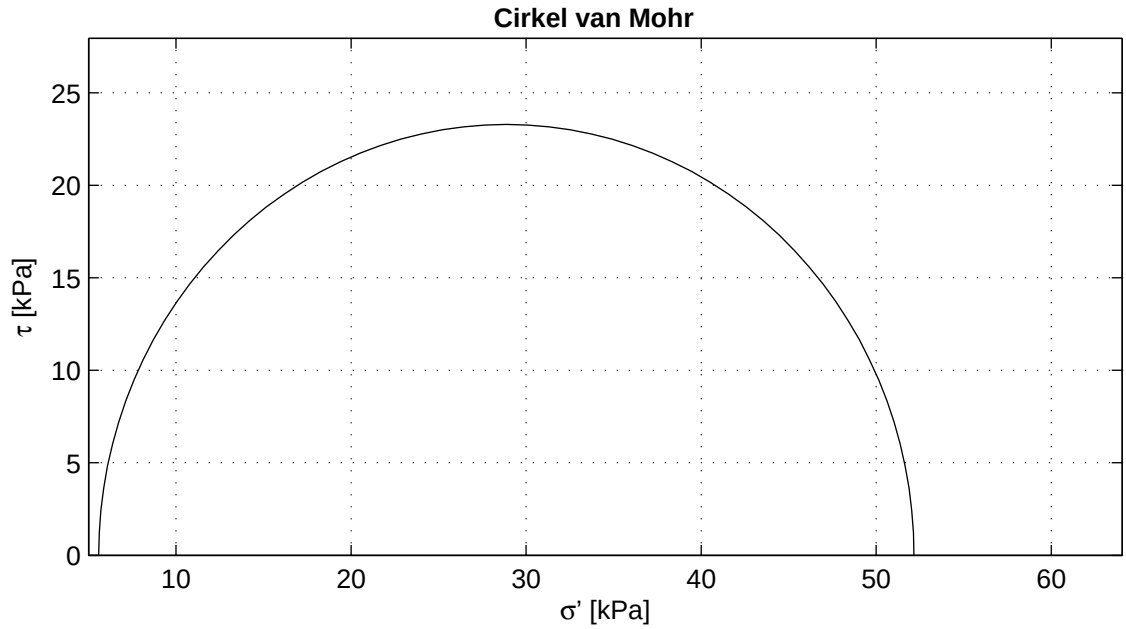



| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 23.3 |
| Eindwaarde $c_u$ [kPa] | 19.0 |
| Nummer Boring | MB−05 |
| Monsternaam | 102 |
| Diepte NAP [m] | −6.60/−6.80 |
| NEN5104 code | Vm |
| $m_i$ [g] | 590.3 |
| $D_i$ [mm] | 66.9 |
| $h_i$ [mm] | 144.0 |
| $w_i$ [%] | 234.0 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1166 |
| $\rho_{i,dry}$ [kg/m$^3$] | 349 |
| Grondsoort | veen |

Voor beproeving

Vacuumconsolidatie na aanbrengen in−situ druk (6.6 kPa horizontaal, 13.2 kPa verticaal).
Volumemeting met extra balans; geen continue meetwaarden, schematisch verloop in plot.
Vacuumdruk was −50 kPa. Na consolidatie vacuumdruk terug naar nul en consolidatie op in−situ druk.

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| datum | get. |
|---|---|
| 2016−08−30 | grw |

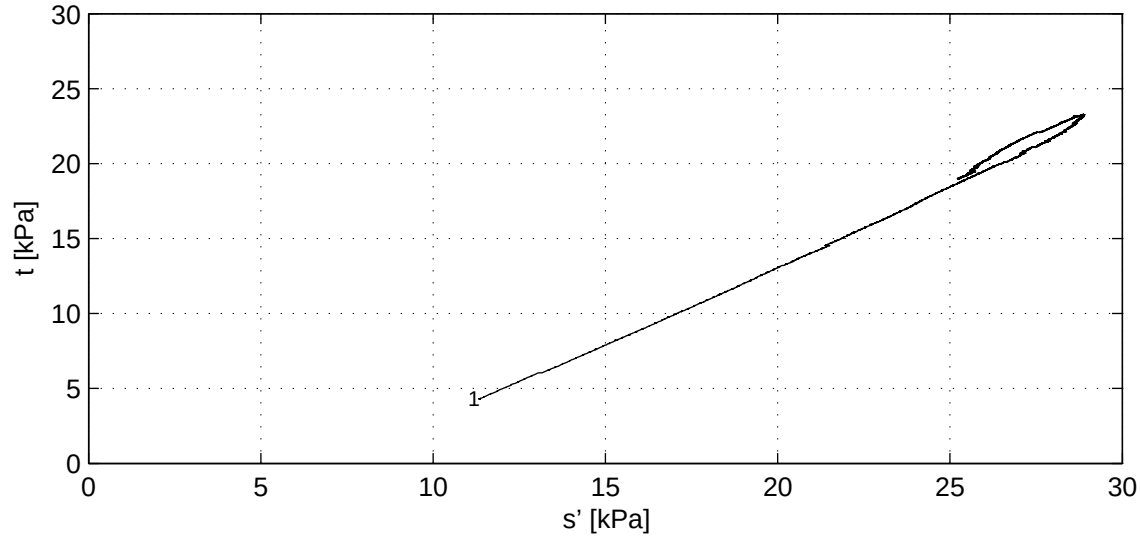
POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

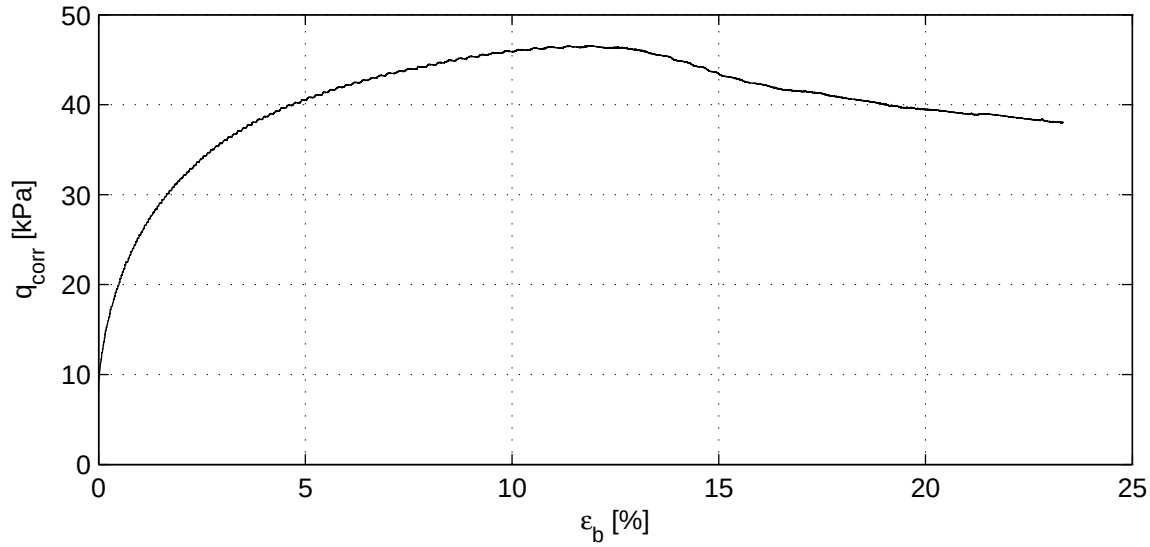
CU_102

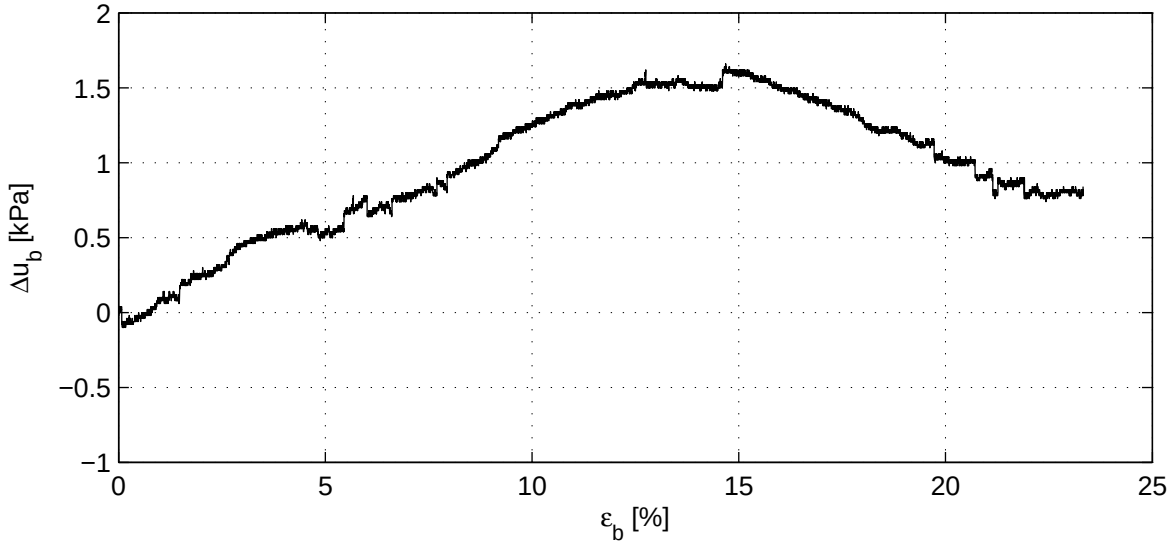
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |
| bijlage | pag. |
| TX102 | 1 |

*) Gecontroleerd en vrijgegeven door ess op 2016-09-14




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| datum | get. |
|---|---|
| 2016−08−30 | grw |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

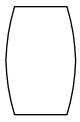
CU_102

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX102 | 2 |

*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

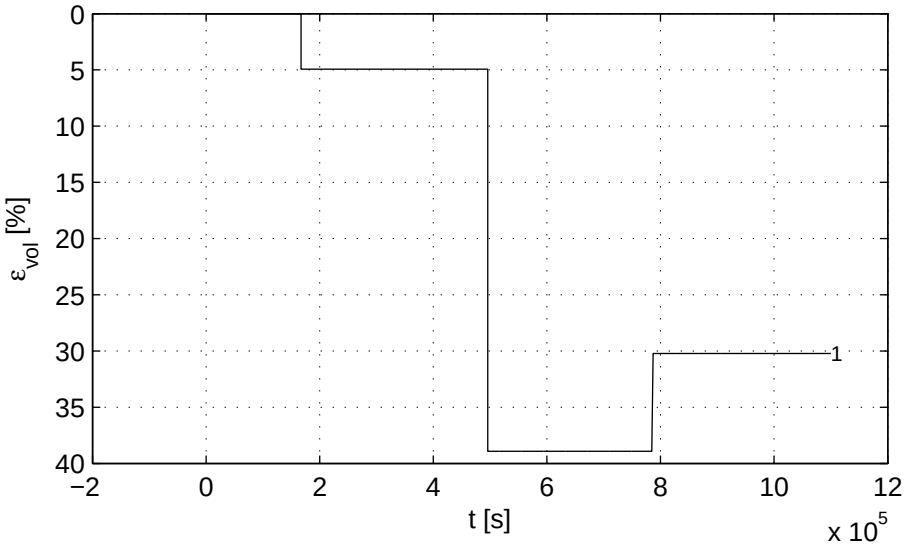
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 1.00 | | |
| | $B_1$ [−] | 1.00 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 16.9 | | |
| | $t_{100}$ [min] | – | | |
| | $h_c$ [mm] | 127.03 | | |
| | $V_c$ [$cm^3$] | 353.18 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1238 | | |
| | $w_c$ [%] | 147.4 | | |
| | $u_{bk}$ [kPa] | 5 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | – | | |
| | v [%/h] | 0.98 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 46.6 | | |
| | $f_{undr}$ [kPa] | 23.3 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 1.27 | | |
| | $E_{50}$ [MPa] | 1.5 | | |
| | $w_e$ [%] | 152.8 | | |
| | Bezwijkfiguur |  | | |

| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 22.7 | | | 15.9 | | | | 15.9 |
| 5.0 | 26.8 | | | 20.3 | | | | 20.3 |
| 10.0 | 28.8 | | | 23.0 | | | | 23.0 |
| $t_{max}$ [kPa] | 28.9 | | | 23.3 | | | | 23.3 |

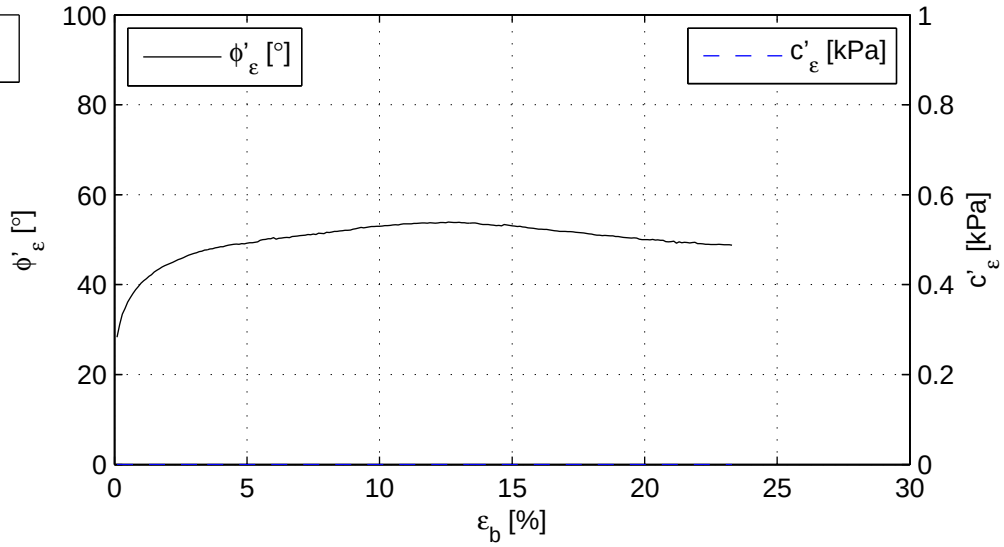


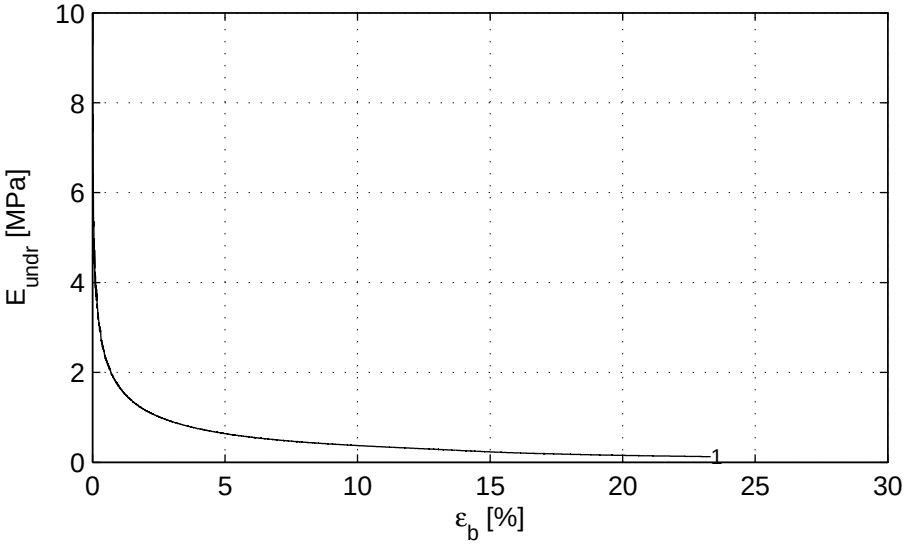
*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

Consolidatiefase




Belastingsfase





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| datum | get. |
|---|---|
| 2016−08−30 | grw |

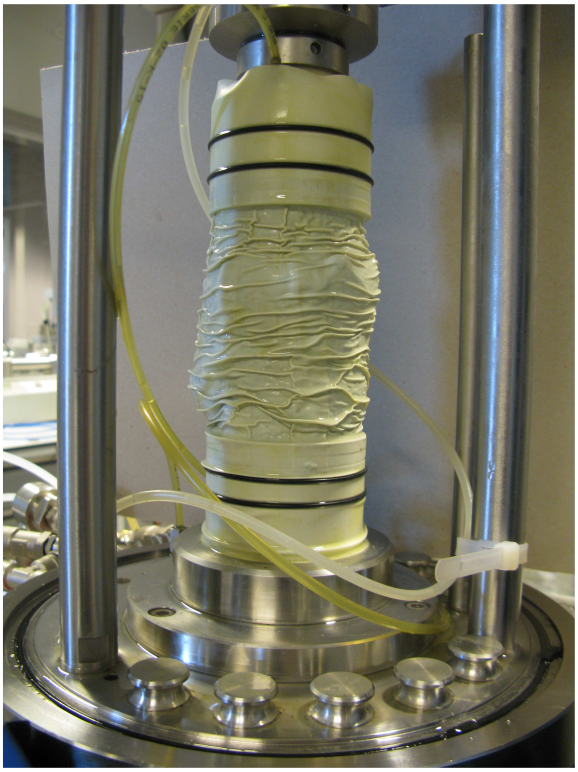
POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

CU_102

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |
| bijlage | pag. |
| TX102 | 4 |

*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

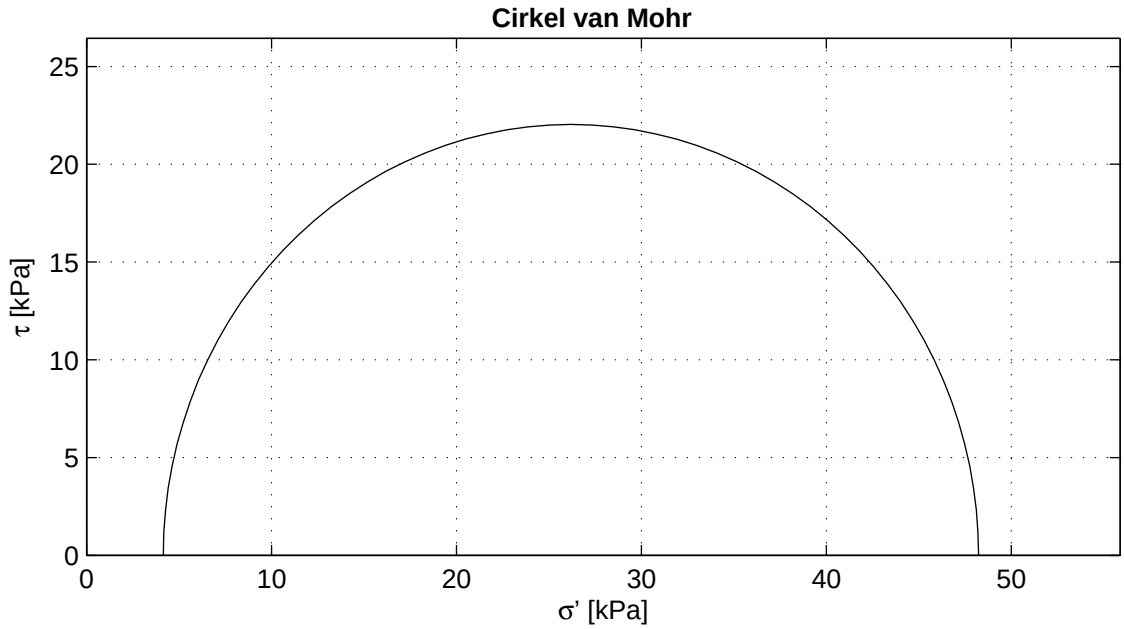








*) Gecontroleerd en vrijgegeven door ess op 2016-09-14




| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 22.0 |
| Eindwaarde $c_u$ [kPa] | 20.4 |
| Nummer Boring | MB−05 |
| Monsternaam | 104 |
| Diepte NAP [m] | −6.95/−7.15 |
| NEN5104 code | Vm |
| $m_i$ [g] | 598.9 |
| $D_i$ [mm] | 66.9 |
| $h_i$ [mm] | 144.9 |
| $w_i$ [%] | 213.2 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1176 |
| $\rho_{i,dry}$ [kg/m$^3$] | 375 |
| Grondsoort | veen |

Voor beproeving

Vacuumconsolidatie na aanbrengen in−situ druk (6.6 kPa horizontaal, 13.2 kPa verticaal).
Volumemeting met extra balans; geen continue meetwaarden, schematisch verloop in plot.
Vacuumdruk was −70 kPa. Na consolidatie vacuumdruk terug naar nul en consolidatie op in−situ druk.

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| datum | get. |
|---|---|
| 2016−08−29 | grw |

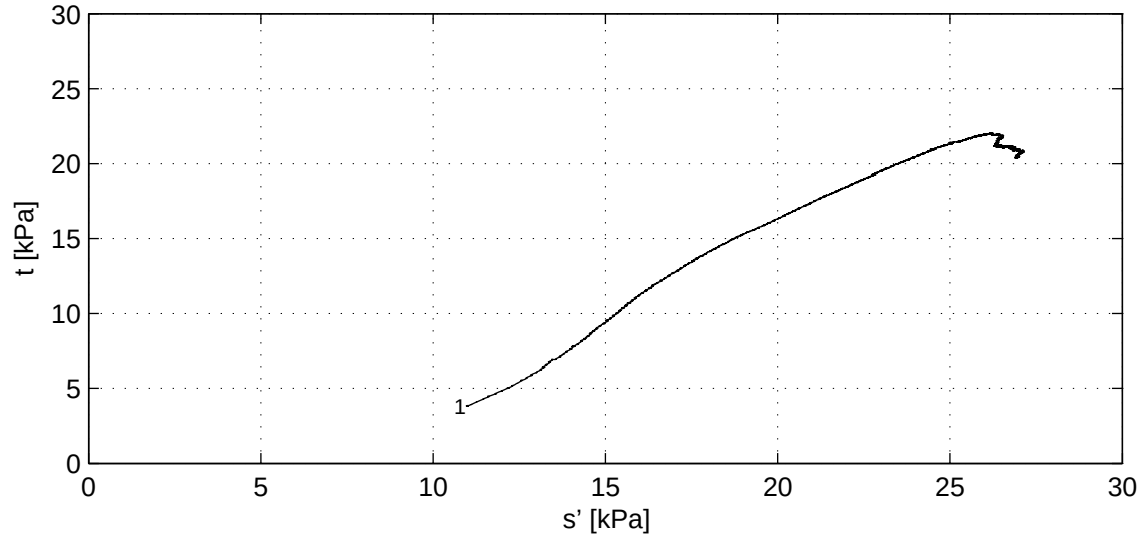
POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

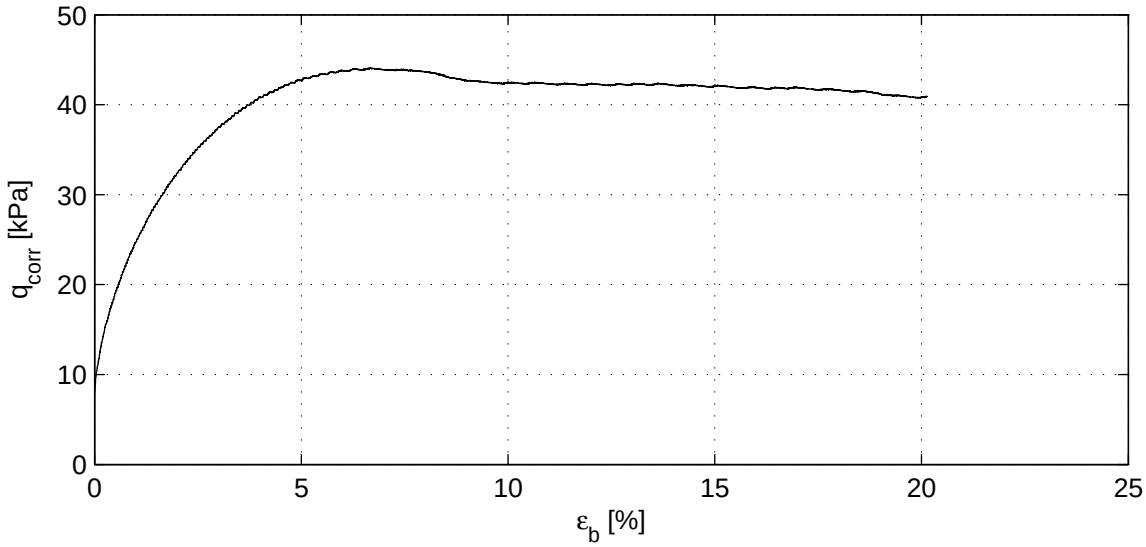
CU_104

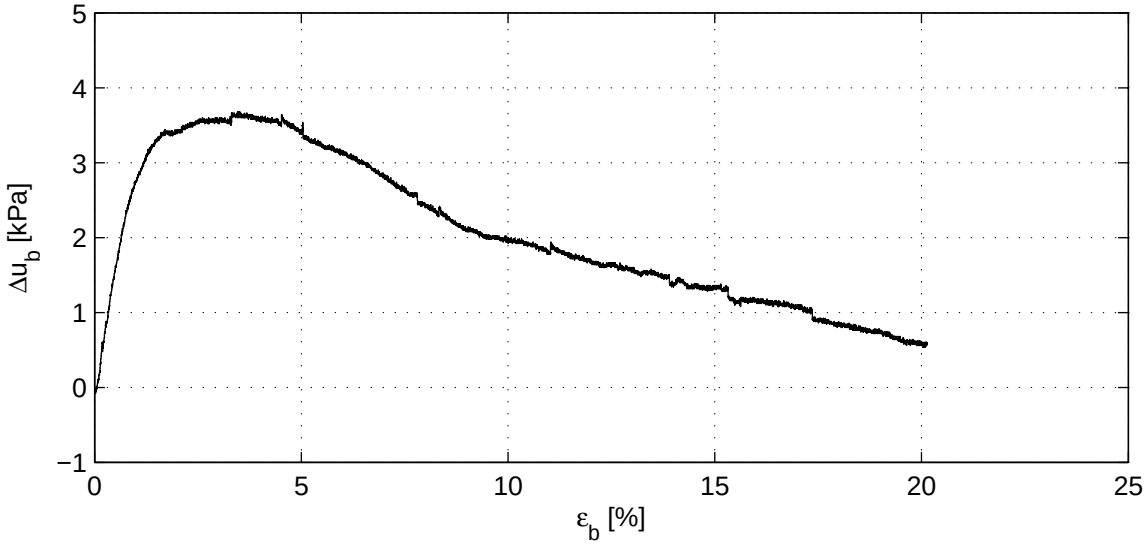
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |
| bijlage | pag. |
| TX104 | 1 |

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| datum | get. |
|---|---|
| 2016−08−29 | grw |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

