source: Piezometric Line
    Use Staged Rapid Drawdown: No
SlipSurface
    Direction of movement: Right to Left
    Allow Passive Mode: Yes
    Slip Surface Option: Grid and Radius
    Critical slip surfaces saved: 1
    Optimize Critical Slip Surface Location: No
    Tension Crack
        Tension Crack Option: (none)
FOS Distribution
    FOS Calculation Option: Constant
Advanced
    Number of Slices: 30
    Optimization Tolerance: 0.01
    Minimum Slip Surface Depth: 0.1 m
    Minimum Slice Width: 0.1 m
    Optimization Maximum Iterations: 2000
    Optimization Convergence Tolerance: 1e-007
    Starting Optimization Points: 8
    Ending Optimization Points: 16
    Complete Passes per Insertion: 1

Materials

FYN_1

Model: Mohr-Coulomb
Unit Weight: 20 kN/m³
Cohesion: 60 kPa
Phi: 13.3 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

FYN_2

Model: Mohr-Coulomb
Unit Weight: 21.5 kN/m³
Cohesion: 18.4 kPa
Phi: 30.6 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Grid

Upper Left: (1347.64, 1513.8257) m
Lower Left: (1360.3394, 1439.4606) m
Lower Right: (1443.9189, 1449.4429) m
Grid Horizontal Increment: 50
Grid Vertical Increment: 50
Left Projection Angle: 0 °
Right Projection Angle: 0 °

Slip Surface Radius

Upper Left Coordinate: (1416.1361, 1371.0012) m
Upper Right Coordinate: (1416.1361, 1371.0012) m
Lower Left Coordinate: (1416.1361, 1371.0012) m
Lower Right Coordinate: (1416.1361, 1371.0012) m
Number of Increments: 0
Left Projection: No
Left Projection Angle: 135 °
Right Projection: No
Right Projection Angle: 45 °
UsePoints: 0

Slip Surface Limits

Left Coordinate: (1248.163, 1384.79) m
Right Coordinate: (1496.6592, 1406.9521) m

Piezometric Lines

Piezometric Line 1

Coordinates

	X (m)	Y (m)
	1302.5027	1382.6029
	1397.8883	1399.832
	1399.7119	1391.3223
	1400.0037	1388.1403
	1406.0472	1384.9232
	1410.3186	1384.8561
	1416.2333	1388.2255
	1416.4031	1390.7389
	1416.8483	1399.677
	1496.4736	1400.7104

Reinforcements

Reinforcement 1

Type: Anchor
Outside Point: (1400.001, 1397.2) m
Inside Point: (1371.34, 1386.768) m
Slip Surface Intersection: (1337.9, 1374.6) m
Total Length: 30.500484 m
Reinforcement Direction: 20 °
Applied Load Option: Constant
F of S Dependent: No
Bond Length: 9 m
Bond Diameter: 0.192 m
Bond Safety Factor: 2.16
Bond Skin Friction: 200 kPa
Bond Resistance: 16.426628 kN/m
Anchor Spacing: 3.4 m
Bar Capacity: 0 kN
Bar Safety Factor: 1
Bar Load: 0 kN
Load Distribution: Conc. in 1 slice
Shear Capacity: 0 kN
Shear Safety Factor: 1
Shear Option: Parallel to Slip
Shear Load: 0 kN
Applied Load: 0 kN
Anchor Load Used: 0 kN
Resisting Force Used: 16.427 kN/m
Available Bond Length: 0 m
Required Bond Length: 0 m
Governing Component: Bond

Reinforcement 2

Type: Anchor
Outside Point: (1400.001, 1394.7) m
Inside Point: (1372.75, 1384.781) m

Slip Surface Intersection: (1341.5, 1373.4) m
Total Length: 29.000061 m
Reinforcement Direction: 20.001 °
Applied Load Option: Constant
F of S Dependent: No
Bond Length: 9 m
Bond Diameter: 0.192 m
Bond Safety Factor: 2.16
Bond Skin Friction: 200 kPa
Bond Resistance: 16.426628 kN/m
Anchor Spacing: 3.4 m
Bar Capacity: 0 kN
Bar Safety Factor: 1
Bar Load: 0 kN
Load Distribution: Conc. in 1 slice
Shear Capacity: 0 kN
Shear Safety Factor: 1
Shear Option: Parallel to Slip
Shear Load: 0 kN
Applied Load: 0 kN
Anchor Load Used: 0 kN
Resisting Force Used: 16.427 kN/m
Available Bond Length: 0 m
Required Bond Length: 0 m
Governing Component: Bond