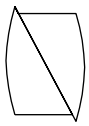
CU_104

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX104 | 2 |

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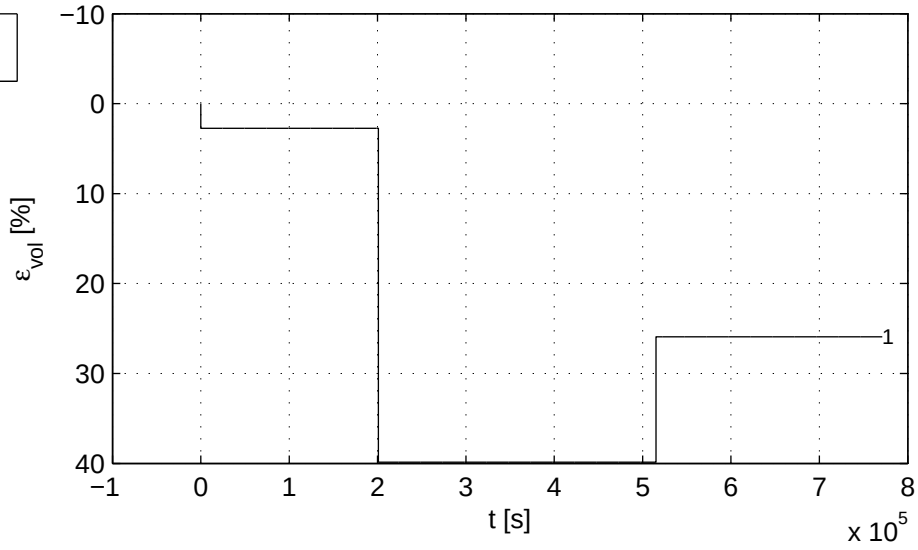
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 1.00 | | |
| | $B_1$ [−] | 1.00 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 16.0 | | |
| | $t_{100}$ [min] | – | | |
| | $h_c$ [mm] | 125.25 | | |
| | $V_c$ [$cm^3$] | 377.34 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1237 | | |
| | $w_c$ [%] | 144.2 | | |
| | $u_{bk}$ [kPa] | 5 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | – | | |
| | v [%/h] | 0.82 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 44.1 | | |
| | $f_{undr}$ [kPa] | 22.0 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 1.13 | | |
| | $E_{50}$ [MPa] | 1.6 | | |
| | $w_e$ [%] | 145.3 | | |
| | Bezwijkfiguur |  | | |

| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 19.9 | | | 16.2 | | | | 16.2 |
| 5.0 | 25.1 | | | 21.3 | | | | 21.3 |
| 10.0 | 26.4 | | | 21.2 | | | | 21.2 |
| $t_{max}$ [kPa] | 26.2 | | | 22.0 | | | | 22.0 |

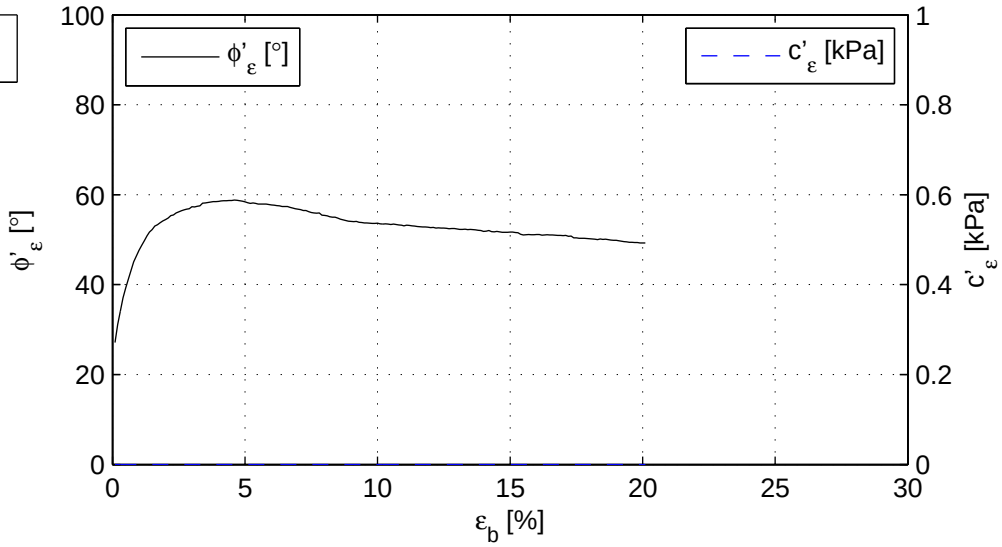


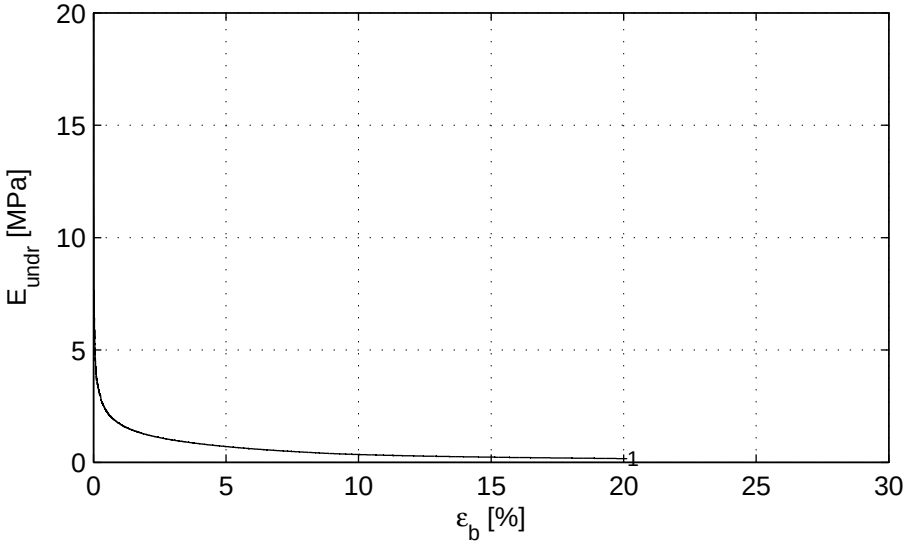
*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

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| | | | | | |
|---|---|---|---|---|---|
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| POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten<br>CU_104 | | | | project<br>1220719.3 | Versie<br>1.4 |
| CU Triaxiaalproef (Singlestage) volgens NEN 5117 | | | | bijlage<br>TX104 | pag.<br>4 |

*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

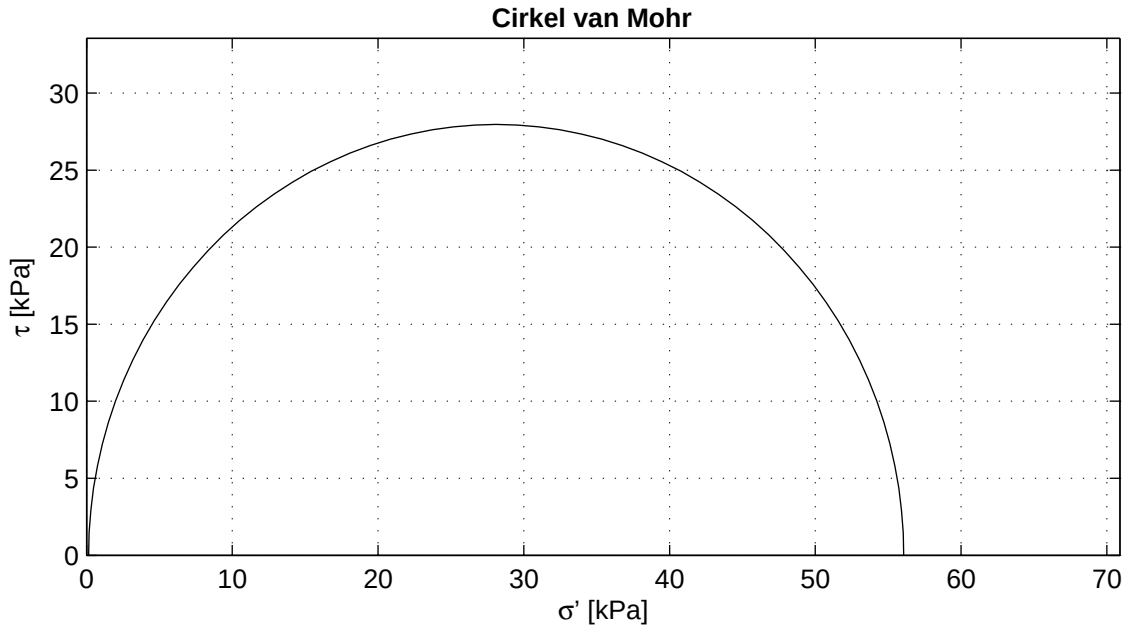








*) Gecontroleerd en vrijgegeven door ess op 2016-09-14



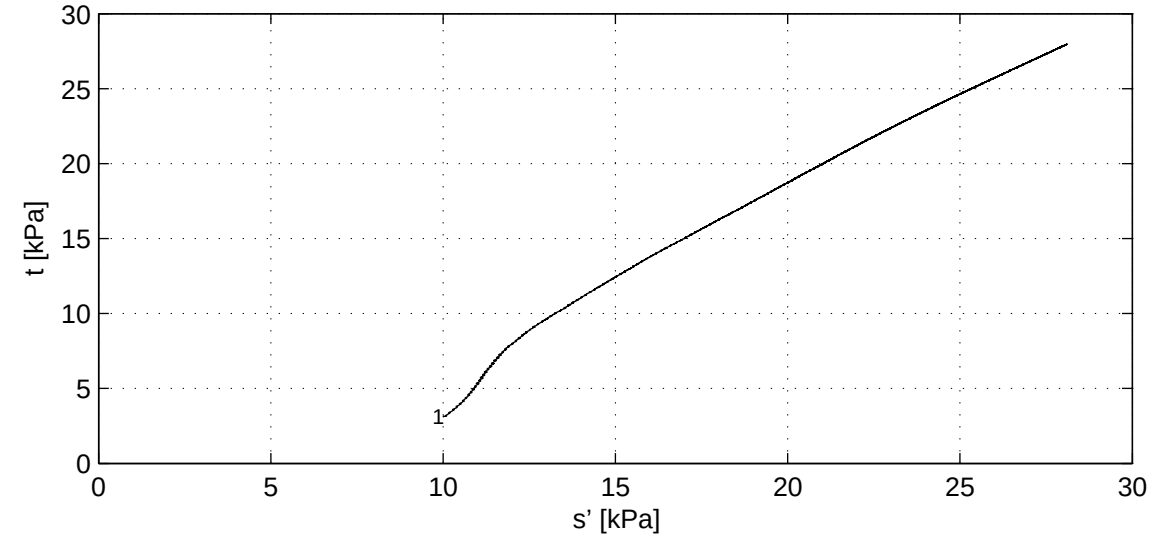

| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 28.0 |
| Eindwaarde $c_u$ [kPa] | 28.0 |
| Nummer Boring | MB−02 |
| Monsternaam | 111 |
| Diepte NAP [m] | −6.10/−6.30 |
| NEN5104 code | Vm<br>plantenresten |
| $m_i$ [g] | 585.7 |
| $D_i$ [mm] | 67.0 |
| $h_i$ [mm] | 143.6 |
| $w_i$ [%] | 243.7 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1157 |
| $\rho_{i,dry}$ [kg/m$^3$] | 337 |
| Grondsoort | veen |

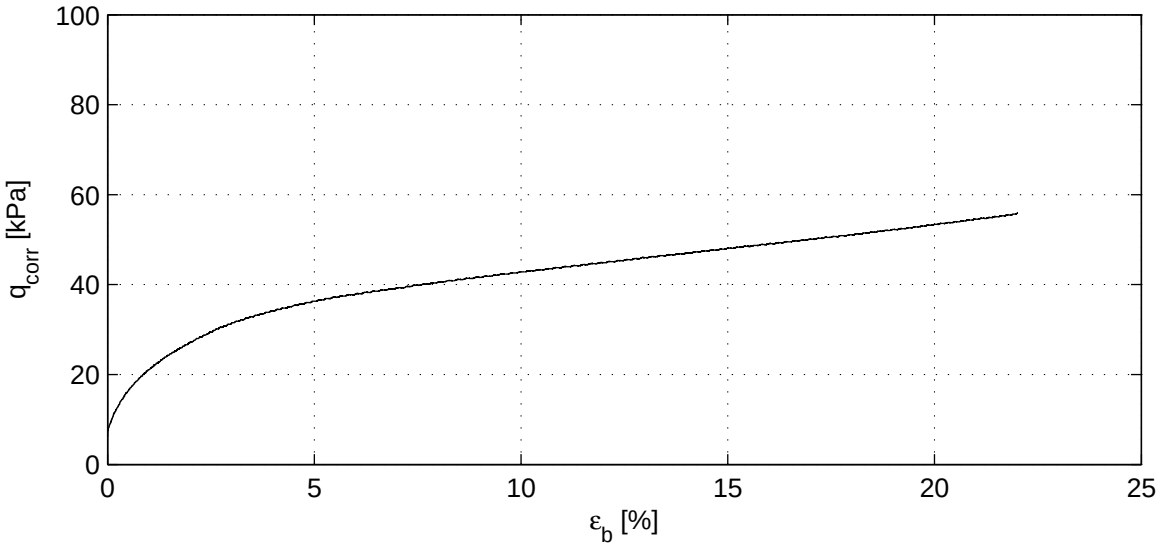
Voor beproeving

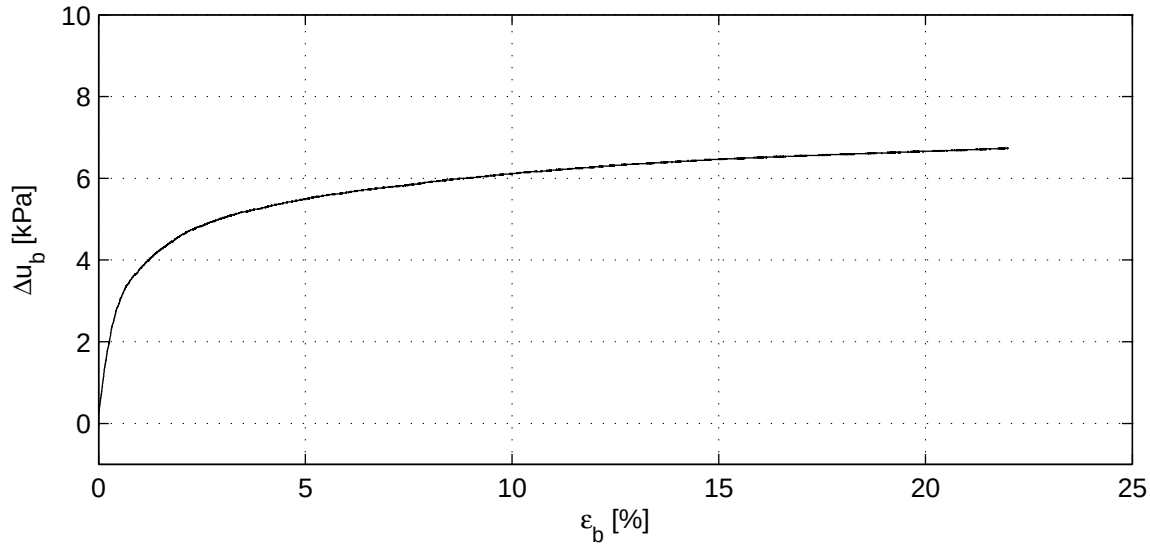
Vacuumconsolidatie simulatie na aanbrengen in−situ druk (6.1 kPa horizontaal, 12.2 kPa verticaal).
Vacuumdruk tijdelijk 30 kPa. Na consolidatie vacuumdruk terug naar nul en consolidatie op in−situ druk.



*) Gecontroleerd en vrijgegeven door ess op 2016-09-14




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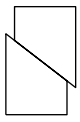
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|---|---|---|
| datum | 2016−08−30 | get. grw |
| project | 1220719.3 | Versie 1.4 |
| bijlage | TX111 | pag. 2 |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

CU_111

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

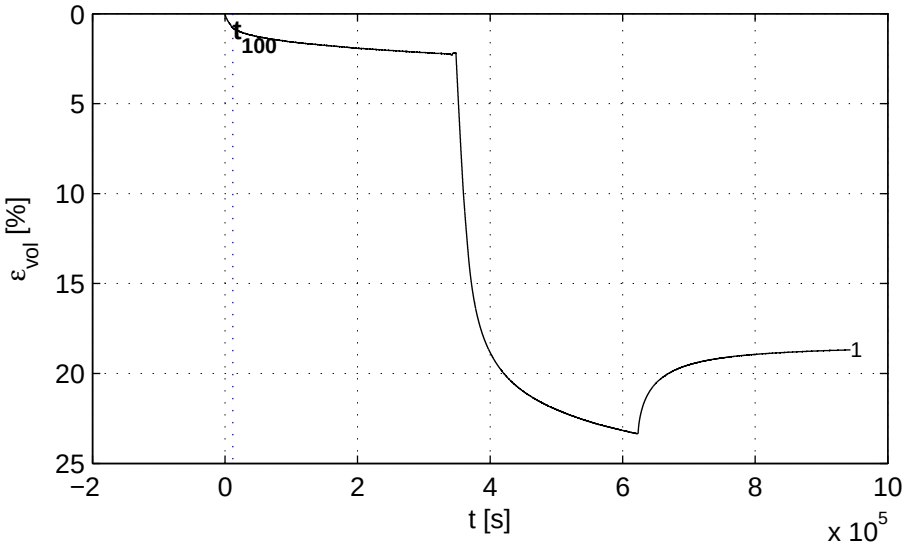
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.90 | | |
| | $B_1$ [−] | 1.00 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 12.2 | | |
| | $t_{100}$ [min] | 194 | | |
| | $h_c$ [mm] | 125.86 | | |
| | $V_c$ [$cm^3$] | 411.52 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1193 | | |
| | $w_c$ [%] | 188.2 | | |
| | $u_{bk}$ [kPa] | 299 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 0.7 | | |
| | v [%/h] | 0.96 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 55.9 | | |
| | $f_{undr}$ [kPa] | 28.0 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 2.91 | | |
| | $E_{50}$ [MPa] | 0.9 | | |
| | $w_e$ [%] | 188.8 | | |
| | Bezwijkfiguur |  | | |

| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 15.9 | | | 13.6 | | | | 13.6 |
| 5.0 | 19.5 | | | 18.2 | | | | 18.2 |
| 10.0 | 22.2 | | | 21.4 | | | | 21.4 |
| $t_{max}$ [kPa] | 28.1 | | | 28.0 | | | | 28.0 |

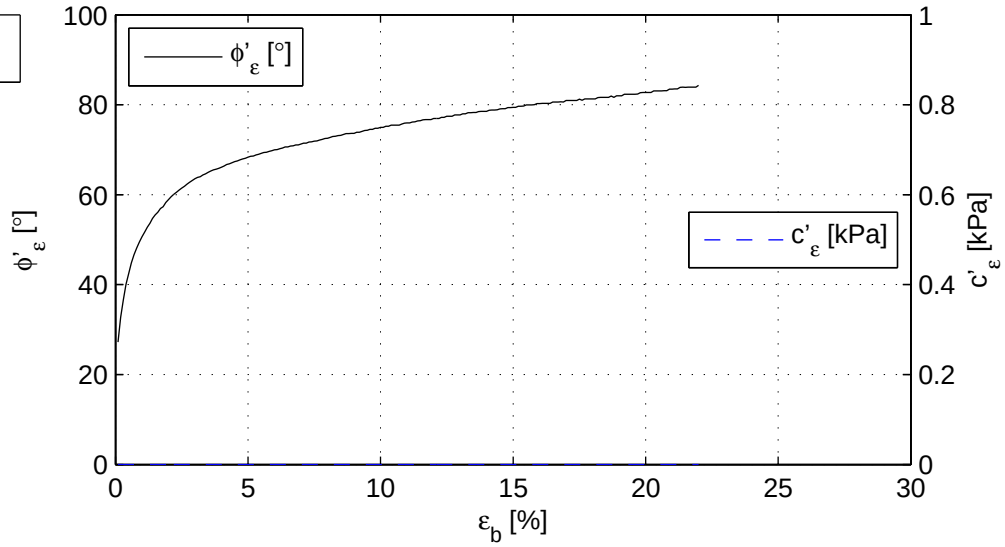


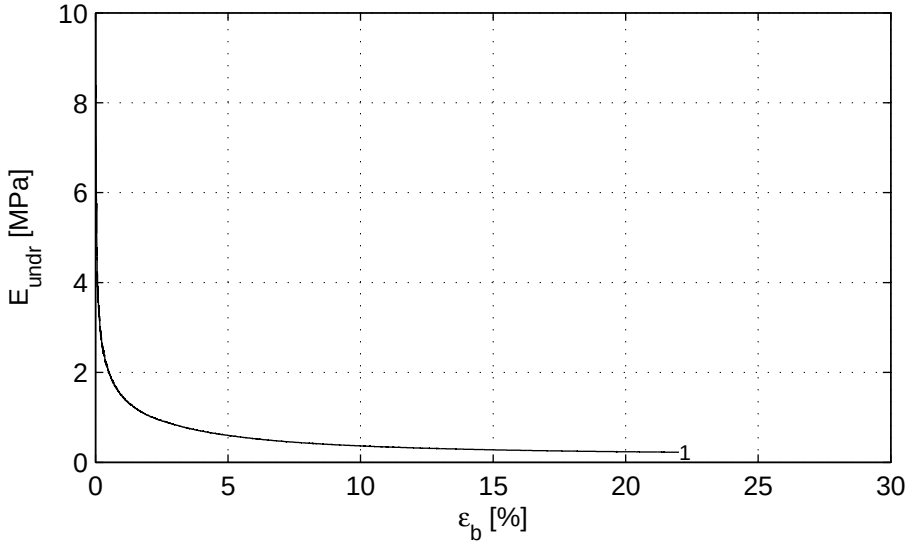
*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

Consolidatiefase




Belastingsfase




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| datum | get. |
|---|---|
| 2016−08−30 | grw |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

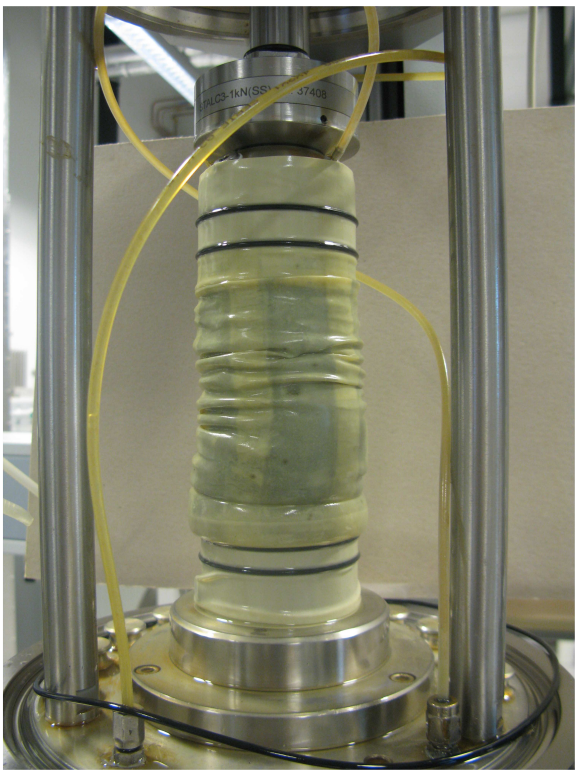
CU_111

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

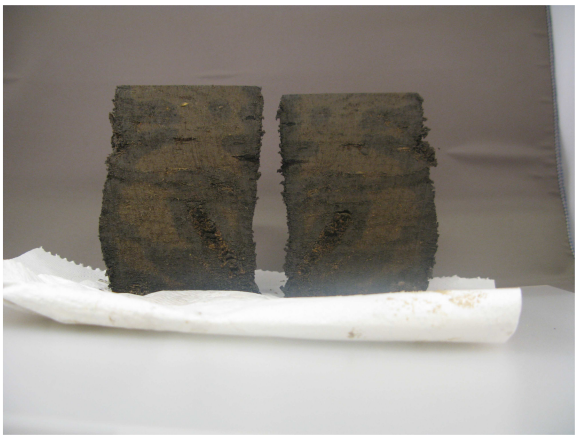
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX111 | 4 |

*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

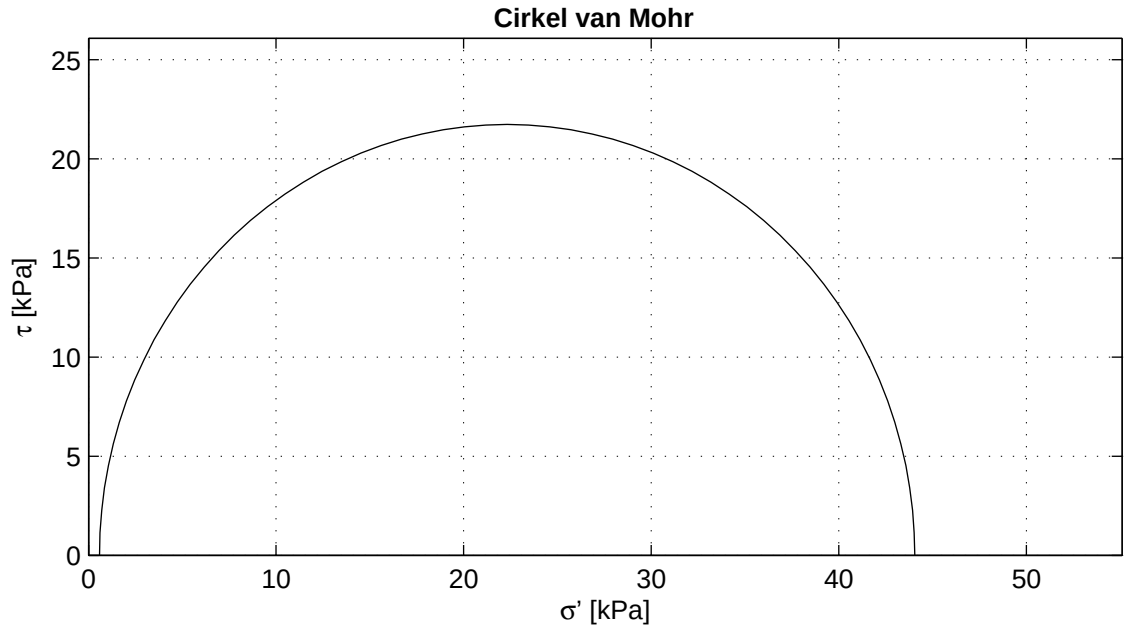








*) Gecontroleerd en vrijgegeven door ess op 2016-09-14




| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 21.7 |
| Eindwaarde $c_u$ [kPa] | 21.7 |
| Nummer Boring | MB−08 |
| Monsternaam | 120 |
| Diepte NAP [m] | −6.01/−6.21 |
| NEN5104 code | Vm |
| $m_i$ [g] | 580.8 |
| $D_i$ [mm] | 67.1 |
| $h_i$ [mm] | 145.3 |
| $w_i$ [%] | 233.2 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1130 |
| $\rho_{i,dry}$ [kg/m$^3$] | 339 |
| Grondsoort | veen |