Reinforcement 3

Type: Anchor
Outside Point: (1400, 1392.2) m
Inside Point: (1374.629, 1382.965) m
Slip Surface Intersection: (1345.3, 1372.3) m
Total Length: 26.999498 m
Reinforcement Direction: 20.001 °
Applied Load Option: Constant
F of S Dependent: No
Bond Length: 9 m
Bond Diameter: 0.228 m
Bond Safety Factor: 2.16
Bond Skin Friction: 200 kPa
Bond Resistance: 19.506621 kN/m
Anchor Spacing: 3.4 m
Bar Capacity: 0 kN
Bar Safety Factor: 1
Bar Load: 0 kN
Load Distribution: Conc. in 1 slice
Shear Capacity: 0 kN
Shear Safety Factor: 1
Shear Option: Parallel to Slip
Shear Load: 0 kN
Applied Load: 0 kN
Anchor Load Used: 0 kN
Resisting Force Used: 19.507 kN/m
Available Bond Length: 0 m

Required Bond Length: 0 m
Governing Component: Bond

Reinforcement 4

Type: Anchor
Outside Point: (1400, 1389.7) m
Inside Point: (1376.039, 1380.978) m
Slip Surface Intersection: (1349.3, 1371.2) m
Total Length: 25.499075 m
Reinforcement Direction: 20.002 °
Applied Load Option: Constant
F of S Dependent: No
Bond Length: 9 m
Bond Diameter: 0.228 m
Bond Safety Factor: 2.16
Bond Skin Friction: 220 kPa
Bond Resistance: 21.457283 kN/m
Anchor Spacing: 3.4 m
Bar Capacity: 0 kN
Bar Safety Factor: 1
Bar Load: 0 kN
Load Distribution: Conc. in 1 slice
Shear Capacity: 0 kN
Shear Safety Factor: 1
Shear Option: Parallel to Slip
Shear Load: 0 kN
Applied Load: 0 kN
Anchor Load Used: 0 kN
Resisting Force Used: 21.457 kN/m
Available Bond Length: 0 m
Required Bond Length: 0 m
Governing Component: Bond

Reinforcement 5

Type: Anchor
Outside Point: (1416.139, 1397.2) m
Inside Point: (1444.8, 1386.768) m
Slip Surface Intersection: (1450.7, 1384.6) m
Total Length: 30.500484 m
Reinforcement Direction: 160 °
Applied Load Option: Constant
F of S Dependent: No
Bond Length: 9 m
Bond Diameter: 0.192 m
Bond Safety Factor: 2.16
Bond Skin Friction: 200 kPa
Bond Resistance: 16.426628 kN/m
Anchor Spacing: 3.4 m
Bar Capacity: 0 kN
Bar Safety Factor: 1
Bar Load: 0 kN
Load Distribution: Conc. in 1 slice
Shear Capacity: 0 kN

Shear Safety Factor: 1
Shear Option: Parallel to Slip
Shear Load: 0 kN
Applied Load: 0 kN
Anchor Load Used: 0 kN
Resisting Force Used: 16.427 kN/m
Available Bond Length: 0 m
Required Bond Length: 0 m
Governing Component: Bond

Reinforcement 6

Type: Anchor
Outside Point: (1416.8213, 1394.3256) m
Inside Point: (1443.39, 1384.781) m
Slip Surface Intersection: (1448, 1383.1) m
Total Length: 28.231148 m
Reinforcement Direction: 160.24 °
Applied Load Option: Constant
F of S Dependent: No
Bond Length: 9 m
Bond Diameter: 0.192 m
Bond Safety Factor: 2.16
Bond Skin Friction: 200 kPa
Bond Resistance: 16.426628 kN/m
Anchor Spacing: 3.4 m
Bar Capacity: 0 kN
Bar Safety Factor: 1
Bar Load: 0 kN
Load Distribution: Conc. in 1 slice
Shear Capacity: 0 kN
Shear Safety Factor: 1
Shear Option: Parallel to Slip
Shear Load: 0 kN
Applied Load: 0 kN
Anchor Load Used: 0 kN
Resisting Force Used: 16.427 kN/m
Available Bond Length: 0 m
Required Bond Length: 0 m
Governing Component: Bond