Voor beproeving

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| datum | get. |
|---|---|
| 2016−11−15 | konstadi |

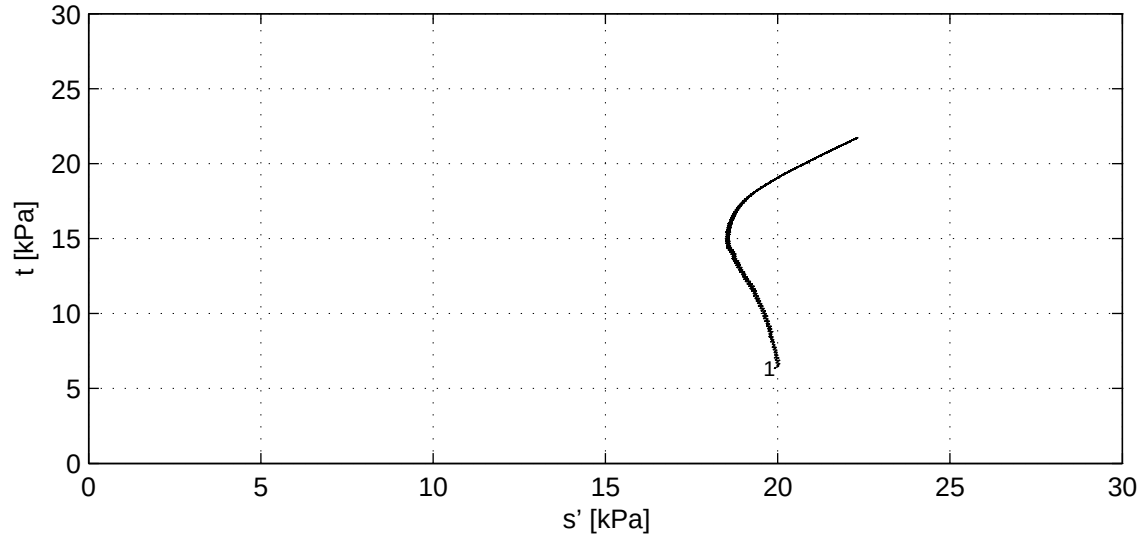
POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

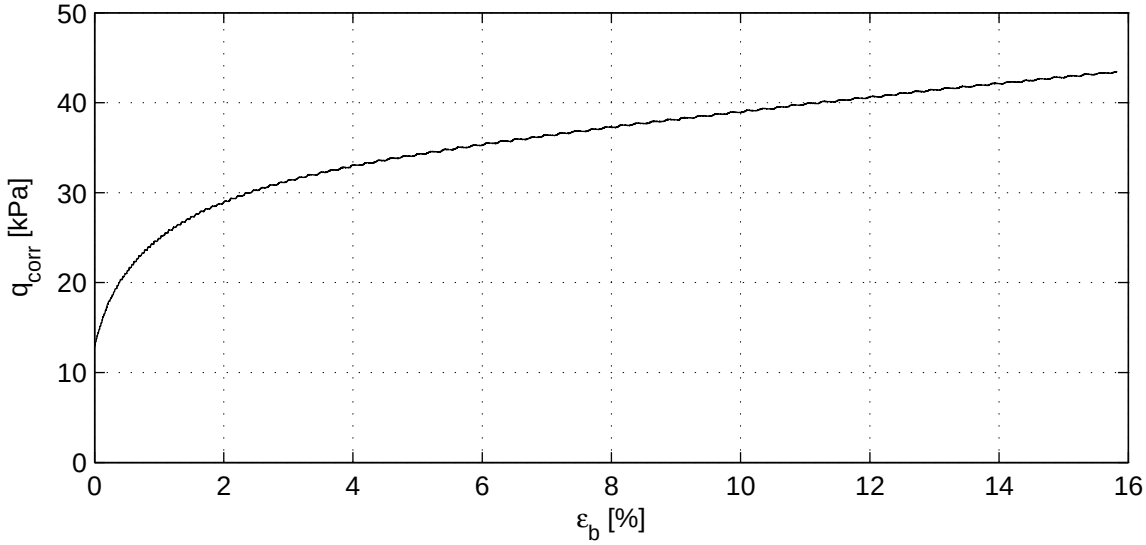
CU_120

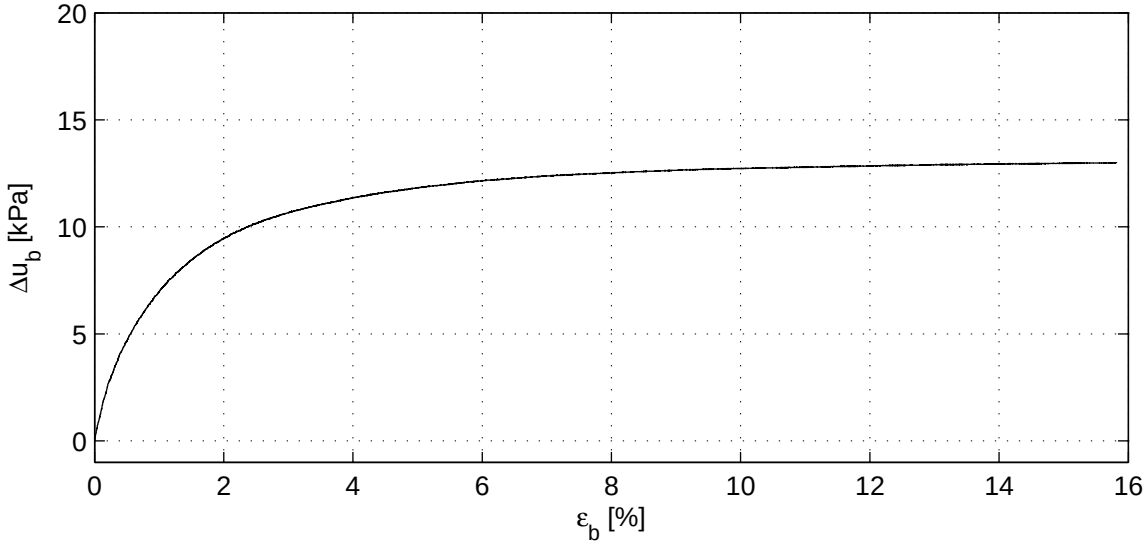
| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX120 | 1 |

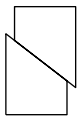


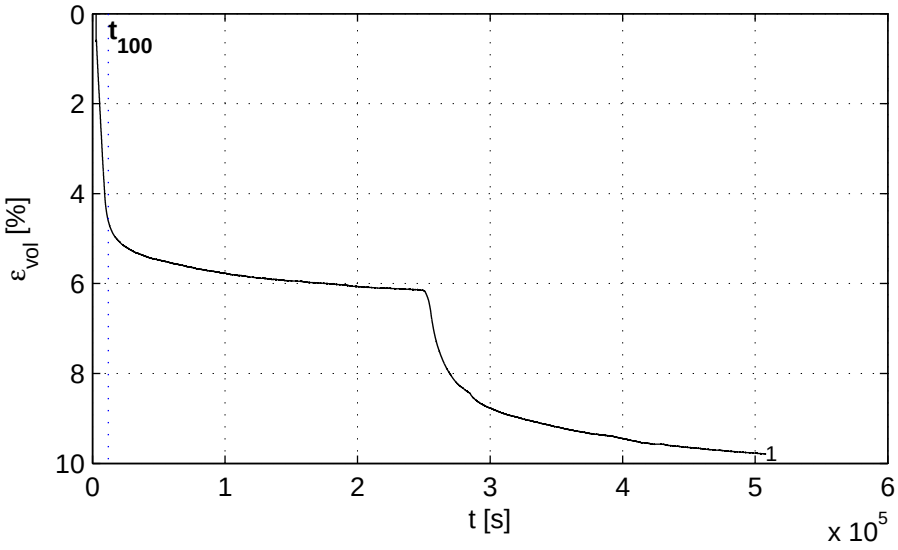

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| | | |
|---|---|---|
| | datum | get. |
| | 2016−11−15 | konstadi |
| POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten | project | Versie |
| CU_120 | 1220719.3 | 1.4 |
| CU Triaxiaalproef (Singlestage) volgens NEN 5117 | bijlage | pag. |
| | TX120 | 2 |

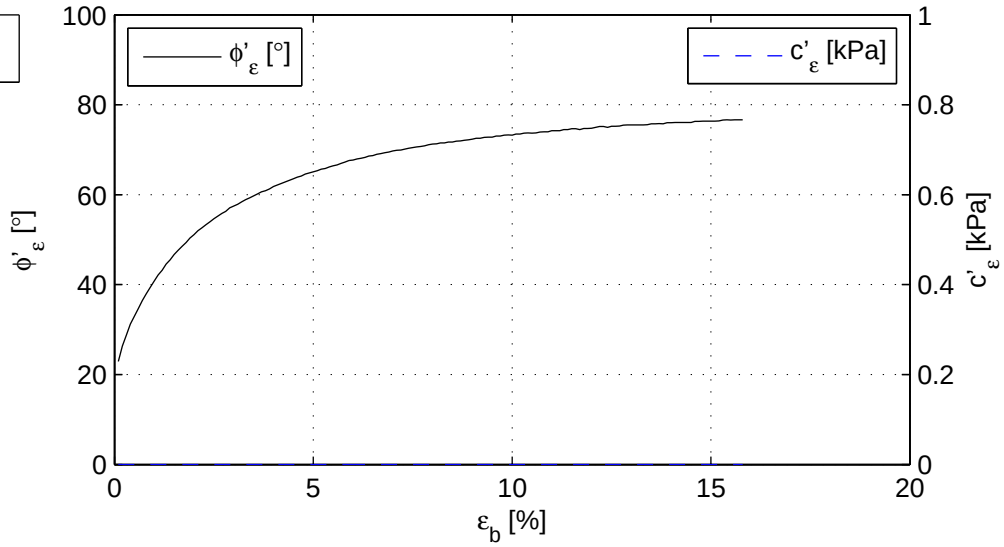
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.82 | | |
| | $B_1$ [−] | 0.99 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 25.4 | | |
| | $t_{100}$ [min] | 200 | | |
| | $h_c$ [mm] | 135.11 | | |
| | $V_c$ [$cm^3$] | 463.53 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1145 | | |
| | $w_c$ [%] | 204.4 | | |
| | $u_{bk}$ [kPa] | 300 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 0.7 | | |
| | v [%/h] | 0.91 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 43.5 | | |
| | $f_{undr}$ [kPa] | 21.7 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 1.71 | | |
| | $E_{50}$ [MPa] | 0.9 | | |
| | $w_e$ [%] | 229.9 | | |
| | Bezwijkfiguur |  | | |

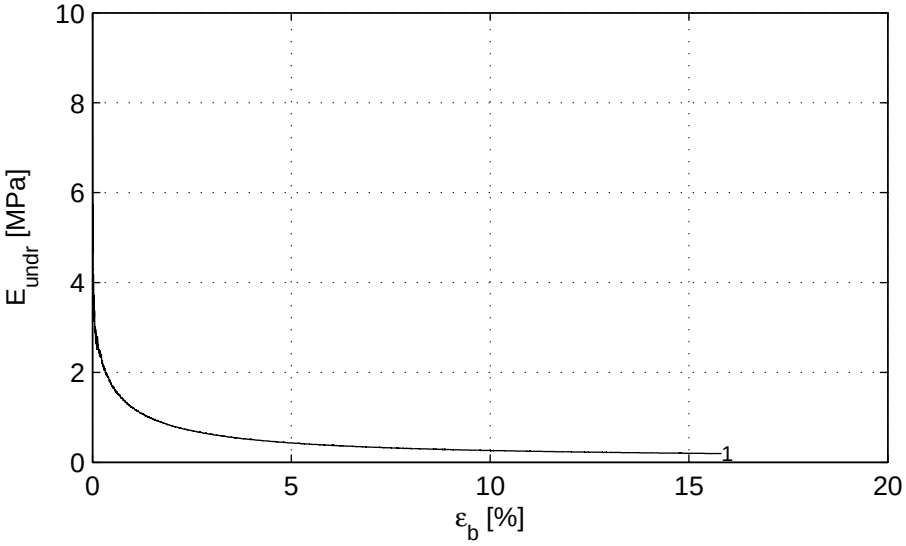
| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 18.6 | | | 14.5 | | | | 14.5 |
| 5.0 | 18.9 | | | 17.2 | | | | 17.2 |
| 10.0 | 20.3 | | | 19.5 | | | | 19.5 |
| $t_{max}$ [kPa] | 22.3 | | | 21.7 | | | | 21.7 |

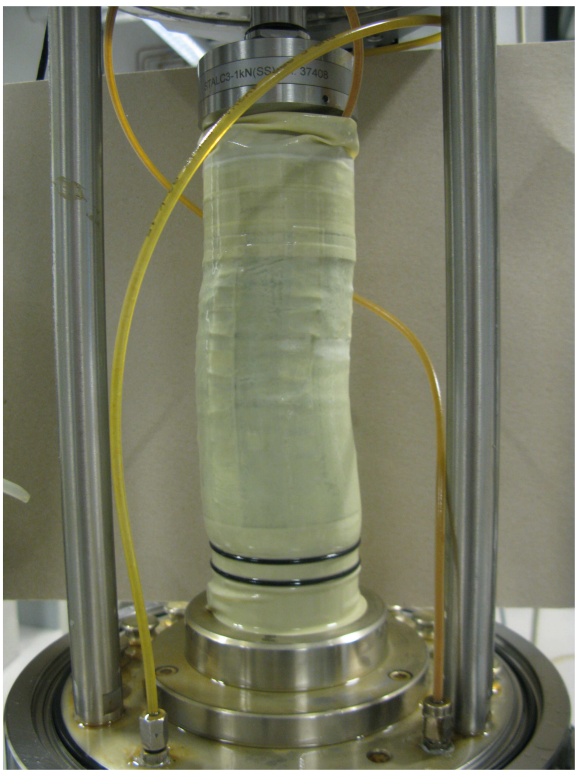
Consolidatiefase




Belastingsfase

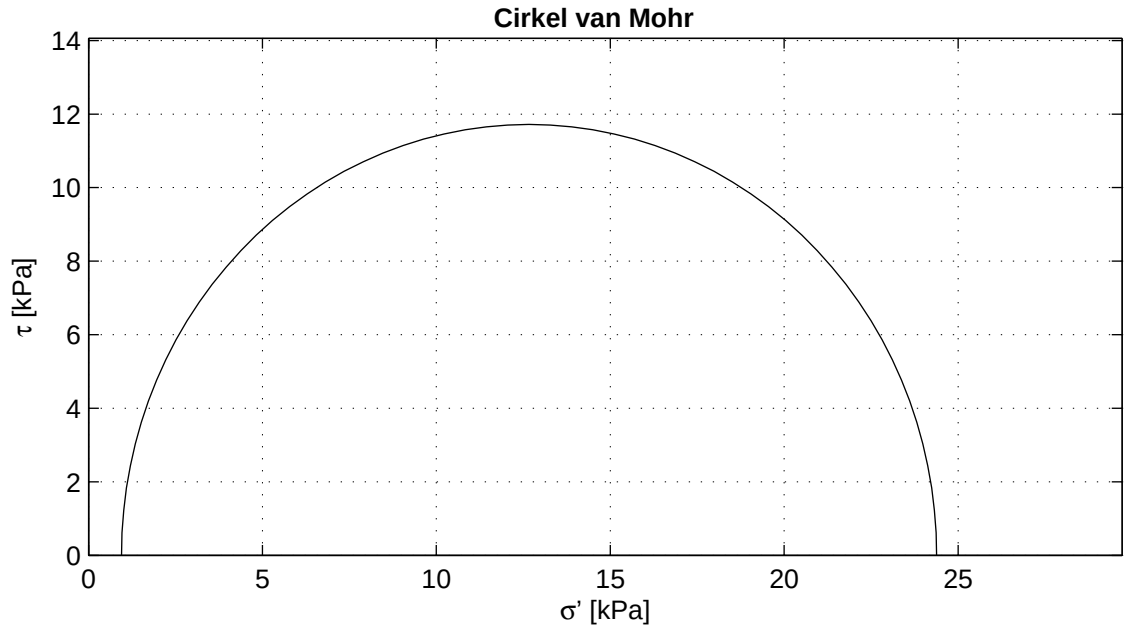











| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 11.7 |
| Eindwaarde $c_u$ [kPa] | 10.8 |
| Nummer Boring | MB−08 |
| Monsternaam | 122 |
| Diepte NAP [m] | −6.81/−7.01 |
| NEN5104 code | Vk1 |
| $m_i$ [g] | 588.8 |
| $D_i$ [mm] | 66.9 |
| $h_i$ [mm] | 143.9 |
| $w_i$ [%] | 221.8 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1164 |
| $\rho_{i,dry}$ [kg/m$^3$] | 362 |
| Grondsoort | veen |

Voor beproeving

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| datum | get. |
|---|---|
| 2016−11−15 | konstadi |

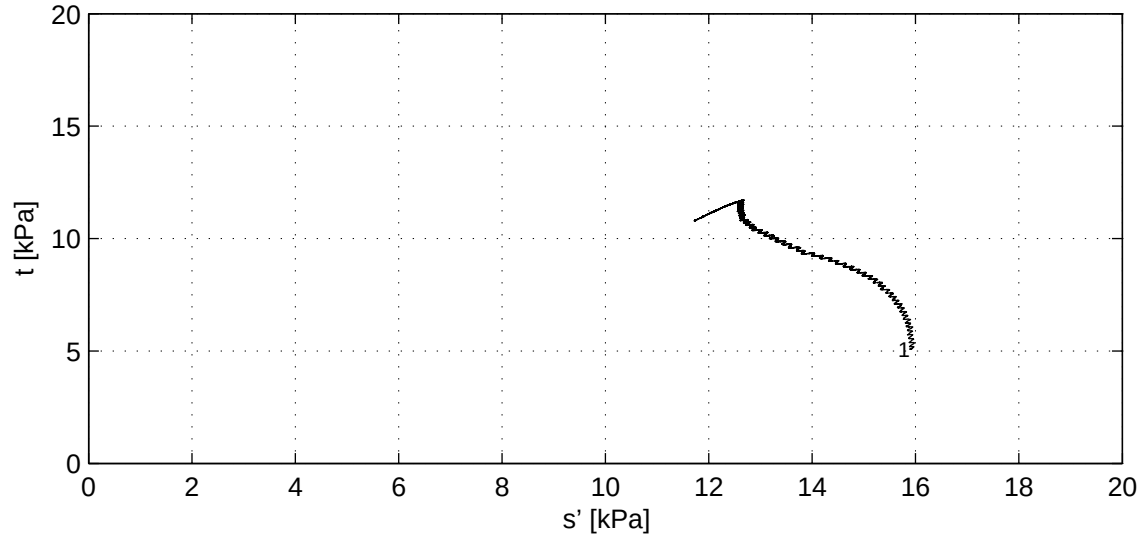
POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

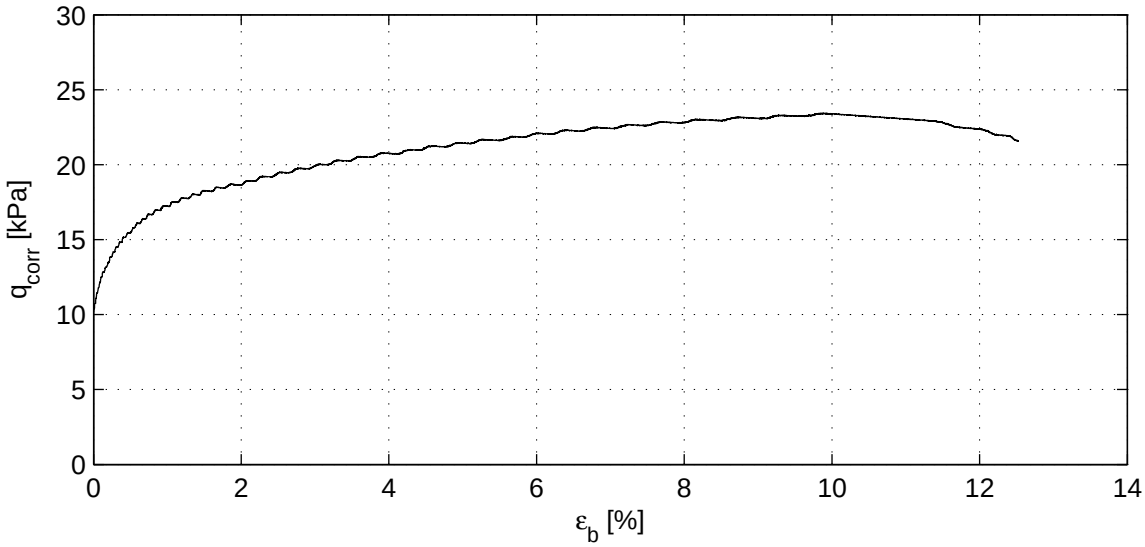
CU_122

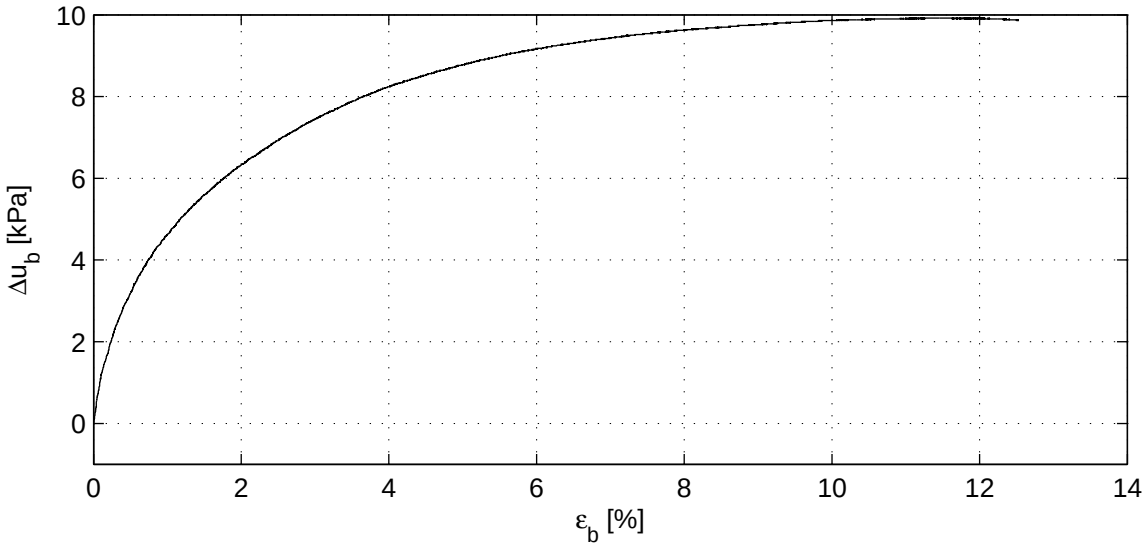
| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
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| TX122 | 1 |




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| datum | get. |
|---|---|
| 2016−11−15 | konstadi |

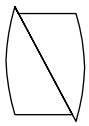
POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

CU_122

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

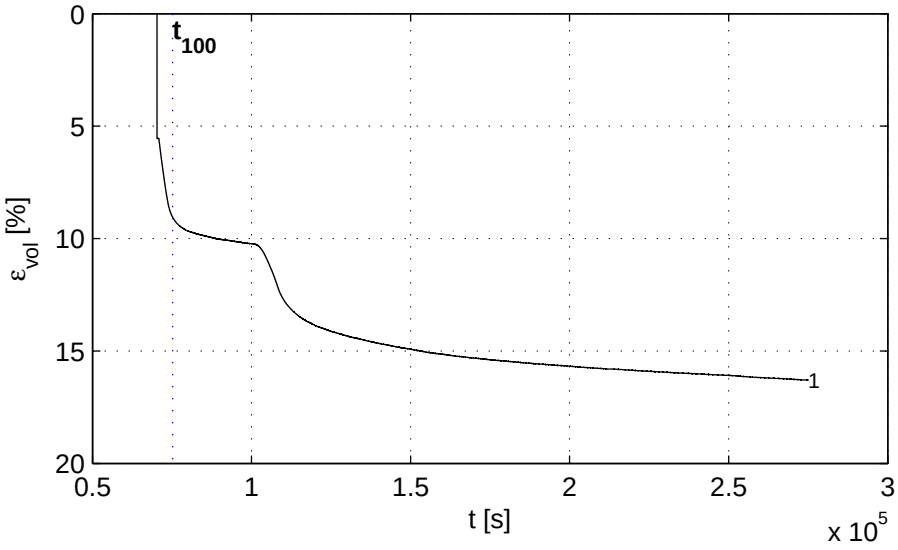
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX122 | 2 |

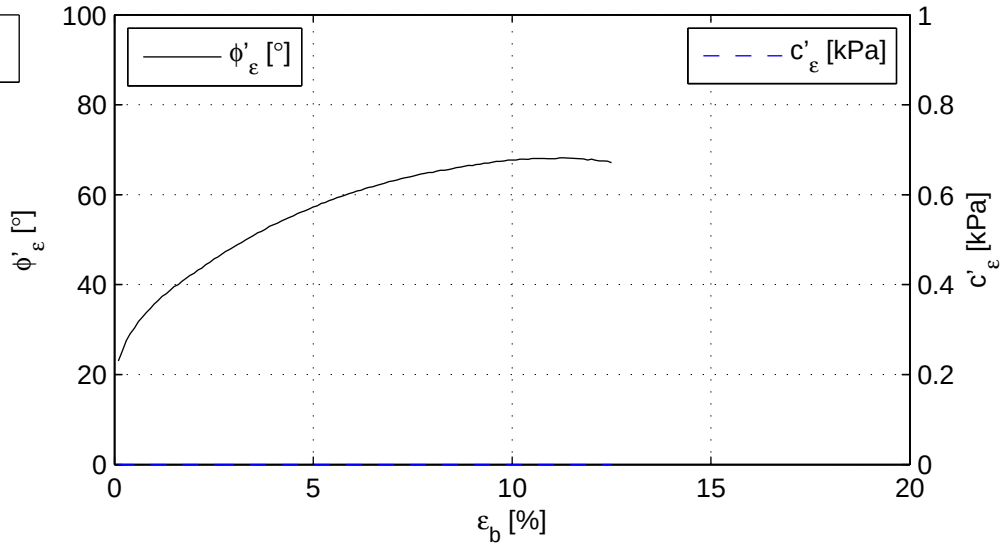
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.83 | | |
| | $B_1$ [−] | 1.00 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 20.6 | | |
| | $t_{100}$ [min] | 1253 | | |
| | $h_c$ [mm] | 131.70 | | |
| | $V_c$ [$cm^3$] | 423.41 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1196 | | |
| | $w_c$ [%] | 176.7 | | |
| | $u_{bk}$ [kPa] | 300 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 0.1 | | |
| | v [%/h] | 0.91 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | ε_b 15% | | |
| | $q_u$ [kPa] | 23.4 | | |
| | $f_{undr}$ [kPa] | 11.7 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 0.82 | | |
| | $E_{50}$ [MPa] | 0.8 | | |
| | $w_e$ [%] | 213.9 | | |
| | Bezwijkfiguur |  | | |

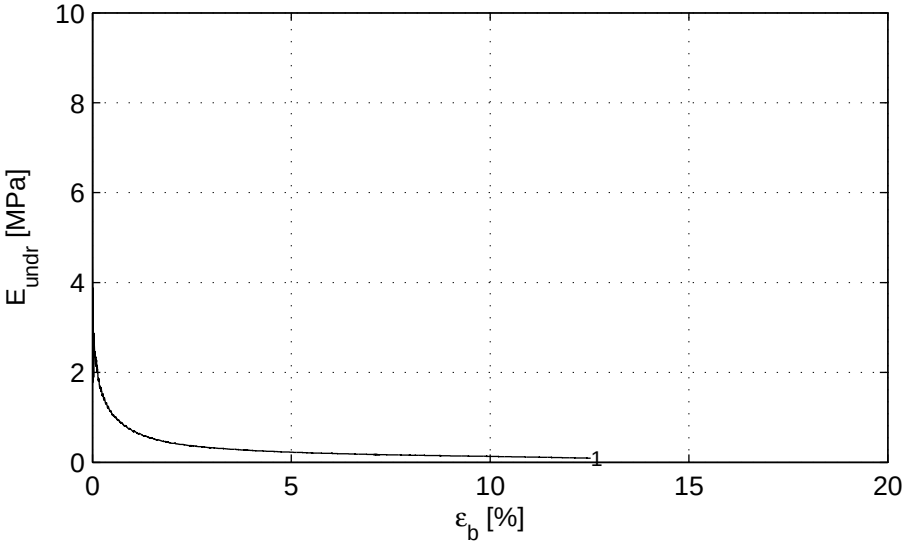
| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 13.8 | | | 9.3 | | | | 9.3 |
| 5.0 | 12.7 | | | 10.7 | | | | 10.7 |
| 10.0 | 12.6 | | | 11.7 | | | | 11.7 |
| $t_{max}$ [kPa] | 12.7 | | | 11.7 | | | | 11.7 |

Consolidatiefase




Belastingsfase

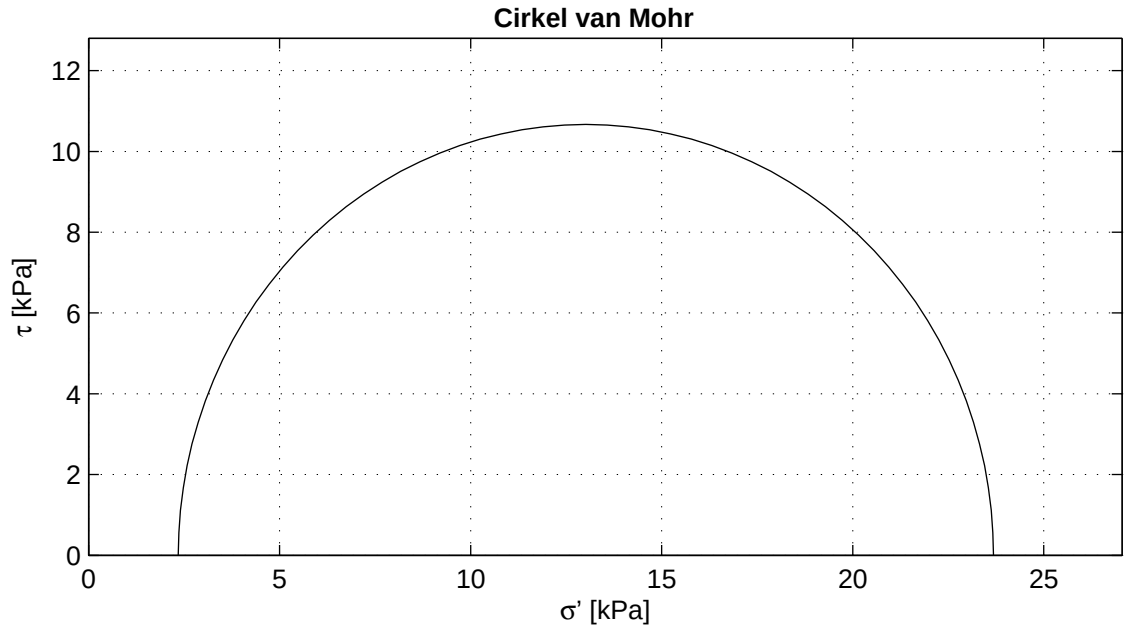



Deltares
Enabling Delta Life
opdracht nr. : 1220719.003 lab. nr. : 122
plaats :
boring nr. : MB-08
diepte monster : -450 - 470 m. datum : 19/10


Deltares
Enabling Delta Life
opdracht nr. : 1220719.003 lab. nr. : 122
plaats :
boring nr. : MB-08
diepte monster : -450 - 470 m. datum : 19/10


Deltares
Enabling Delta Life
opdracht nr. : 1220719.003 lab. nr. : 122
plaats :
boring nr. : MB-08
diepte monster : -450 - 470 m. datum : 19/10




| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 10.7 |
| Eindwaarde $c_u$ [kPa] | 8.5 |
| Nummer Boring | MB−08 |
| Monsternaam | 123 |
| Diepte NAP [m] | −7.61/−7.81 |
| NEN5104 code | Vk1 |
| $m_i$ [g] | 606.8 |
| $D_i$ [mm] | 67.0 |
| $h_i$ [mm] | 140.1 |
| $w_i$ [%] | 182.4 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1228 |
| $\rho_{i,dry}$ [kg/m$^3$] | 435 |
| Grondsoort | veen |

Voor beproeving

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| datum | get. |
|---|---|
| 2016−11−16 | konstadi |

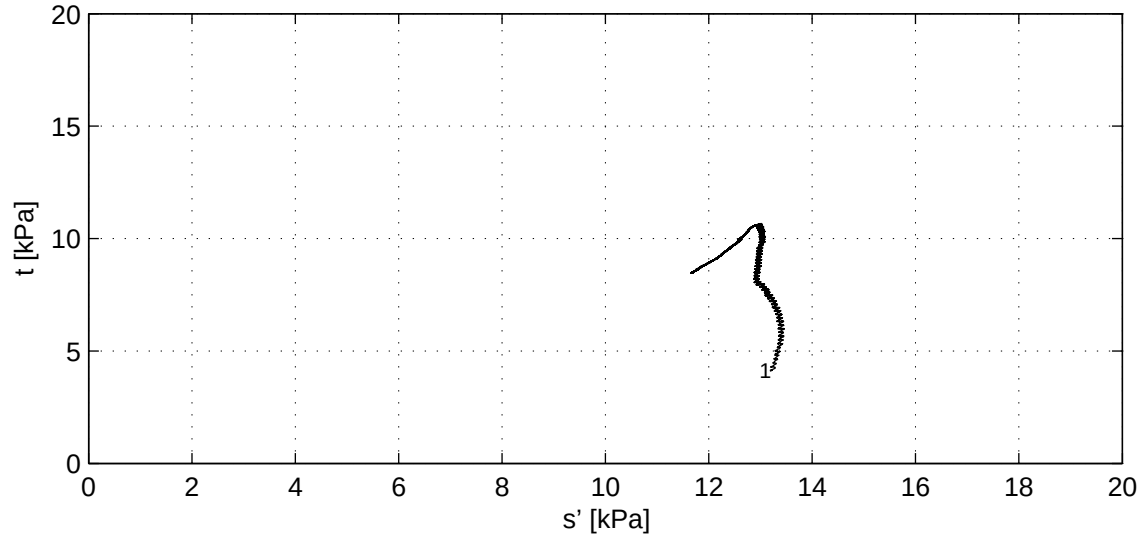
POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

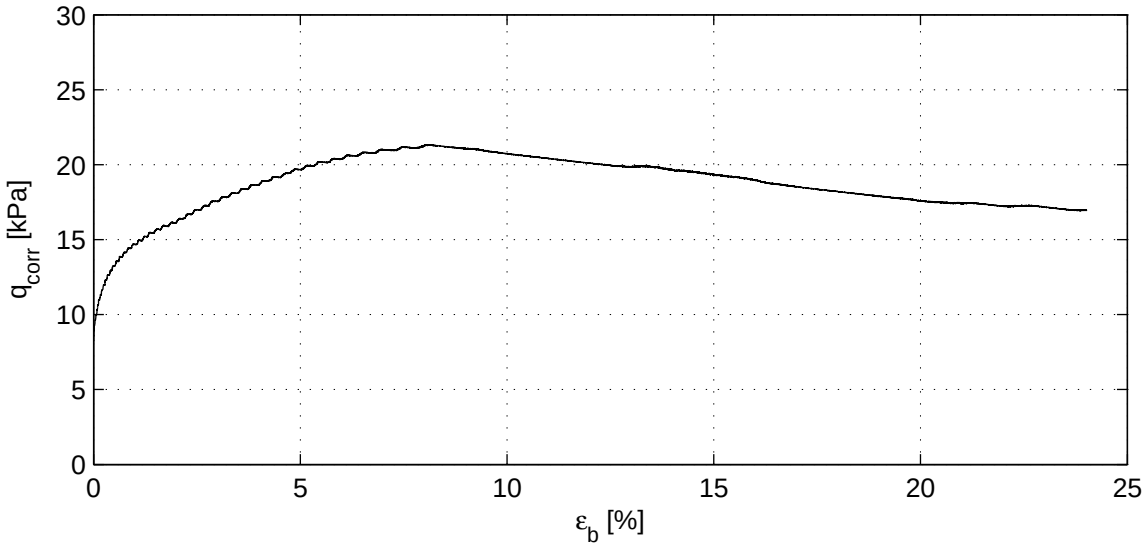
CU_123

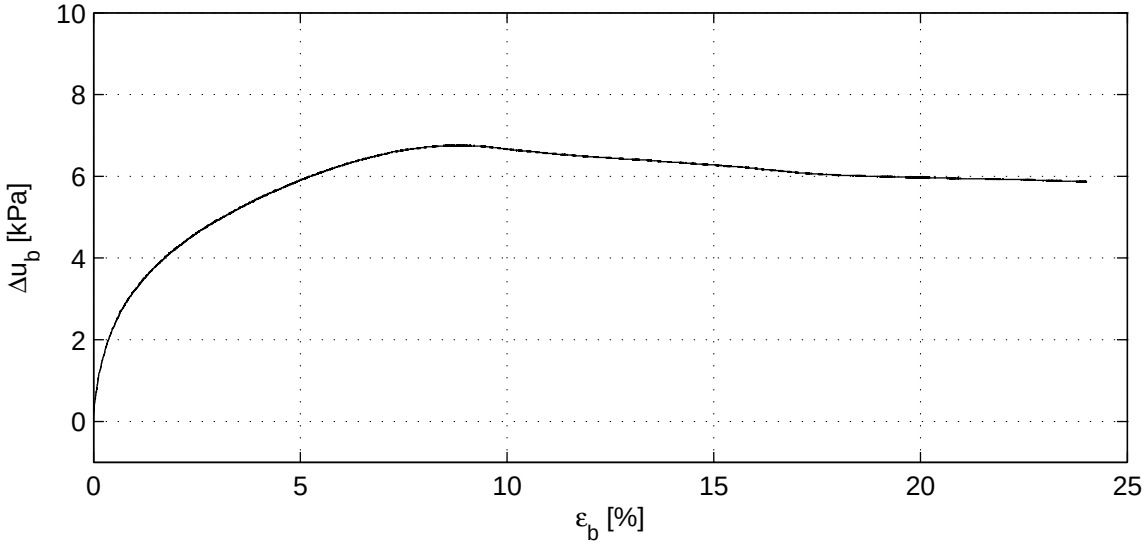
| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX123 | 1 |




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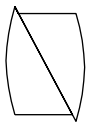
| | |
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| datum | get. |
| 2016−11−16 | konstadi |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

CU_123

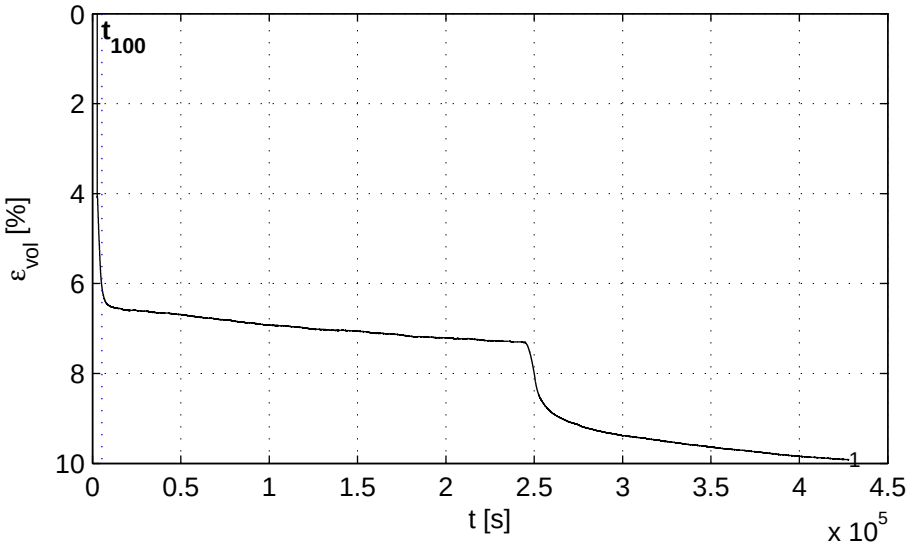
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| | |
|---|---|
| project | Versie |
| 1220719.3 | 1.4 |
| bijlage | pag. |
| TX123 | 2 |

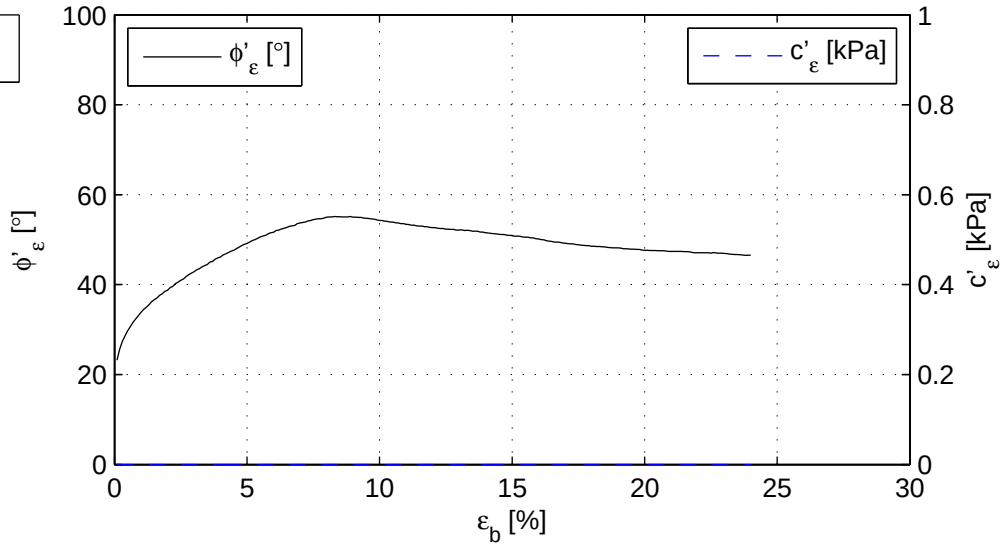
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.88 | | |
| | $B_1$ [−] | 0.99 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 16.9 | | |
| | $t_{100}$ [min] | 90 | | |
| | $h_c$ [mm] | 134.25 | | |
| | $V_c$ [$cm^3$] | 444.96 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1254 | | |
| | $w_c$ [%] | 159.6 | | |
| | $u_{bk}$ [kPa] | 300 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 1.5 | | |
| | v [%/h] | 0.98 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | ε_b 15% | | |
| | $q_u$ [kPa] | 21.3 | | |
| | $f_{undr}$ [kPa] | 10.7 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 1.07 | | |
| | $E_{50}$ [MPa] | 0.6 | | |
| | $w_e$ [%] | 182.4 | | |
| | Bezwijkfiguur |  | | |

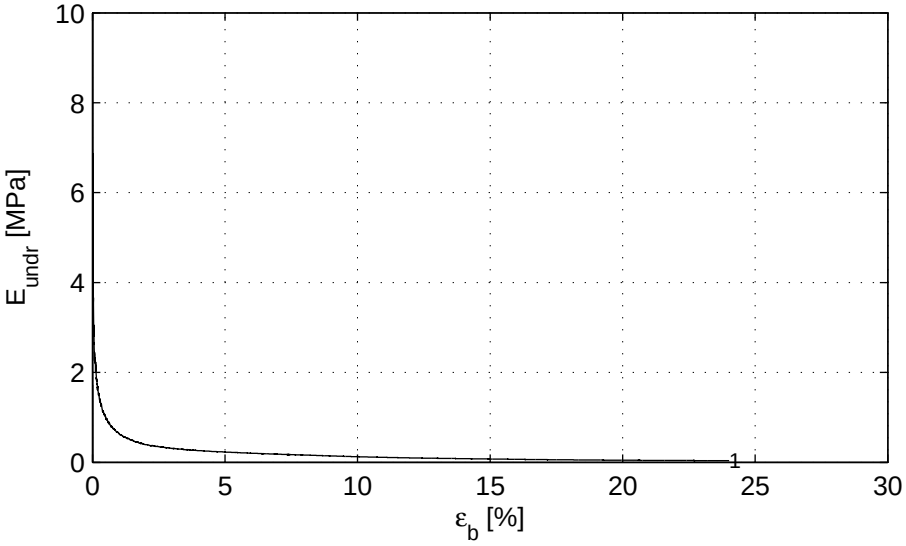
| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 12.9 | | | 8.1 | | | | 8.1 |
| 5.0 | 13.0 | | | 9.8 | | | | 9.8 |
| 10.0 | 12.8 | | | 10.4 | | | | 10.4 |
| $t_{max}$ [kPa] | 13.0 | | | 10.7 | | | | 10.7 |

Consolidatiefase




Belastingsfase

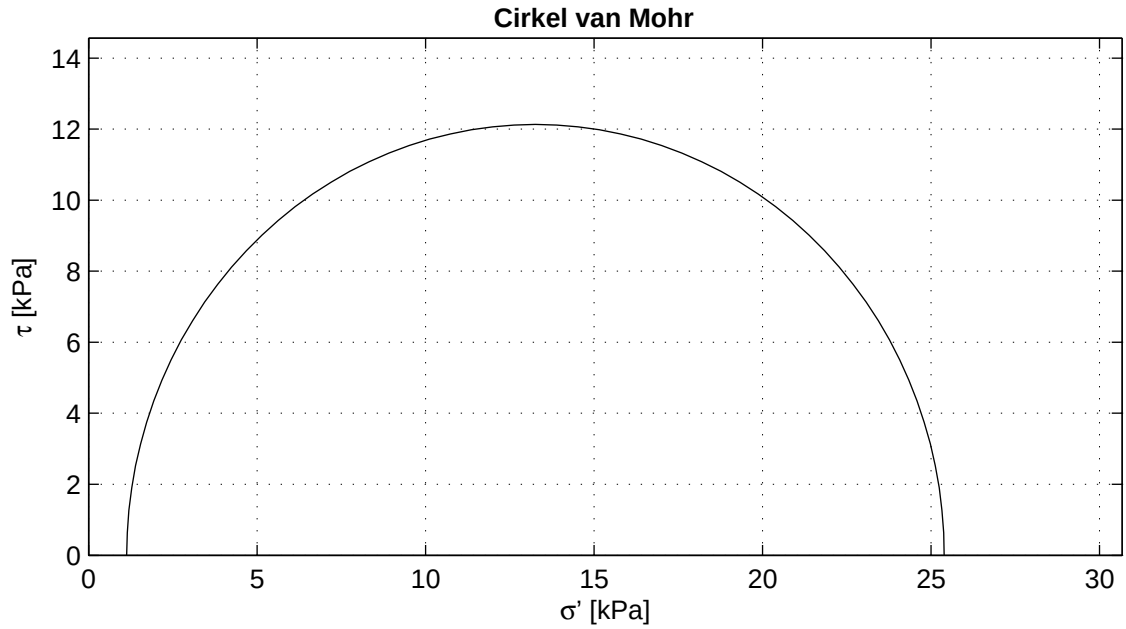



GEOTECHNIK








| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 12.1 |
| Eindwaarde $c_u$ [kPa] | 8.0 |
| Nummer Boring | MB−01 |
| Monsternaam | 16 |
| Diepte NAP [m] | −6.91/−7.11 |
| NEN5104 code | Vm |
| $m_i$ [g] | 596.9 |
| $D_i$ [mm] | 66.4 |
| $h_i$ [mm] | 145.0 |
| $w_i$ [%] | 204.5 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1189 |
| $\rho_{i,dry}$ [kg/m$^3$] | 390 |
| Grondsoort | veen |

Voor beproeving

Apparaat: Wille−B

Spanningspad beinvloed door conversie onnauwkeurigheid van het krachtsignaal.

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| datum | get. |
|---|---|
| 2016−06−28 | venema |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

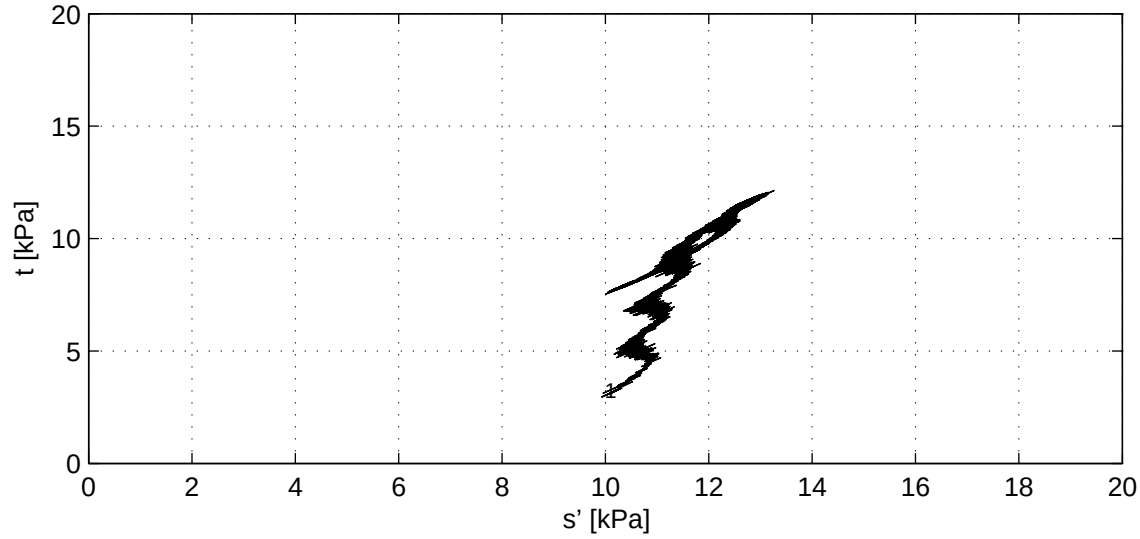
CU_16

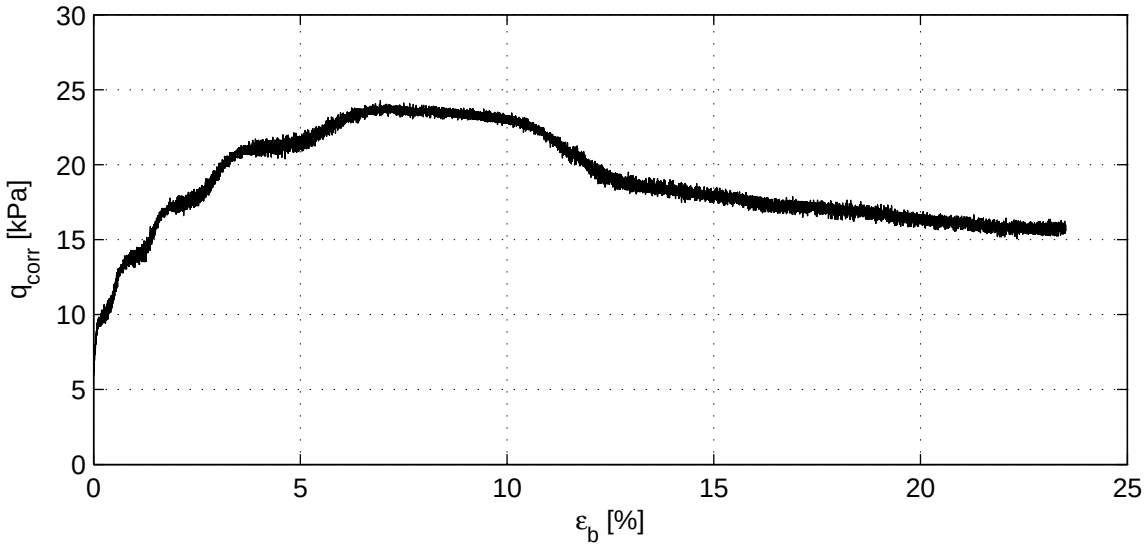
| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