Reinforcement 7

Type: Anchor
Outside Point: (1416.968, 1391.663) m
Inside Point: (1441.511, 1382.965) m
Slip Surface Intersection: (1445.2, 1381.7) m
Total Length: 26.038701 m
Reinforcement Direction: 160.49 °
Applied Load Option: Constant
F of S Dependent: No
Bond Length: 9 m
Bond Diameter: 0.228 m
Bond Safety Factor: 2.16
Bond Skin Friction: 200 kPa

Bond Resistance: 19.506621 kN/m
Anchor Spacing: 3.4 m
Bar Capacity: 0 kN
Bar Safety Factor: 1
Bar Load: 0 kN
Load Distribution: Conc. in 1 slice
Shear Capacity: 0 kN
Shear Safety Factor: 1
Shear Option: Parallel to Slip
Shear Load: 0 kN
Applied Load: 0 kN
Anchor Load Used: 0 kN
Resisting Force Used: 19.507 kN/m
Available Bond Length: 0 m
Required Bond Length: 0 m
Governing Component: Bond

Reinforcement 8

Type: Anchor
Outside Point: (1416.139, 1389.7) m
Inside Point: (1440.101, 1380.978) m
Slip Surface Intersection: (1442.2, 1380.2) m
Total Length: 25.500014 m
Reinforcement Direction: 160 °
Applied Load Option: Constant
F of S Dependent: No
Bond Length: 9 m
Bond Diameter: 0.228 m
Bond Safety Factor: 2.16
Bond Skin Friction: 220 kPa
Bond Resistance: 21.457283 kN/m
Anchor Spacing: 3.4 m
Bar Capacity: 0 kN
Bar Safety Factor: 1
Bar Load: 0 kN
Load Distribution: Conc. in 1 slice
Shear Capacity: 0 kN
Shear Safety Factor: 1
Shear Option: Parallel to Slip
Shear Load: 0 kN
Applied Load: 0 kN
Anchor Load Used: 0 kN
Resisting Force Used: 21.457 kN/m
Available Bond Length: 0 m
Required Bond Length: 0 m
Governing Component: Bond

Regions

	Material	Points	Area (m²)
Regi	FYN_	4,51,52	9

on 1	1		
Region 2	FYN_1	5,6,50,49	348.33256
Region 3	FYN_2	1,48,44,45,46,47,3,52,51,28,27,25,24,21,20,41,17,16,15,43,13,12,11,10,9,42,36,37,38,31,30,29,49,50,40,7	10889.504

Points

	X (m)	Y (m)
Point 1	1349.502	1350.0262
Point 2	1316.0616	1387.3315
Point 3	1392.4	1400
Point 4	1400	1403.9
Point 5	1416.139	1404.3
Point 6	1496.6592	1406.9521
Point 7	1496.6592	1349.9503
Point 8	1416.139	1371
Point 9	1416.139	1388.298
Point 10	1414.197	1388.298
Point 11	1412.956	1386.626
Point 12	1410.59	1385.388
Point 13	1408.07	1384.933
Point 14	1405.55	1385.388
Point 15	1403.184	1386.626
Point 16	1401.943	1388.298
Point 17	1400	1388.298
Point 18	1400	1371
Point 19	1376.039	1380.978
Point 20	1400	1389.7
Point 21	1400	1392.2
Point 22	1374.629	1382.965
Point 23	1372.75	1384.781
Point 24	1400	1394.7
Point 25	1400	1397.2
Point 26	1371.34	1386.768
Point 27	1400	1399.2
Point 28	1400	1400
Point 29	1416.139	1400
Point 30	1416.139	1399.2
Point 31	1416.139	1397.2
Point 32	1444.8	1386.768
Point 33	1443.39	1384.781
Point 34	1441.511	1382.965
Point 35	1440.101	1380.978
Point 36	1416.139	1389.7

Point 37	1416.139	1392.2
Point 38	1416.139	1394.7
Point 39	1349.8947	1389.2329
Point 40	1496.6592	1389.2217
Point 41	1400	1389.2
Point 42	1416.139	1389.2
Point 43	1405.7951	1385.2651
Point 44	1248.163	1384.79
Point 45	1334.761	1389.2
Point 46	1368.763	1394.8
Point 47	1380.023	1400
Point 48	1248.163	1350.0262
Point 49	1416.139	1401.3
Point 50	1496.6592	1401.3
Point 51	1400	1400.9
Point 52	1394	1400.9