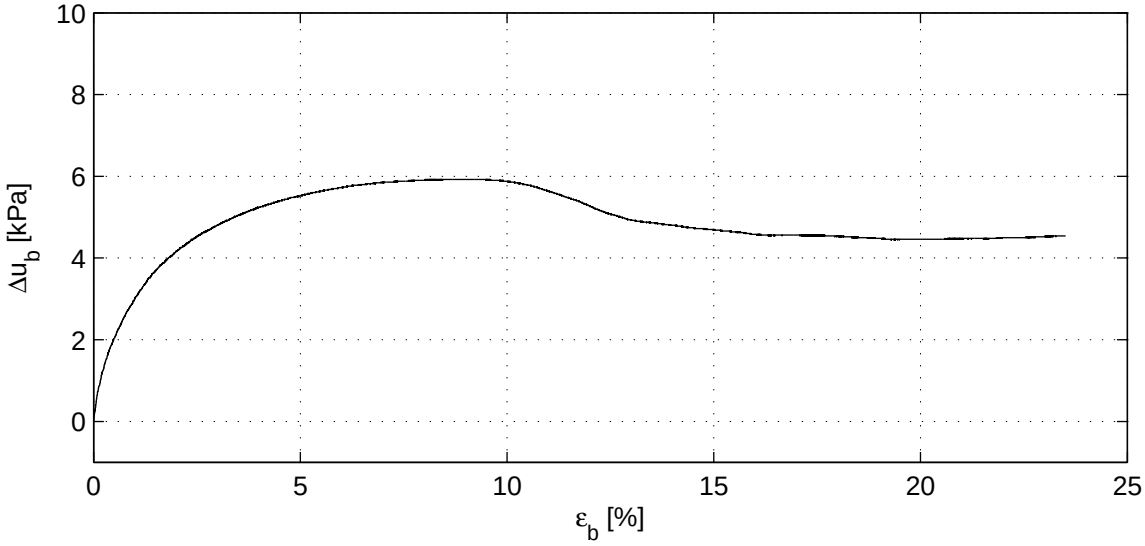
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX16 | 1 |

*) Gecontroleerd en vrijgegeven door grw op 2016-07-01




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| datum | get. |
|---|---|
| 2016−06−28 | venema |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

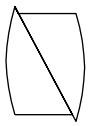
CU_16

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX16 | 2 |

*) Gecontroleerd en vrijgegeven door grw op 2016-07-01

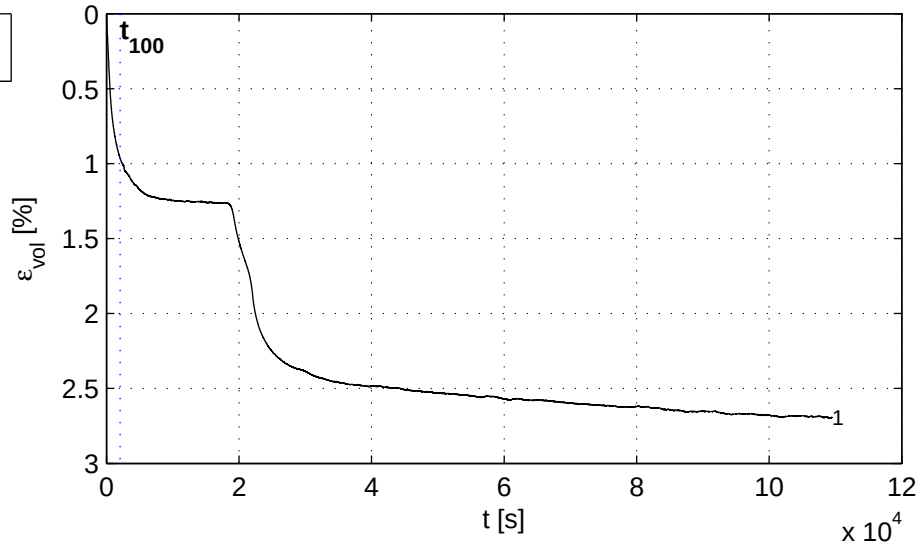
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.82 | | |
| | $B_1$ [−] | 1.00 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 12.1 | | |
| | $t_{100}$ [min] | 35 | | |
| | $h_c$ [mm] | 141.79 | | |
| | $V_c$ [cm$^3$] | 488.58 | | |
| | $\rho_{n,c}$ [kg/m$^3$] | 1194 | | |
| | $w_c$ [%] | 197.6 | | |
| | $u_{bk}$ [kPa] | 300 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 3.9 | | |
| | v [%/h] | 0.95 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 24.3 | | |
| | $f_{undr}$ [kPa] | 12.1 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 1.36 | | |
| | $E_{50}$ [MPa] | 0.7 | | |
| | $w_e$ [%] | 203.6 | | |
| | Bezwijkfiguur |  | | |

| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 11.5 | | | 8.7 | | | | 8.7 |
| 5.0 | 12.3 | | | 10.9 | | | | 10.9 |
| 10.0 | 12.5 | | | 11.4 | | | | 11.4 |
| $t_{max}$ [kPa] | 13.3 | | | 12.1 | | | | 12.1 |

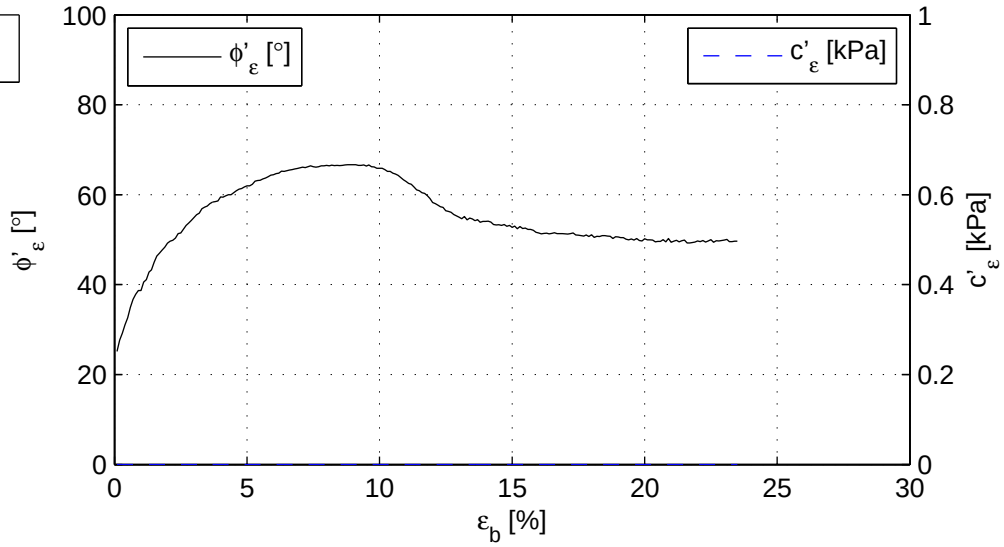


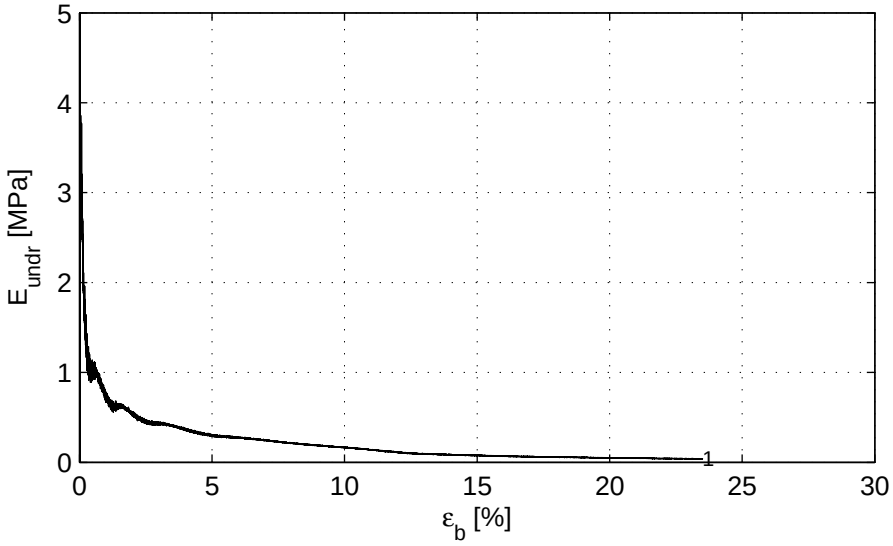
*) Gecontroleerd en vrijgegeven door grw op 2016-07-01

Consolidatiefase




Belastingsfase

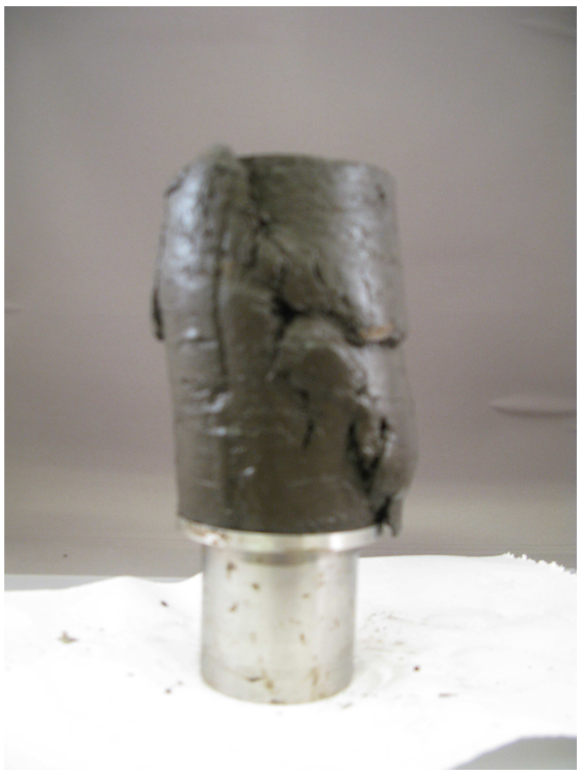



| | | | | | |
|---|---|---|---|---|---|
| Deltares | Postbus 177, 2600 MH Delft<br>Boussinesqweg 1, 2629HV Delft | Telefoon (0)88 335 8273<br>Telefax (0)88 335 8582 | Homepage:<br>www.deltares.nl | datum<br>2016−06−28 | get.<br>venema |
| POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten<br>CU_16 | | | | project<br>1220719.3 | Versie<br>1.4 |
| CU Triaxiaalproef (Singlestage) volgens NEN 5117 | | | | bijlage<br>TX16 | pag.<br>4 |

*) Gecontroleerd en vrijgegeven door grw op 2016-07-01

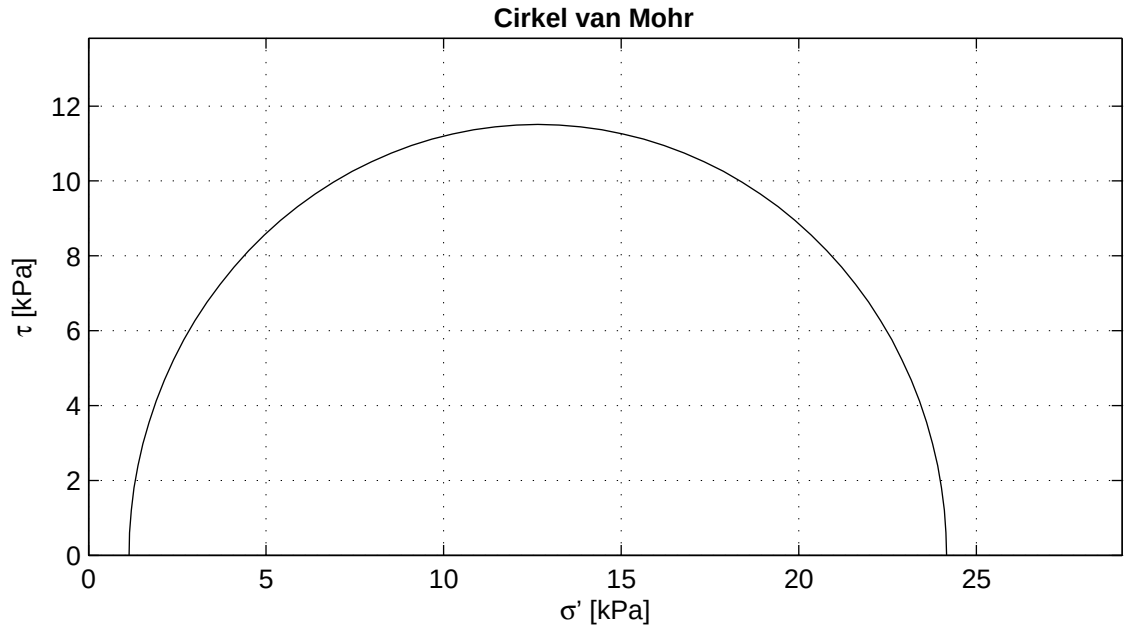








*) Gecontroleerd en vrijgegeven door grw op 2016-07-01




| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 11.5 |
| Eindwaarde $c_u$ [kPa] | 7.5 |
| Nummer Boring | MB−01 |
| Monsternaam | 17 |
| Diepte NAP [m] | −7.33/−7.53 |
| NEN5104 code | Vm |
| $m_i$ [g] | 621.0 |
| $D_i$ [mm] | 66.7 |
| $h_i$ [mm] | 146.0 |
| $w_i$ [%] | 182.1 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1217 |
| $\rho_{i,dry}$ [kg/m$^3$] | 432 |
| Grondsoort | veen |

Voor beproeving

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www.deltares.nl

| datum | get. |
|---|---|
| 2016−06−28 | venema |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

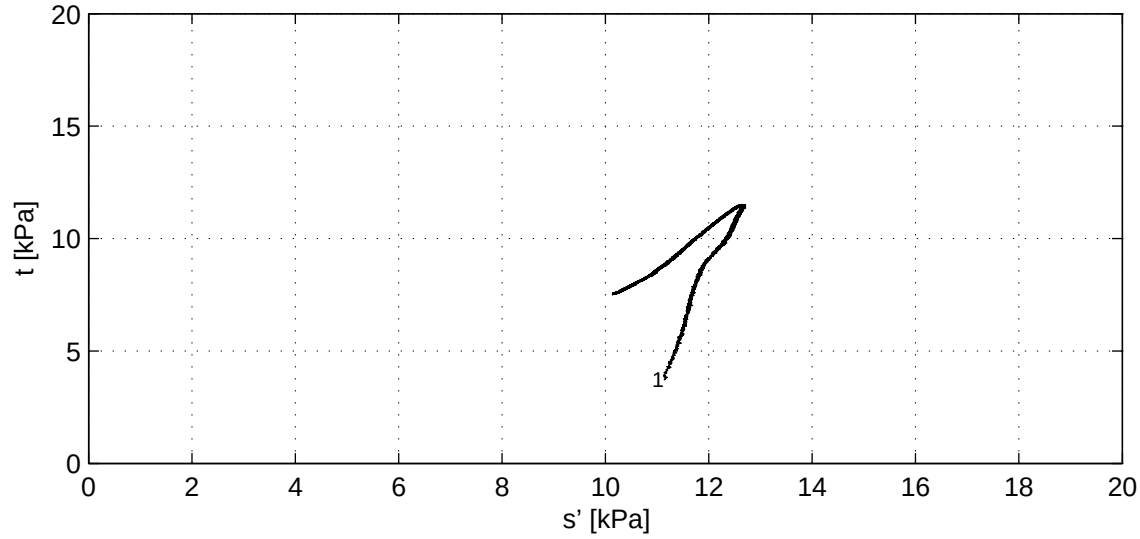
CU_17

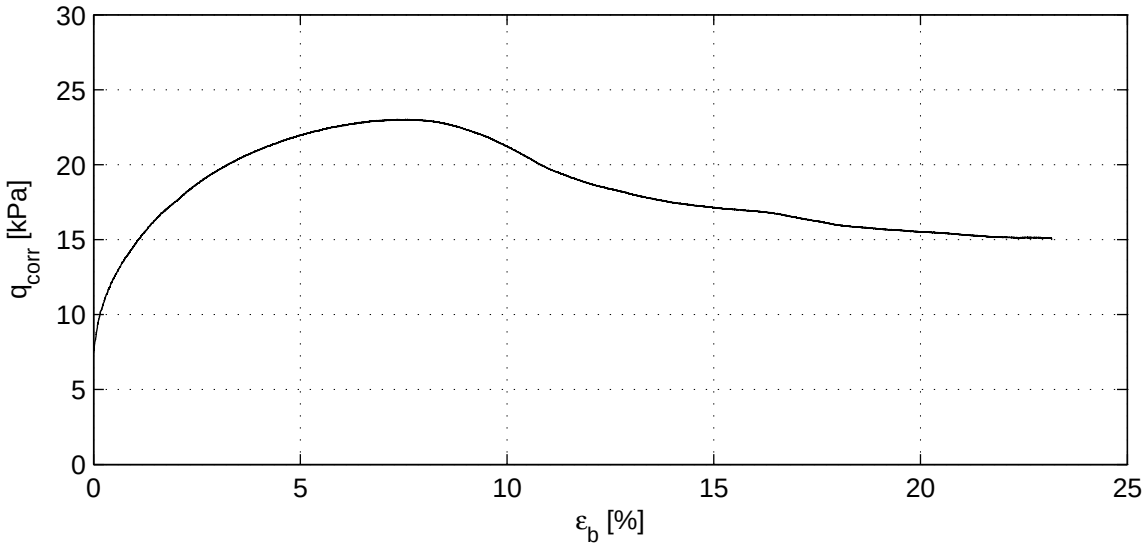
| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

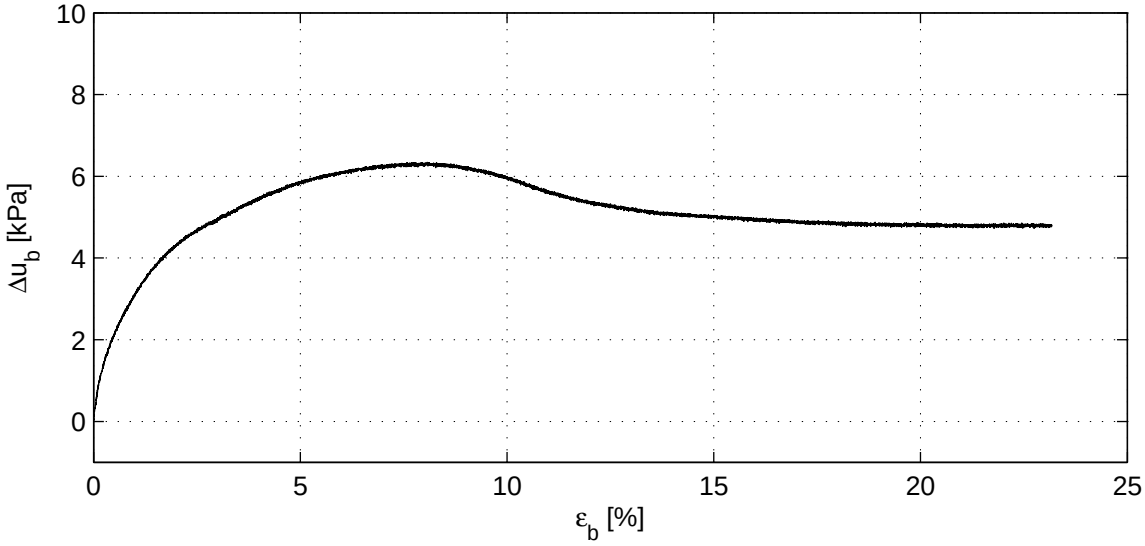
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX17 | 1 |

*) Gecontroleerd en vrijgegeven door grw op 2016-07-01

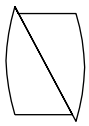





*) Gecontroleerd en vrijgegeven door grw op 2016-07-01

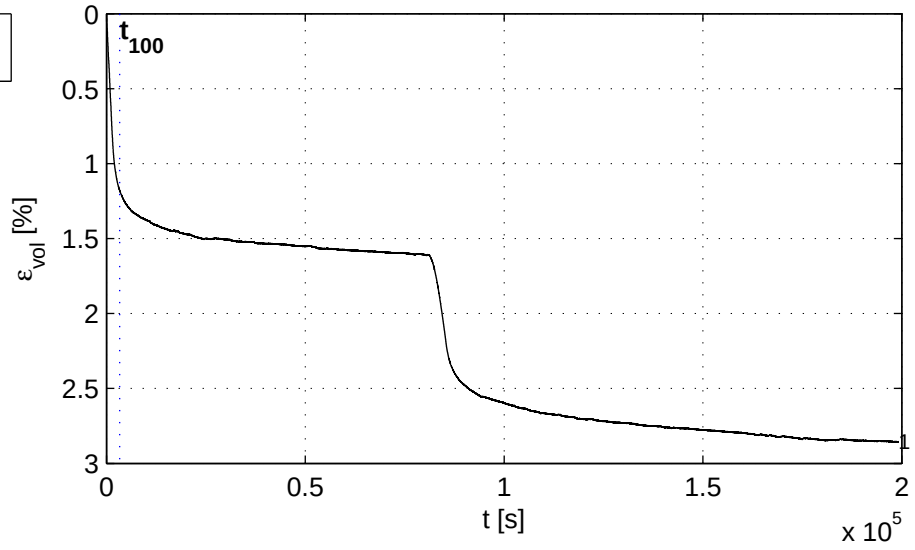
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.95 | | |
| | $B_1$ [−] | 1.00 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 14.7 | | |
| | $t_{100}$ [min] | 55 | | |
| | $h_c$ [mm] | 142.96 | | |
| | $V_c$ [cm$^3$] | 495.58 | | |
| | $\rho_{n,c}$ [kg/m$^3$] | 1224 | | |
| | $w_c$ [%] | 175.4 | | |
| | $u_{bk}$ [kPa] | 300 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 2.5 | | |
| | v [%/h] | 0.94 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 23.0 | | |
| | $f_{undr}$ [kPa] | 11.5 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 1.15 | | |
| | $E_{50}$ [MPa] | 0.7 | | |
| | $w_e$ [%] | 188.8 | | |
| | Bezwijkfiguur |  | | |

| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 11.9 | | | 8.8 | | | | 8.8 |
| 5.0 | 12.6 | | | 11.0 | | | | 11.0 |
| 10.0 | 12.1 | | | 10.6 | | | | 10.6 |
| $t_{max}$ [kPa] | 12.6 | | | 11.5 | | | | 11.5 |

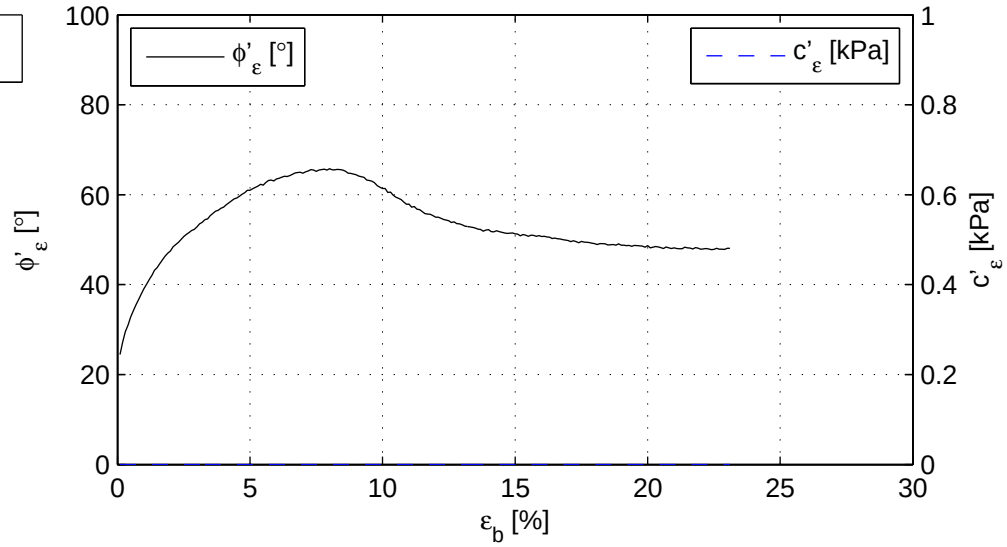


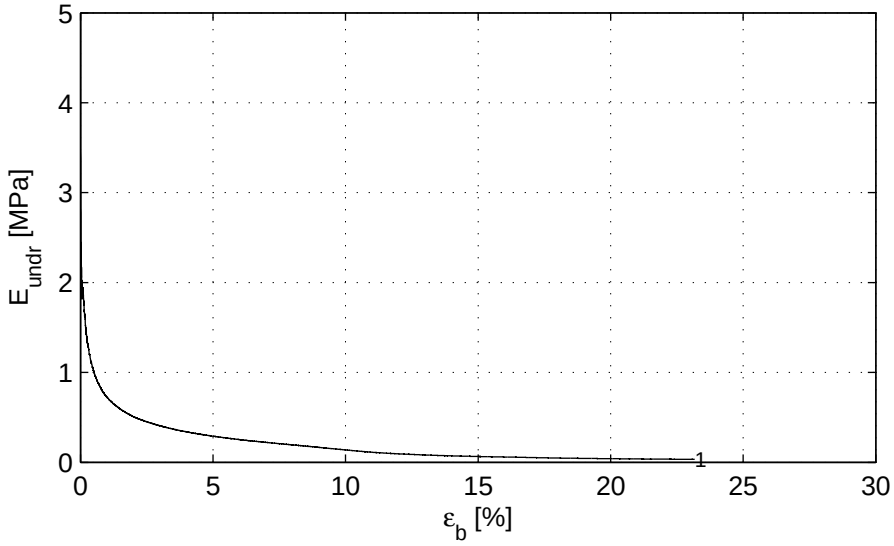
*) Gecontroleerd en vrijgegeven door grw op 2016-07-01