Critical Slip Surfaces

	Number	FOS	Center (m)	Radius (m)	Entry (m)	Exit (m)
1	2163	4.065	(1383.1, 1505.92)	138.904	(1480.01, 1406.4)	(1309.81, 1387.93)

Slices of Slip Surface: 2163

	Slip Surface	X (m)	Y (m)	PWP (kPa)	Base Normal Stress (kPa)	Frictional Strength (kPa)	Cohesive Strength (kPa)
1	2163	1312.4015	1386.3945	-19.647653	42.59424	25.190163	18.4
2	2163	1318.2905	1383.121	22.886017	125.55965	60.721017	18.4
3	2163	1324.879	1379.8605	66.527472	207.99223	83.662022	18.4
4	2163	1331.467	1377.0195	106.06079	281.02806	103.47535	18.4
5	2163	1337.5945	1374.7175	139.49455	348.30292	123.48893	18.4
6	2163	1343.2615	1372.886	167.49525	411.02559	144.02344	18.4
7	2163	1348.9285	1371.3175	192.90871	466.66497	161.899	18.4
8	2163	1354.5955	1370.004	215.82583	515.25676	177.08296	18.4
9	2163	1360.2625	1368.9375	236.33465	556.8955	189.57916	18.4
10	2163	1365.9295	1368.112	254.46353	591.75203	199.47186	18.4
11	2163	1371.578	1367.5245	270.23678	638.65942	217.88454	18.4
12	2163	1377.208	1367.1705	283.68719	697.3814	244.65808	18.4
13	2163	1383.117	1367.051	295.32197	720.43306	251.41	18.4
14	2163	1389.3055	1367.1895	304.92288	708.47877	238.66229	18.4
15	2163	1393.2	1367.386	309.89071	708.24682	235.58715	18.4
16	2163	1395.944	1367.6245	312.41781	728.11276	245.84131	18.4
17	2163	1398.8	1367.909	271.33819	746.07104	280.75623	18.4
18	2163	1399.856	1368.0305	213.01866	752.28255	318.91978	18.4

19	2163	1400.002	1368.048	197.24115	427.04578	135.90608	18.4
20	2163	1400.9735	1368.174	190.74804	423.40215	137.59126	18.4
21	2163	1402.5635	1368.3875	180.34708	399.64543	129.69268	18.4
22	2163	1404.4895	1368.6785	167.4397	359.77133	113.74461	18.4
23	2163	1405.921	1368.903	157.76253	339.09846	107.24177	18.4
24	2163	1407.0585	1369.101	155.00682	330.50462	103.78911	18.4
25	2163	1409.1945	1369.4935	150.83547	321.6938	101.04534	18.4
26	2163	1410.4545	1369.736	149.04203	320.35744	101.31565	18.4
27	2163	1411.773	1370.0125	153.69702	326.98405	102.48166	18.4
28	2163	1413.5765	1370.4015	159.95446	347.68437	111.02316	18.4
29	2163	1415.168	1370.7715	165.21804	356.12864	112.90422	18.4
30	2163	1416.186	1371.0135	168.53809	674.85294	299.43377	18.4
31	2163	1416.318	1371.046	180.8052	674.33227	291.8711	18.4
32	2163	1416.6255	1371.1225	236.21156	673.62585	258.68609	18.4
33	2163	1419.678	1371.9505	272.27787	655.87009	226.85581	18.4
34	2163	1425.338	1373.6265	256.55276	619.42604	214.60266	18.4
35	2163	1430.998	1375.5695	238.22538	578.789	201.40876	18.4
36	2163	1436.658	1377.792	217.14682	533.8118	187.27515	18.4
37	2163	1442.318	1380.309	193.1786	484.14507	172.07709	18.4
38	2163	1447.978	1383.1385	166.14742	429.34954	155.6573	18.4
39	2163	1453.6385	1386.303	135.84378	368.81449	137.7785	18.4
40	2163	1459.299	1389.829	101.98146	301.73184	118.13204	18.4
41	2163	1464.959	1393.7515	64.23273	227.07733	96.306031	18.4
42	2163	1470.619	1398.1145	22.169433	143.5348	71.775279	18.4
43	2163	1473.9625	1400.856	-4.2910511	91.192751	53.931242	18.4
44	2163	1477.243	1403.852	-33.255422	33.623392	7.948233	60