Consolidatiefase




Belastingsfase






*) Gecontroleerd en vrijgegeven door grw op 2016-07-01

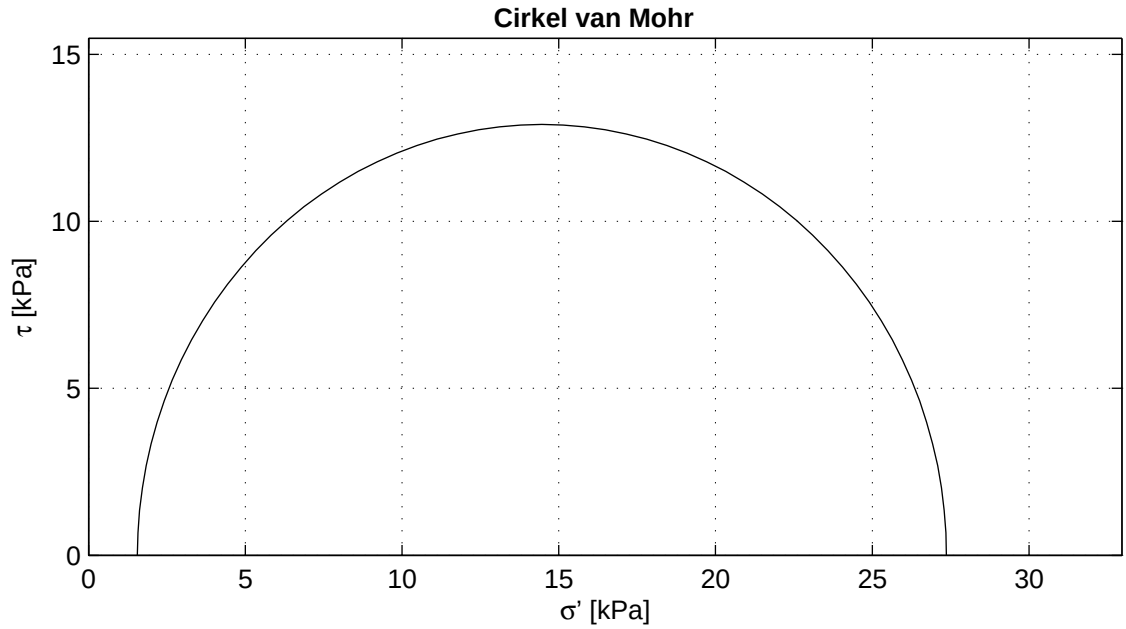








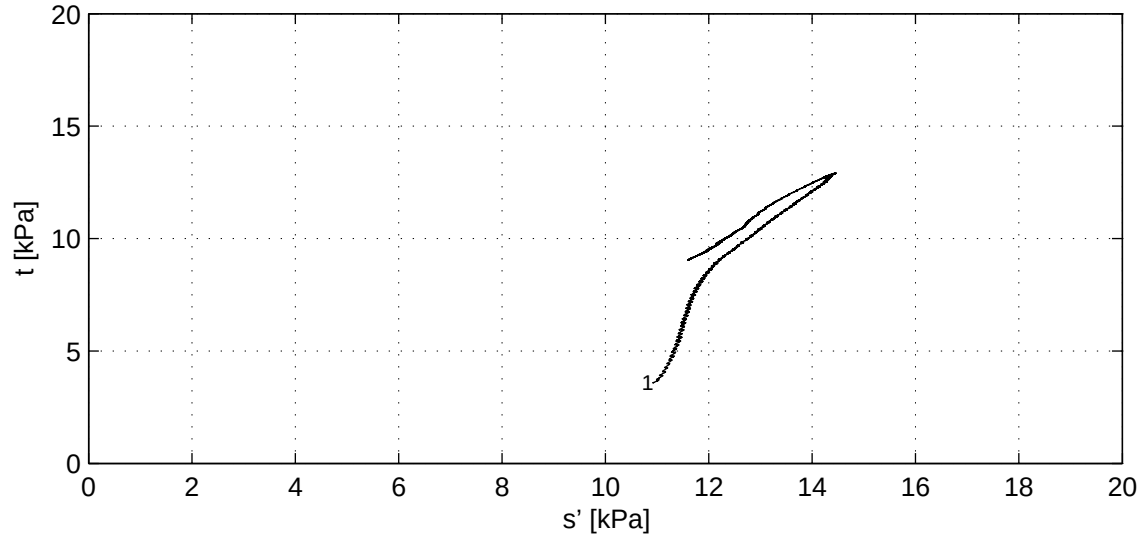
*) Gecontroleerd en vrijgegeven door grw op 2016-07-01

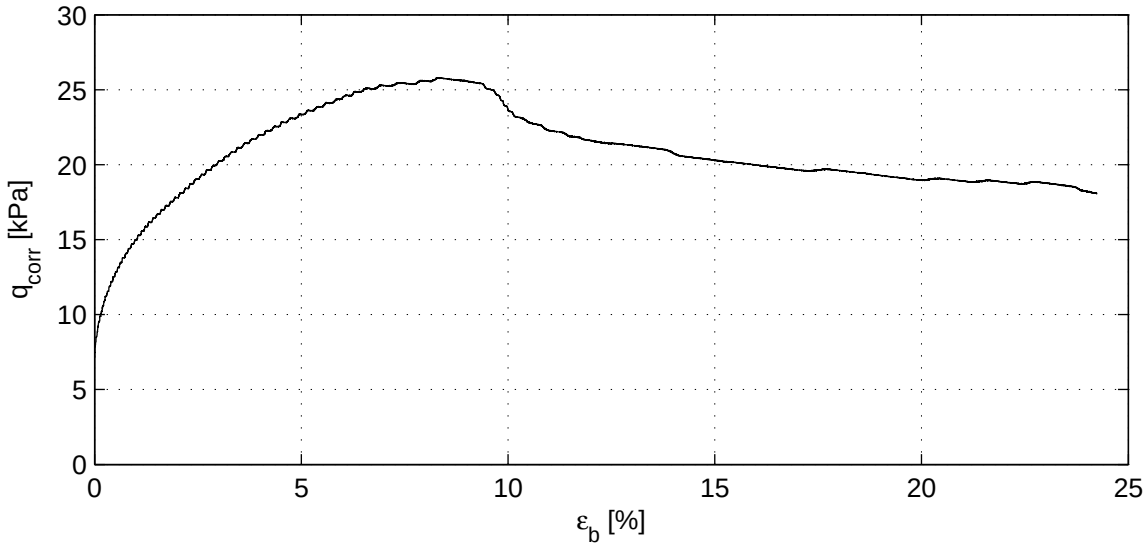


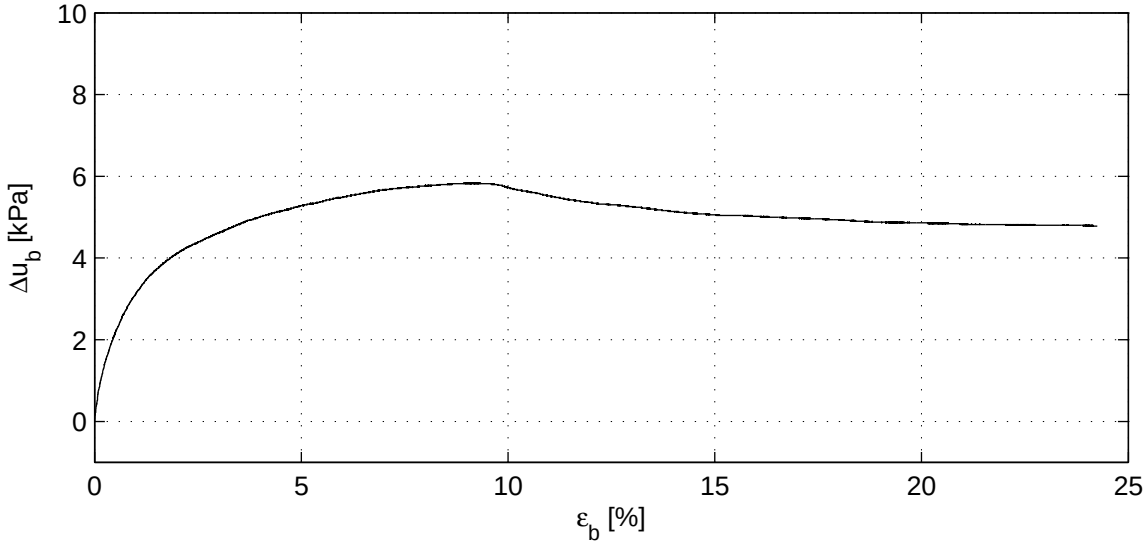

| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 12.9 |
| Eindwaarde $c_u$ [kPa] | 9.0 |
| Nummer Boring | MB−02 |
| Monsternaam | 32 |
| Diepte NAP [m] | −6.90/−7.10 |
| NEN5104 code | Vk1 |
| $m_i$ [g] | 599.1 |
| $D_i$ [mm] | 67.1 |
| $h_i$ [mm] | 142.1 |
| $w_i$ [%] | 194.3 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1192 |
| $\rho_{i,dry}$ [kg/m$^3$] | 405 |
| Grondsoort | veen |

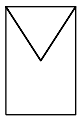
Voor beproeving

Anisotrope consolidatie 7.3 kPa horizontaal en 14.6 kPa verticaal.


t [kPa]
s' [kPa]
1

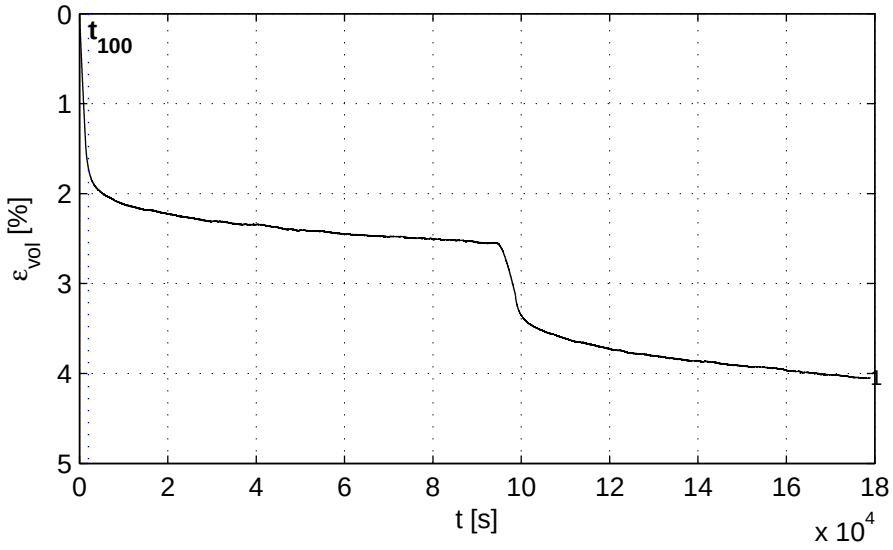

q_corr [kPa]
ε_b [%]


Δu_b [kPa]
ε_b [%]

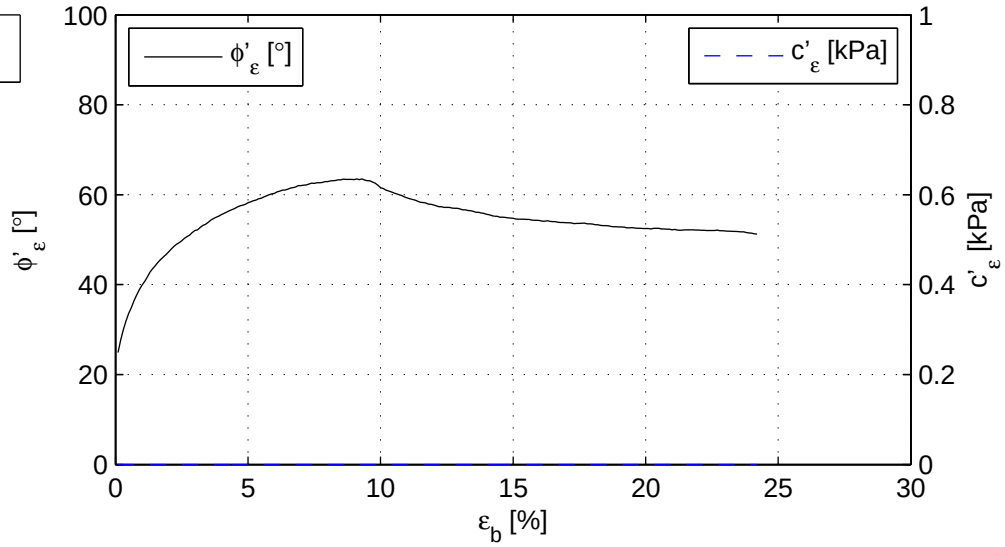
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.93 | | |
| | $B_1$ [−] | 0.99 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 13.0 | | |
| | $t_{100}$ [min] | 34 | | |
| | $h_c$ [mm] | 138.65 | | |
| | $V_c$ [$cm^3$] | 482.14 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1200 | | |
| | $w_c$ [%] | 184.3 | | |
| | $u_{bk}$ [kPa] | 300 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 4.0 | | |
| | v [%/h] | 0.97 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 25.8 | | |
| | $f_{undr}$ [kPa] | 12.9 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 1.48 | | |
| | $E_{50}$ [MPa] | 0.6 | | |
| | $w_e$ [%] | 200.9 | | |
| | Bezwijkfiguur |  | | |

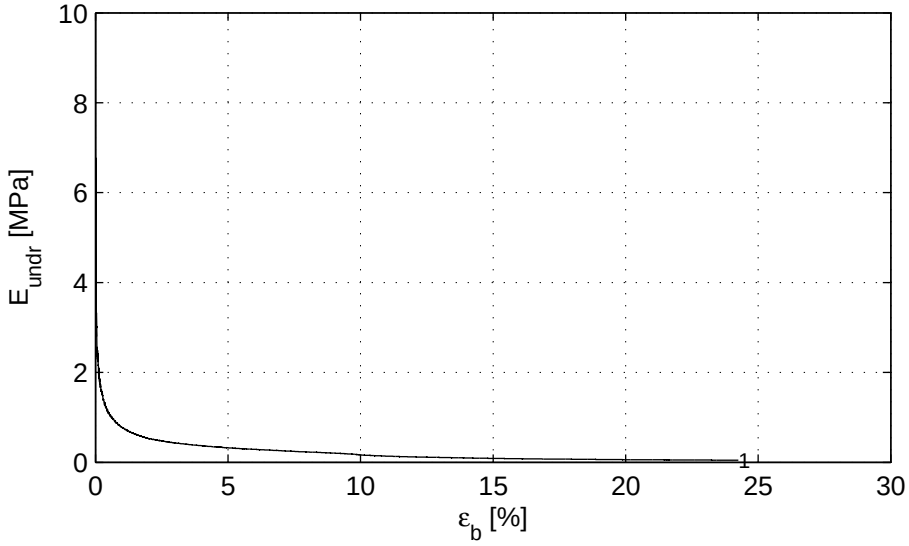
| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 12.1 | | | 8.9 | | | | 8.9 |
| 5.0 | 13.7 | | | 11.7 | | | | 11.7 |
| 10.0 | 13.4 | | | 11.8 | | | | 11.8 |
| $t_{max}$ [kPa] | 14.5 | | | 12.9 | | | | 12.9 |

Consolidatiefase




Belastingsfase

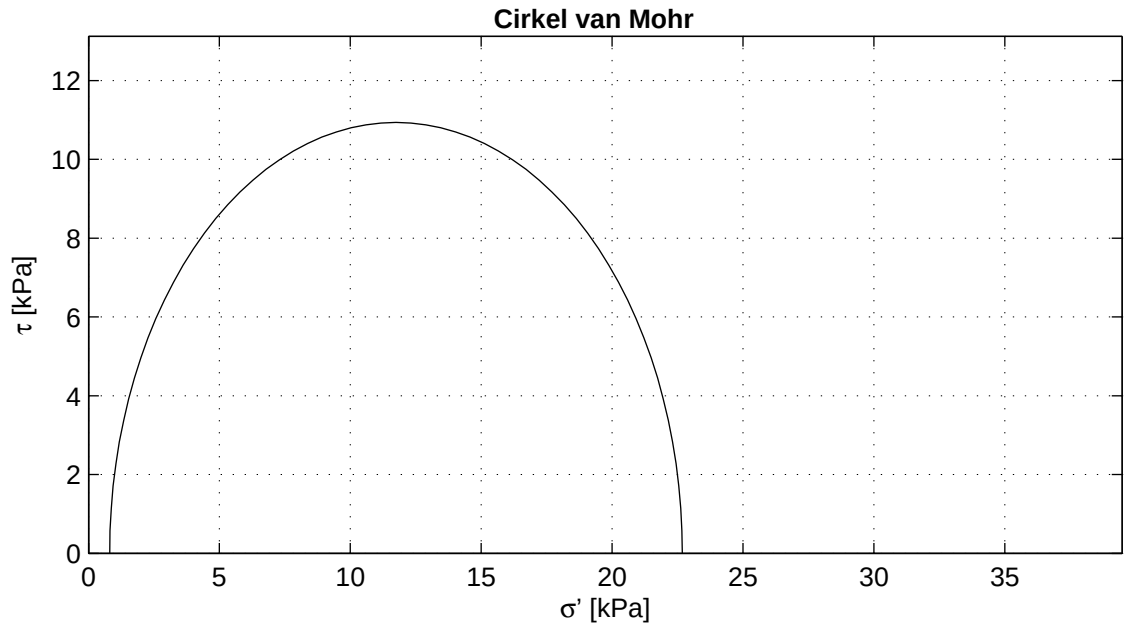



Deltares
Enabling Delta Life
opdracht nr. 1220719.003 lab. nr. 32
plaats
boring nr. MB-02
diepte monster -5.30-5.50 datum 29/09


Deltares
Enabling Delta Life
opdracht nr. 1220719.003 lab. nr. 32
plaats
boring nr. MB-02
diepte monster -5.30-5.50 datum 29/09


Deltares
Enabling Delta Life
opdracht nr. 1220719.003 lab. nr. 32
plaats
boring nr. MB-02
diepte monster -5.30-5.50 datum 29/09




| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 10.9 |
| Eindwaarde $c_u$ [kPa] | 10.5 |
| Nummer Boring | MB−03 |
| Monsternaam | 43 |
| Diepte NAP [m] | −4.88/−5.08 |
| NEN5104 code | Vm<br>kleiig |
| $m_i$ [g] | 543.5 |
| $D_i$ [mm] | 66.7 |
| $h_i$ [mm] | 140.0 |
| $w_i$ [%] | 264.4 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1111 |
| $\rho_{i,dry}$ [kg/m$^3$] | 305 |
| Grondsoort | veen |

Voor beproeving

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| datum | get. |
|---|---|
| 2016−10−26 | luije_sa |

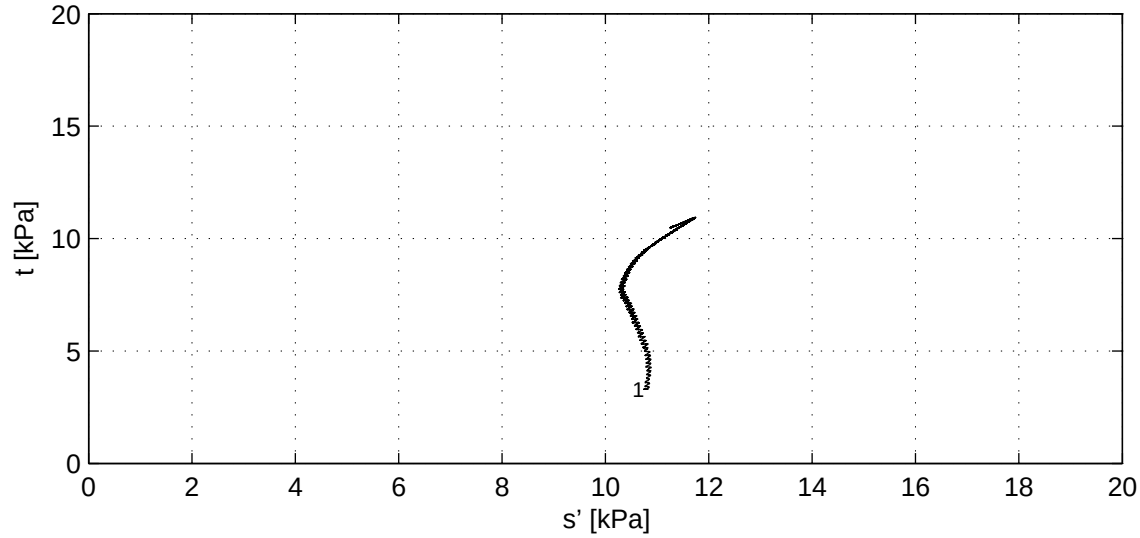
POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

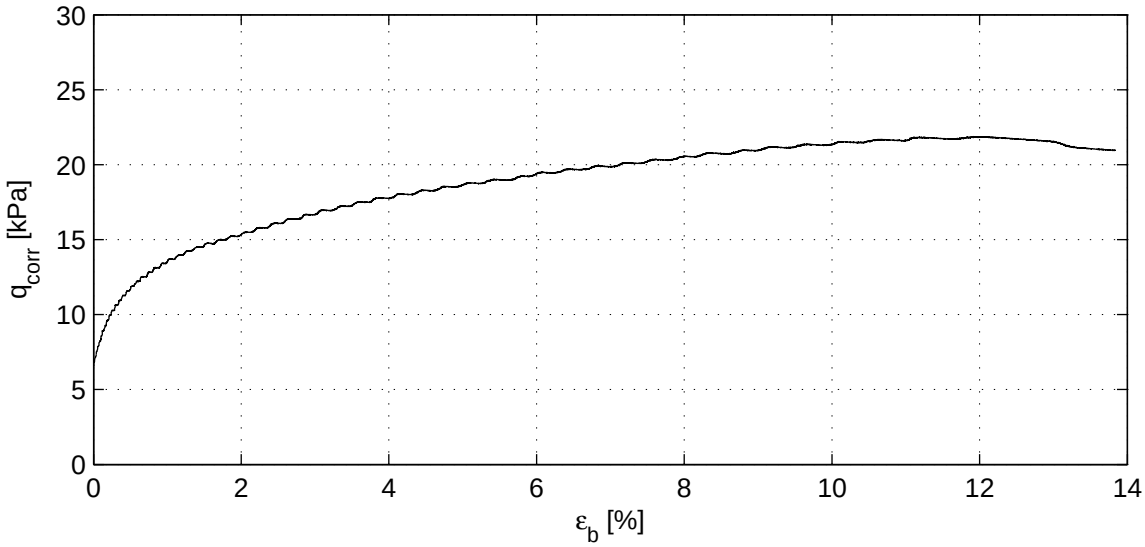
CU_43

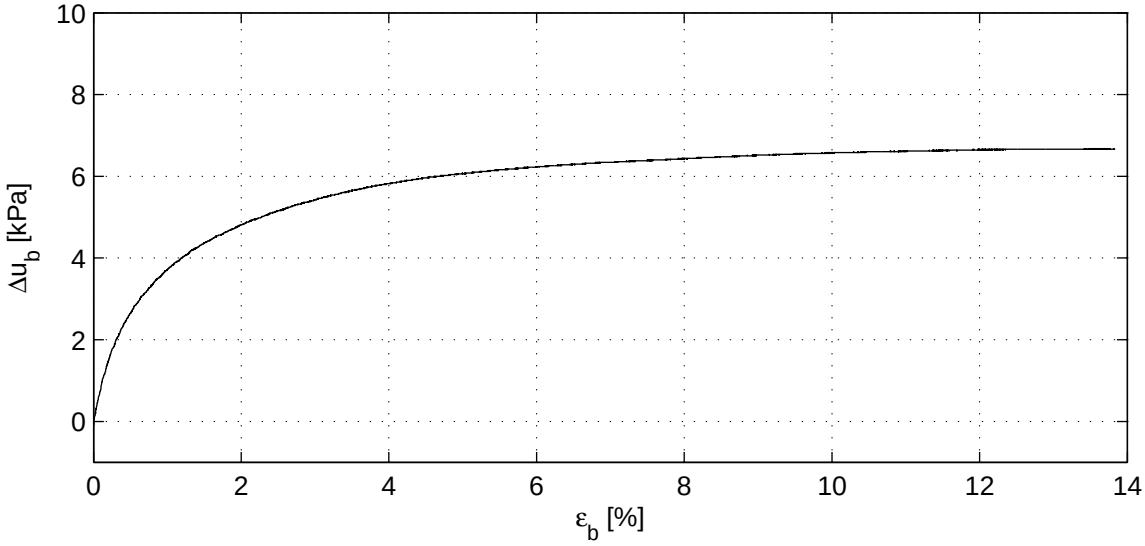
| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
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| TX43 | 1 |




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Boussinesqweg 1, 2629HV Delft
Telefoon (0)88 335 8273
Telefax (0)88 335 8582
Homepage:
www.deltares.nl

| datum | get. |
|---|---|
| 2016−10−26 | luije_sa |

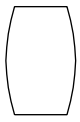
POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

CU_43

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

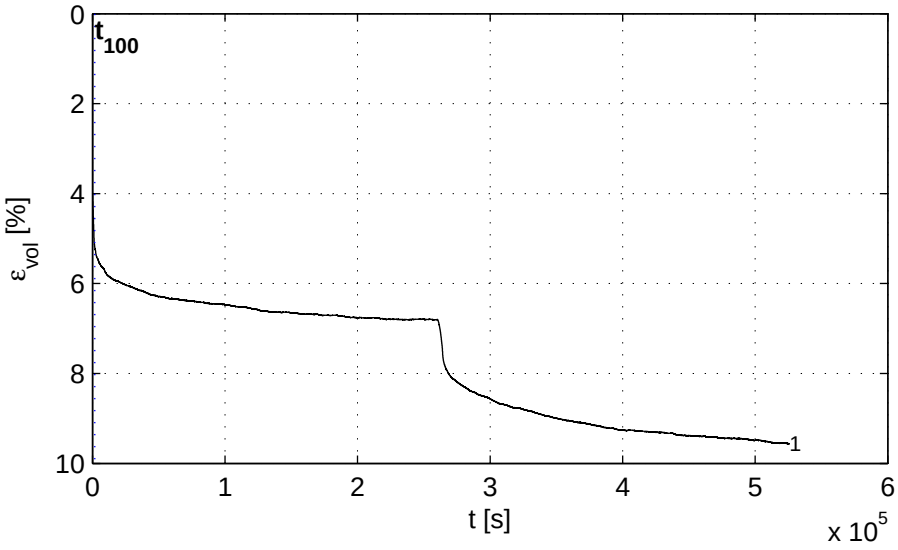
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX43 | 2 |

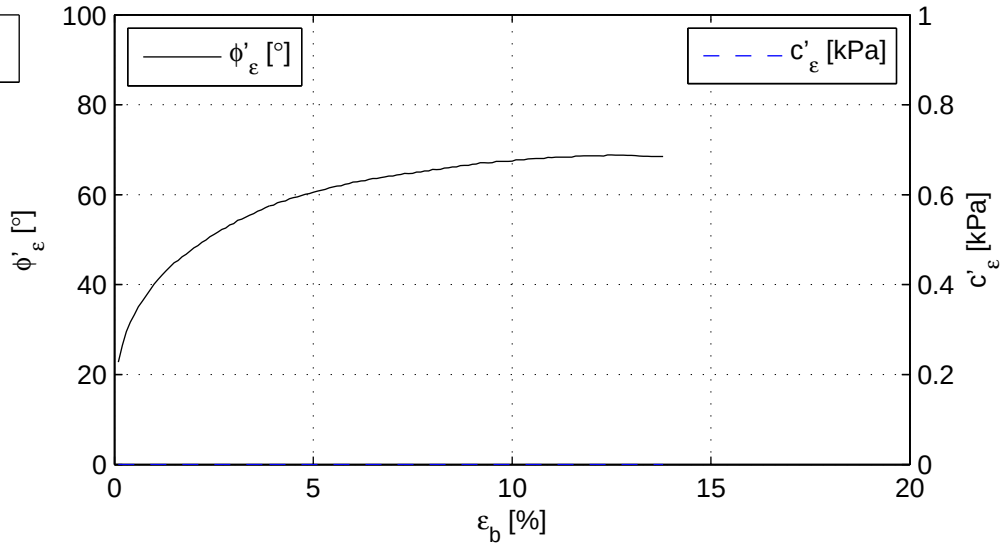
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.78 | | |
| | $B_1$ [−] | 0.99 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 12.9 | | |
| | $t_{100}$ [min] | 29 | | |
| | $h_c$ [mm] | 133.67 | | |
| | $V_c$ [$cm^3$] | 442.41 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1123 | | |
| | $w_c$ [%] | 233.0 | | |
| | $u_{bk}$ [kPa] | 300 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 4.7 | | |
| | v [%/h] | 0.94 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 21.9 | | |
| | $f_{undr}$ [kPa] | 10.9 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 1.27 | | |
| | $E_{50}$ [MPa] | 0.6 | | |
| | $w_e$ [%] | 295.1 | | |
| | Bezwijkfiguur |  | | |

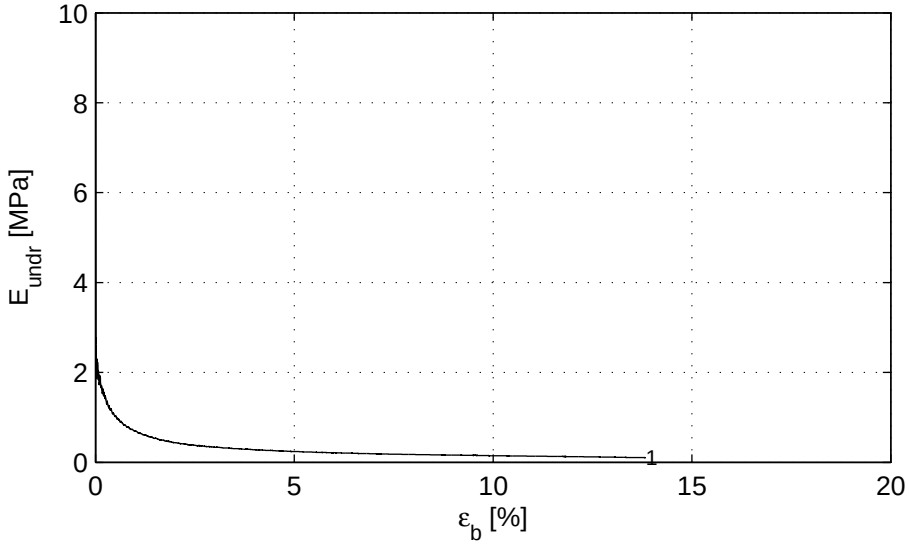
| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 10.3 | | | 7.7 | | | | 7.7 |
| 5.0 | 10.7 | | | 9.3 | | | | 9.3 |
| 10.0 | 11.6 | | | 10.7 | | | | 10.7 |
| $t_{max}$ [kPa] | 11.7 | | | 10.9 | | | | 10.9 |

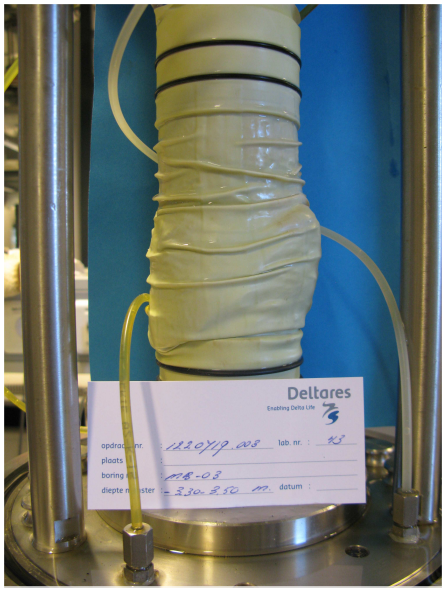
Consolidatiefase




Belastingsfase

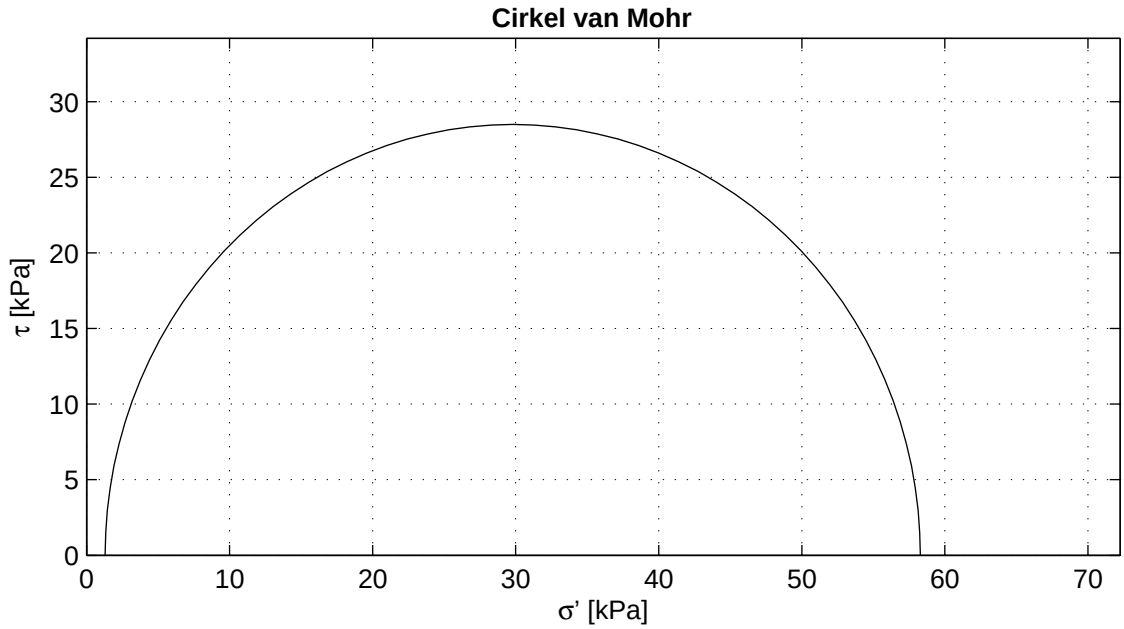



Deltares
opdracht nr. 1220719.003 lab. nr. K3
plaats
boring nr. MB-03
diepte monster -330-350 m. datum


Deltares
opdracht nr.
plaats
boring nr. MB-03
diepte monster -330-350 m. datum


Deltares
opdracht nr. 1220719.003 lab. nr. K3
plaats
boring nr. MB-03
diepte monster -330-350 m. datum



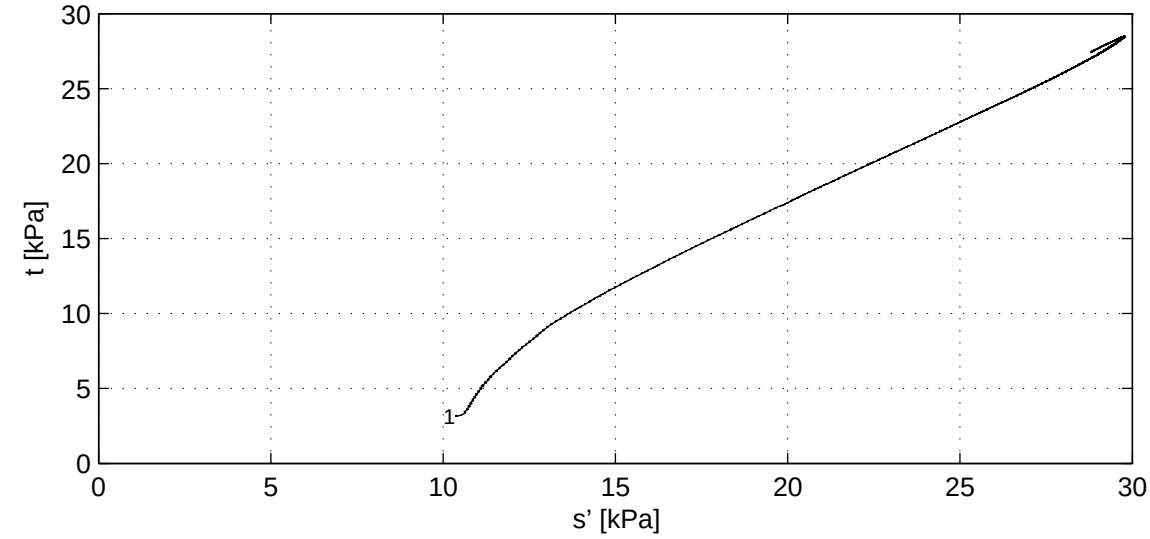

| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 28.5 |
| Eindwaarde $c_u$ [kPa] | 27.4 |
| Nummer Boring | MB−03 |
| Monsternaam | 45 |
| Diepte NAP [m] | −5.28/−5.48 |
| NEN5104 code | Vm |
| $m_i$ [g] | 583.0 |
| $D_i$ [mm] | 66.9 |
| $h_i$ [mm] | 144.3 |
| $w_i$ [%] | 266.8 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1149 |
| $\rho_{i,dry}$ [kg/m$^3$] | 313 |
| Grondsoort | veen |

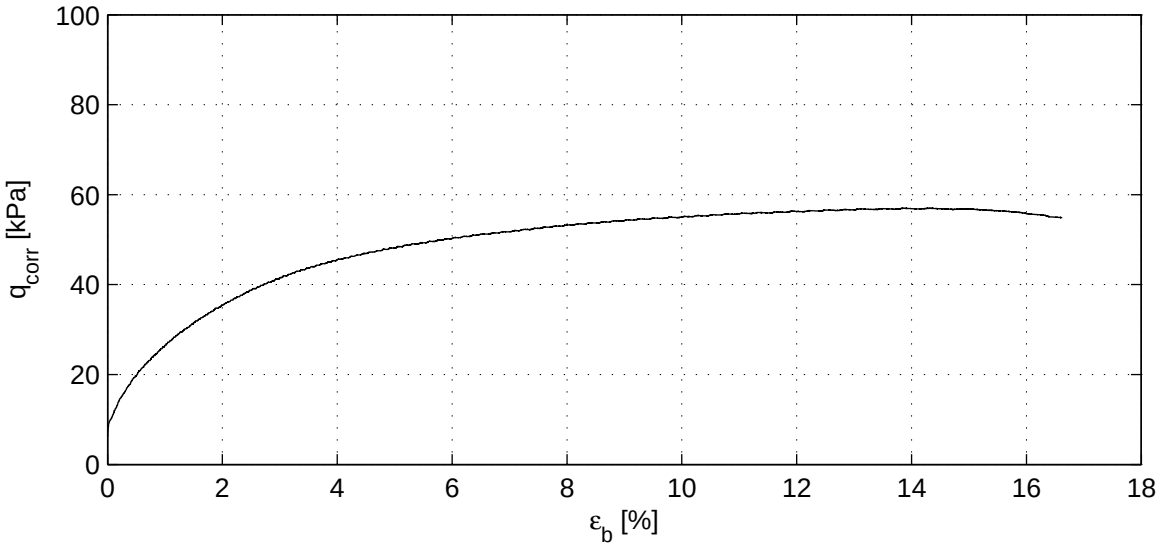
Voor beproeving

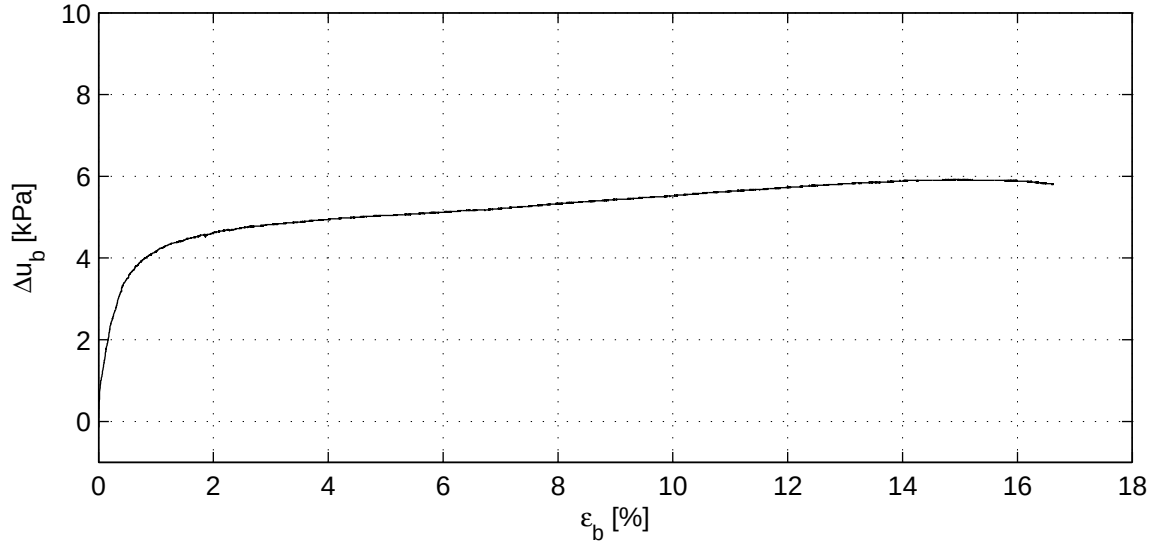
Vacuumconsolidatie simulatie na aanbrengen in−situ druk (6.8 kPa horizontaal, 13.6 kPa verticaal).
Vacuumdruk tijdelijk 50 kPa. Na consolidatie vacuumdruk terug naar nul en consolidatie op in−situ druk.



*) Gecontroleerd en vrijgegeven door ess op 2016-09-14




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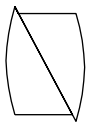
| | | |
|---|---|---|
| datum | 2016−09−08 | get. grw |
| project | 1220719.3 | Versie 1.4 |
| bijlage | TX45 | pag. 2 |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

CU_45

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

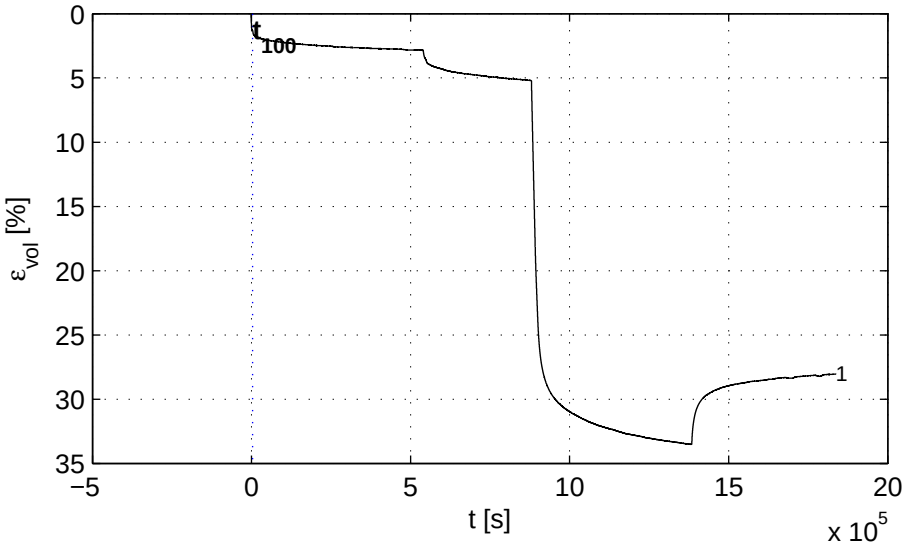
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.90 | | |
| | $B_1$ [−] | 1.00 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 4.1 | | |
| | $t_{100}$ [min] | 60 | | |
| | $h_c$ [mm] | 119.81 | | |
| | $V_c$ [$cm^3$] | 364.98 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1208 | | |
| | $w_c$ [%] | 177.3 | | |
| | $u_{bk}$ [kPa] | 299 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 2.3 | | |
| | v [%/h] | 0.92 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 57.0 | | |
| | $f_{undr}$ [kPa] | 28.5 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 1.52 | | |
| | $E_{50}$ [MPa] | 1.7 | | |
| | $w_e$ [%] | 180.7 | | |
| | Bezwijkfiguur |  | | |

| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 20.3 | | | 17.7 | | | | 17.7 |
| 5.0 | 26.2 | | | 24.1 | | | | 24.1 |
| 10.0 | 29.2 | | | 27.5 | | | | 27.5 |
| $t_{max}$ [kPa] | 29.8 | | | 28.5 | | | | 28.5 |

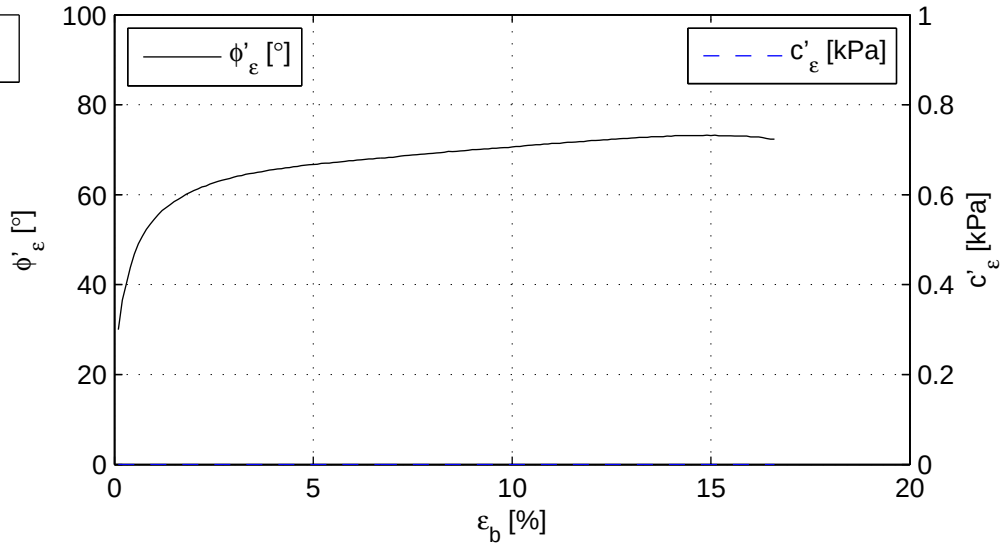


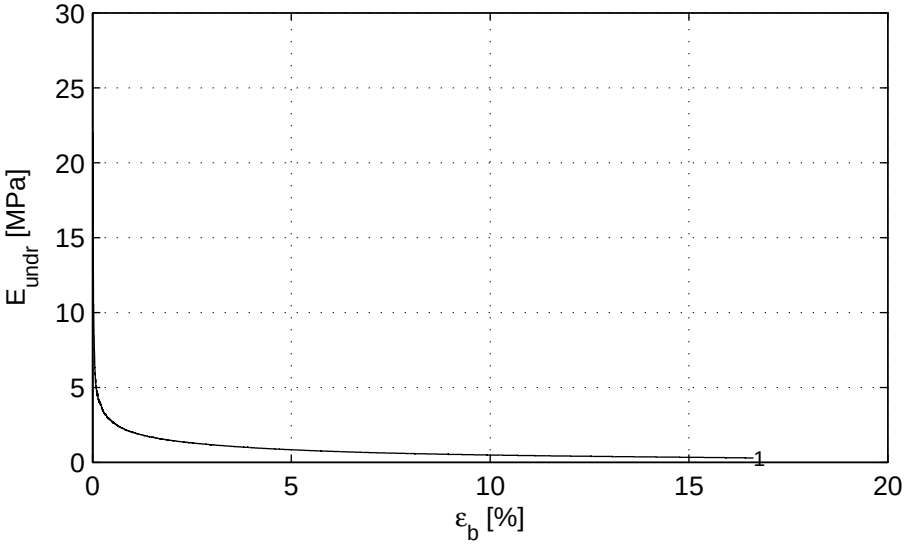
*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

Consolidatiefase




Belastingsfase




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Telefax (0)88 335 8582
Homepage:
www.deltares.nl

| datum | get. |
|---|---|
| 2016−09−08 | grw |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

CU_45

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX45 | 4 |

*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

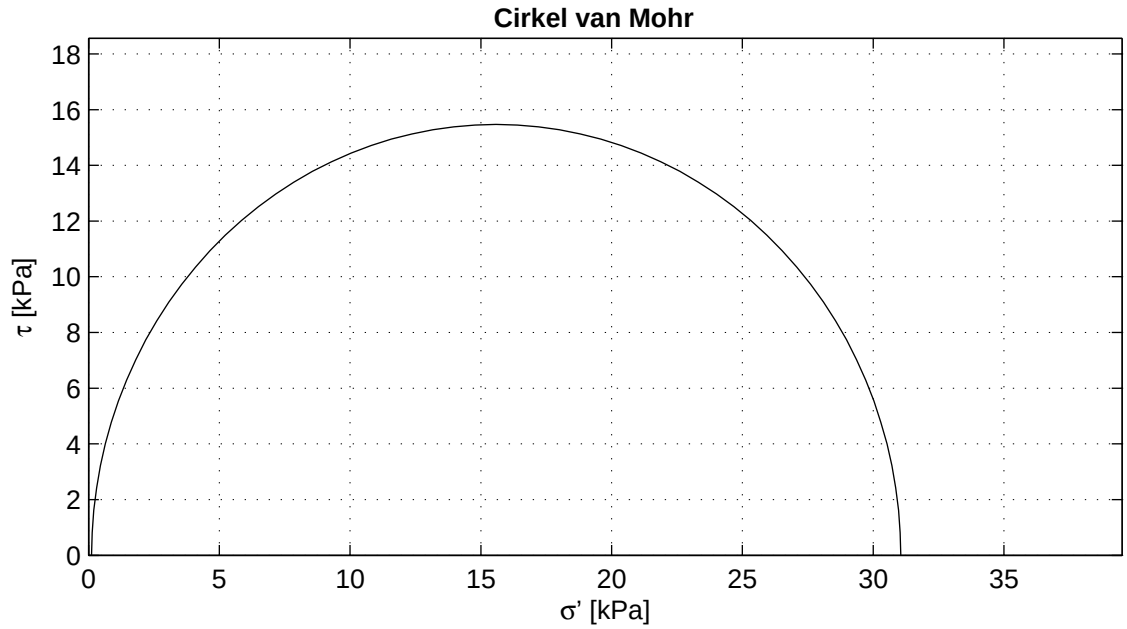








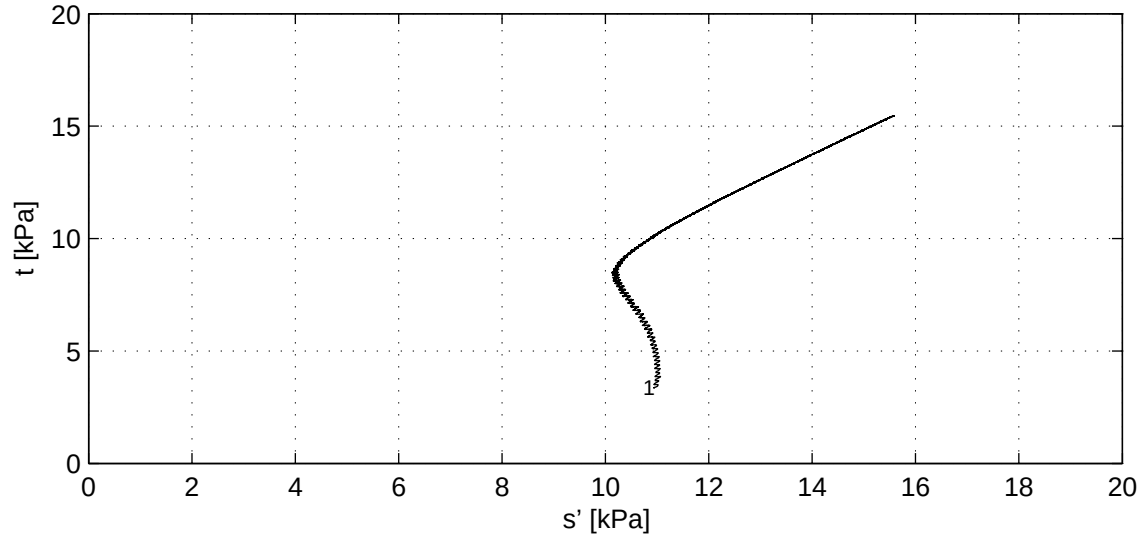
*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

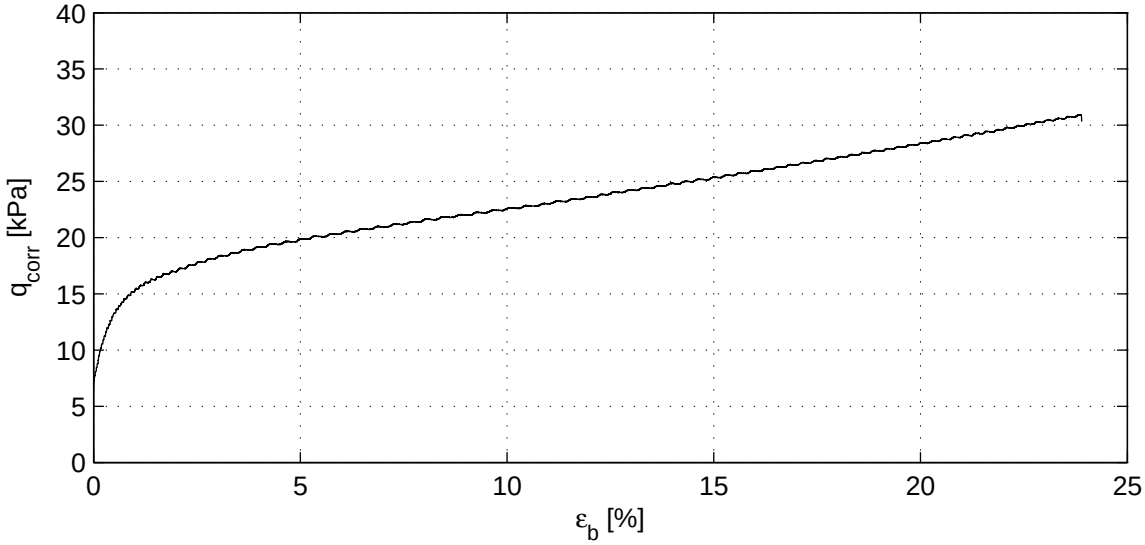


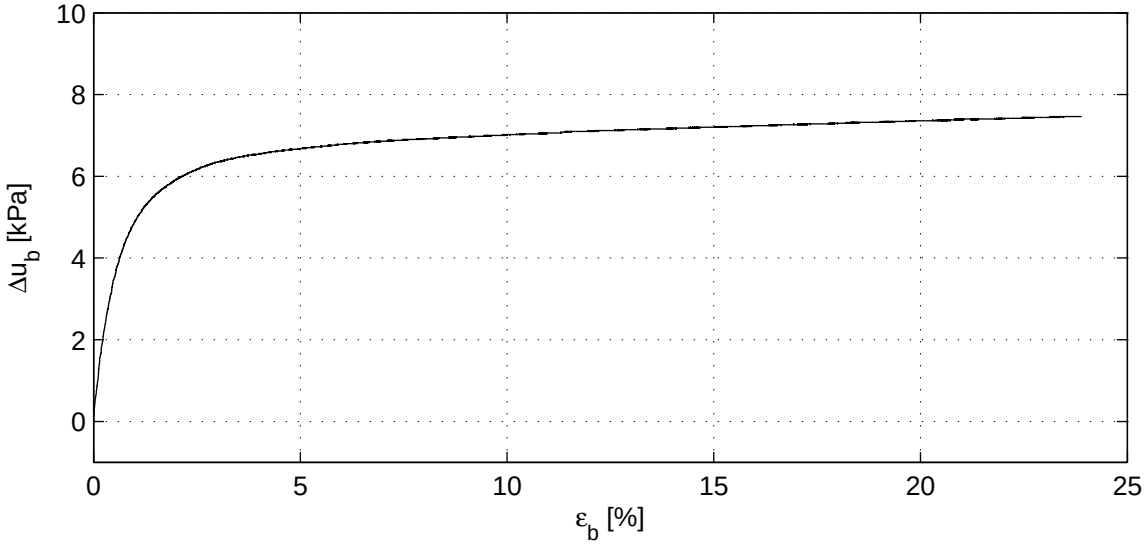

| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 15.5 |
| Eindwaarde $c_u$ [kPa] | 15.2 |
| Nummer Boring | MB−03 |
| Monsternaam | 47 |
| Diepte NAP [m] | −5.68/−5.88 |
| NEN5104 code | Vm<br>kleiig |
| $m_i$ [g] | 541.1 |
| $D_i$ [mm] | 66.5 |
| $h_i$ [mm] | 144.1 |
| $w_i$ [%] | 285.0 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1081 |
| $\rho_{i,dry}$ [kg/m$^3$] | 281 |
| Grondsoort | veen |

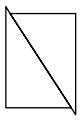
Voor beproeving

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t [kPa]
s' [kPa]
1

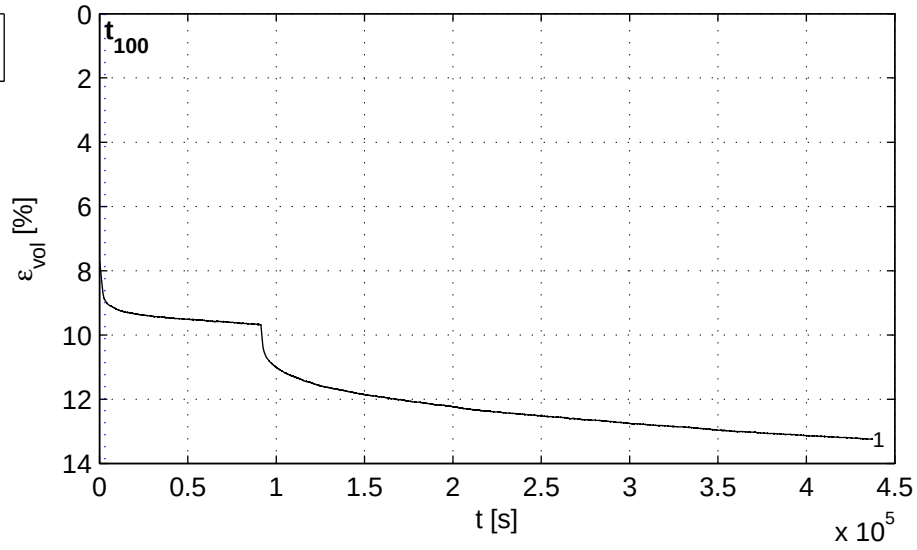

$q_{corr}$ [kPa]
$\varepsilon_b$ [%]


$\Delta u_b$ [kPa]
$\varepsilon_b$ [%]

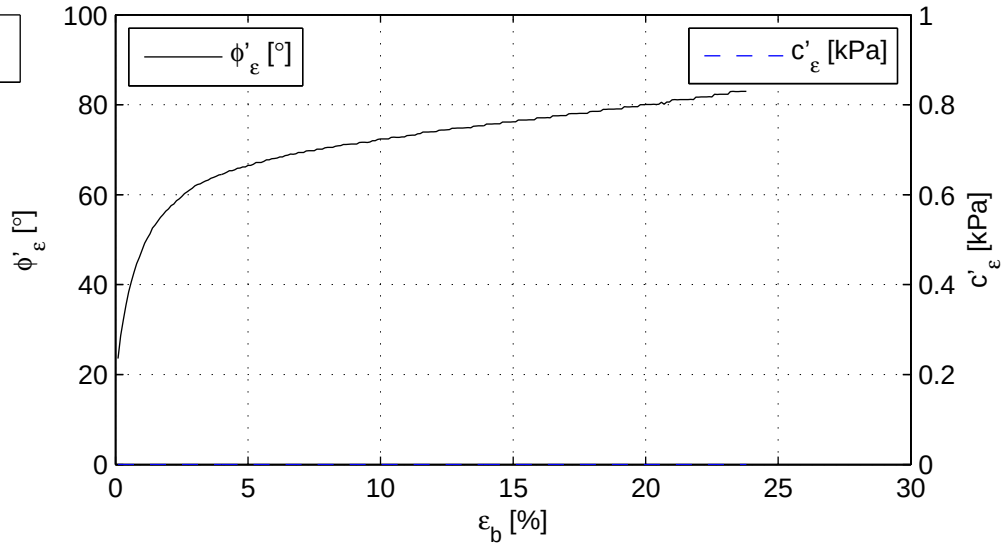
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.97 | | |
| | $B_1$ [−] | 0.99 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 15.0 | | |
| | $t_{100}$ [min] | 51 | | |
| | $h_c$ [mm] | 137.41 | | |
| | $V_c$ [$cm^3$] | 434.19 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1094 | | |
| | $w_c$ [%] | 237.8 | | |
| | $u_{bk}$ [kPa] | 299 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 2.7 | | |
| | v [%/h] | 0.95 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 30.9 | | |
| | $f_{undr}$ [kPa] | 15.5 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 3.58 | | |
| | $E_{50}$ [MPa] | 0.3 | | |
| | $w_e$ [%] | 247.4 | | |
| | Bezwijkfiguur |  | | |

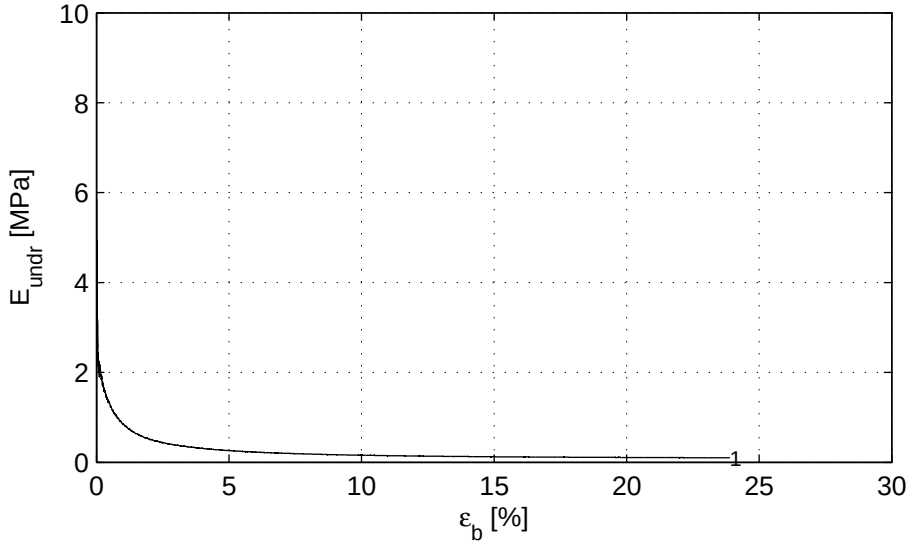
| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 10.1 | | | 8.5 | | | | 8.5 |
| 5.0 | 10.8 | | | 9.9 | | | | 9.9 |
| 10.0 | 11.8 | | | 11.3 | | | | 11.3 |
| $t_{max}$ [kPa] | 15.6 | | | 15.5 | | | | 15.5 |

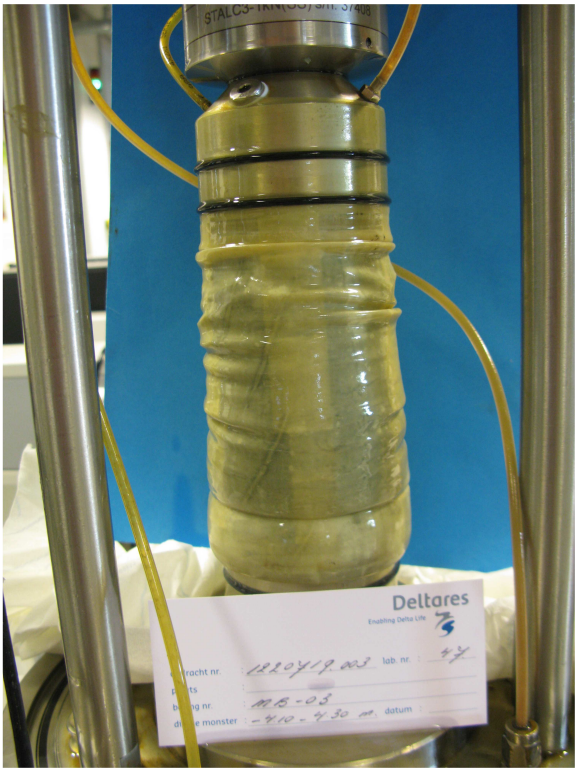
Consolidatiefase

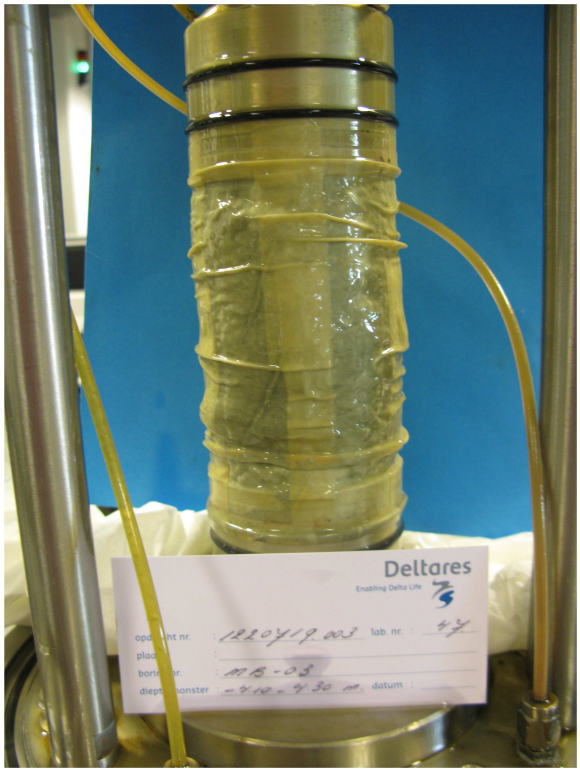



Belastingsfase



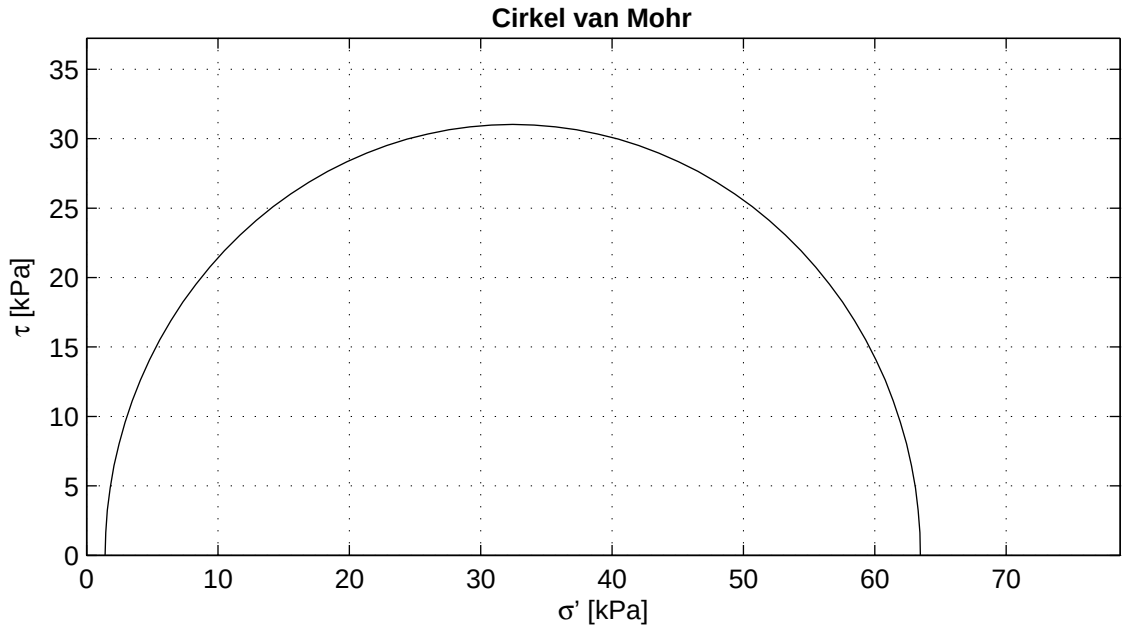




Deltares
Enabling Delta Life
1220719.003
47
MB-03
-4.10 - -4.30 m


Deltares
Enabling Delta Life
1220719.003
47
MB-03
-4.10 - -4.30 m


Deltares
Enabling Delta Life
opdracht nr. 1220719.003 lab. nr. 47
plaats
boring nr. MB-03
diepte monster -4.10 - -4.30 m. datum


Deltares
Enabling Delta Life
opdracht nr. 1220719.003 lab. nr. 47
plaats
boring nr. MB-03
diepte monster -4.10 - -4.30 m. datum




| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 31.0 |
| Eindwaarde $c_u$ [kPa] | 31.0 |
| Nummer Boring | MB−03 |
| Monsternaam | 48 |
| Diepte NAP [m] | −6.08/−6.28 |
| NEN5104 code | Vm |
| $m_i$ [g] | 571.1 |
| $D_i$ [mm] | 66.7 |
| $h_i$ [mm] | 143.8 |
| $w_i$ [%] | 251.4 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1137 |
| $\rho_{i,dry}$ [kg/m$^3$] | 323 |
| Grondsoort | veen |

Voor beproeving

Vacuumconsolidatie simulatie na aanbrengen in−situ druk (6.9 kPa horizontaal, 13.8 kPa verticaal). Vacuumdruk tijdelijk 70 kPa. Na consolidatie vacuumdruk terug naar nul en consolidatie op in−situ druk.

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| datum | get. |
|---|---|
| 2016−09−15 | grw |

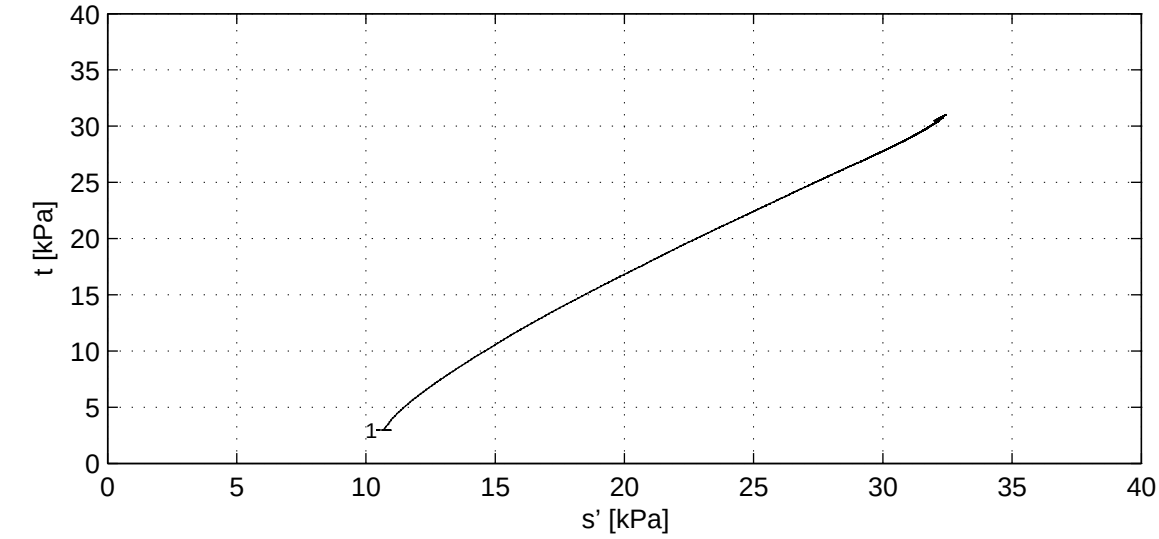
POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

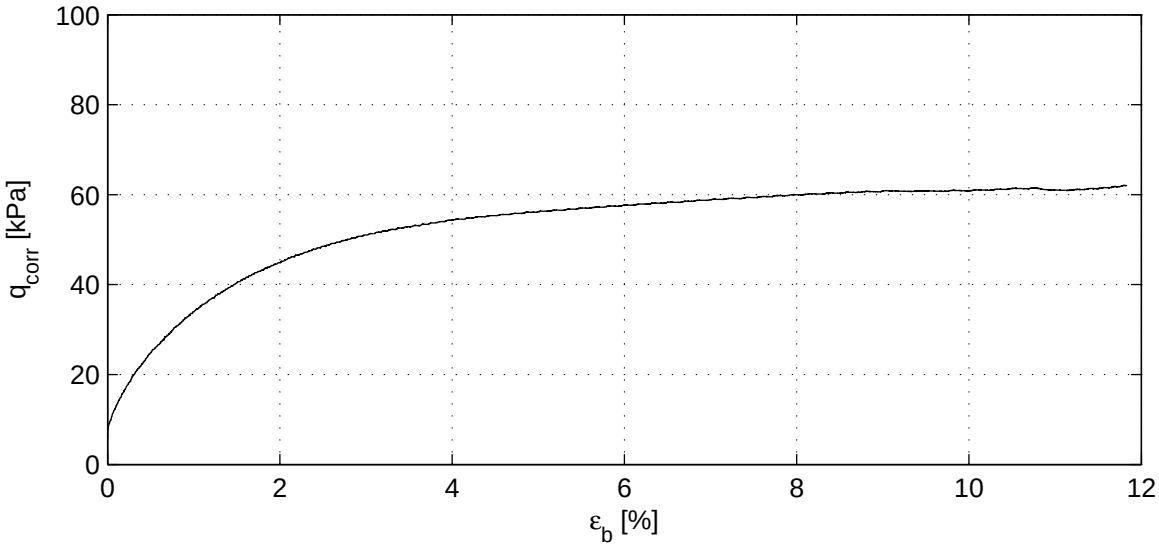
CU_48

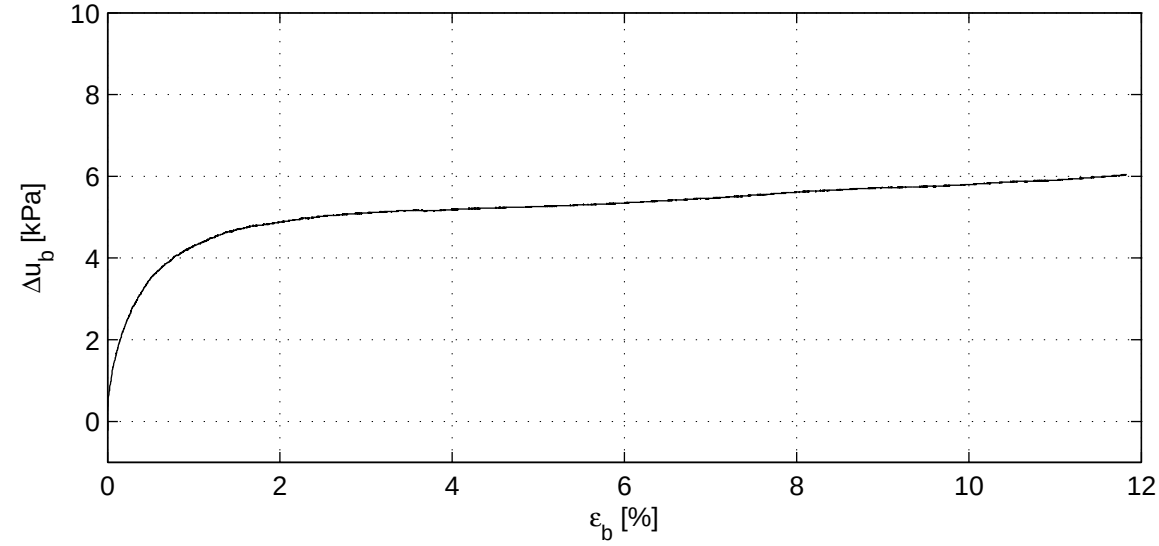
| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

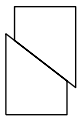
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX48 | 1 |


t [kPa]
s' [kPa]
1

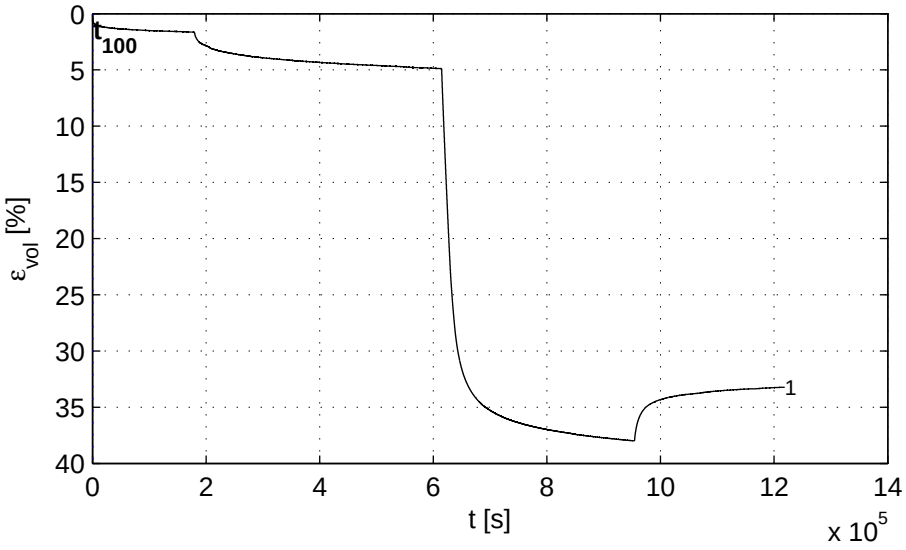

$q_{corr}$ [kPa]
$\varepsilon_b$ [%]


$\Delta u_b$ [kPa]
$\varepsilon_b$ [%]

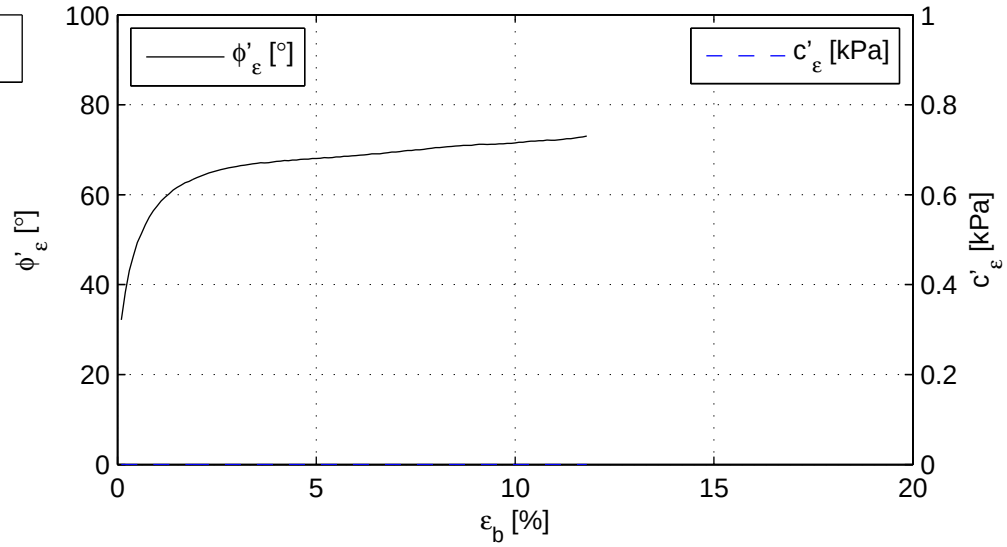
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.86 | | |
| | $B_1$ [−] | 1.00 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 13.8 | | |
| | $t_{100}$ [min] | 19 | | |
| | $h_c$ [mm] | 112.15 | | |
| | $V_c$ [$cm^3$] | 335.50 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1205 | | |
| | $w_c$ [%] | 148.7 | | |
| | $u_{bk}$ [kPa] | 298 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 7.2 | | |
| | v [%/h] | 0.78 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 62.0 | | |
| | $f_{undr}$ [kPa] | 31.0 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 1.00 | | |
| | $E_{50}$ [MPa] | 2.8 | | |
| | $w_e$ [%] | 144.2 | | |
| | Bezwijkfiguur |  | | |

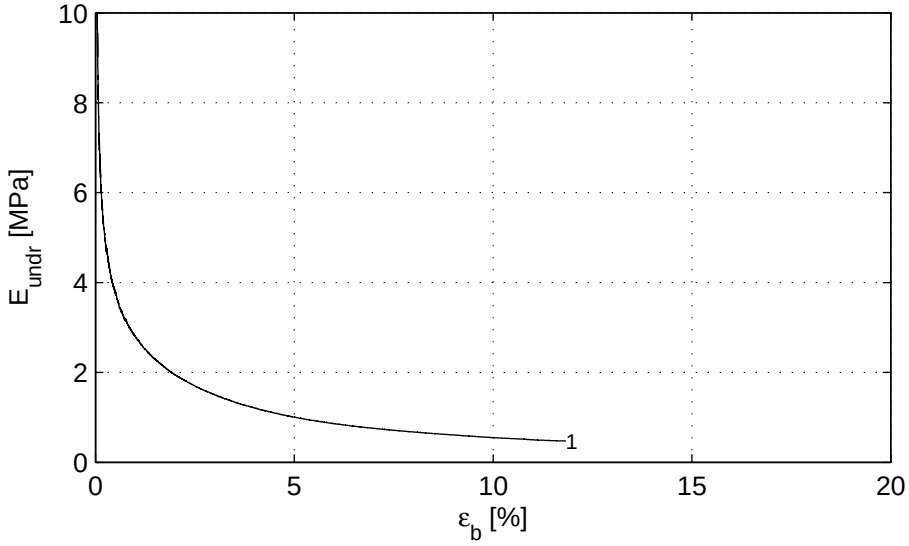
| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 25.0 | | | 22.4 | | | | 22.4 |
| 5.0 | 30.3 | | | 28.1 | | | | 28.1 |
| 10.0 | 32.1 | | | 30.4 | | | | 30.4 |
| $t_{max}$ [kPa] | 32.4 | | | 31.0 | | | | 31.0 |

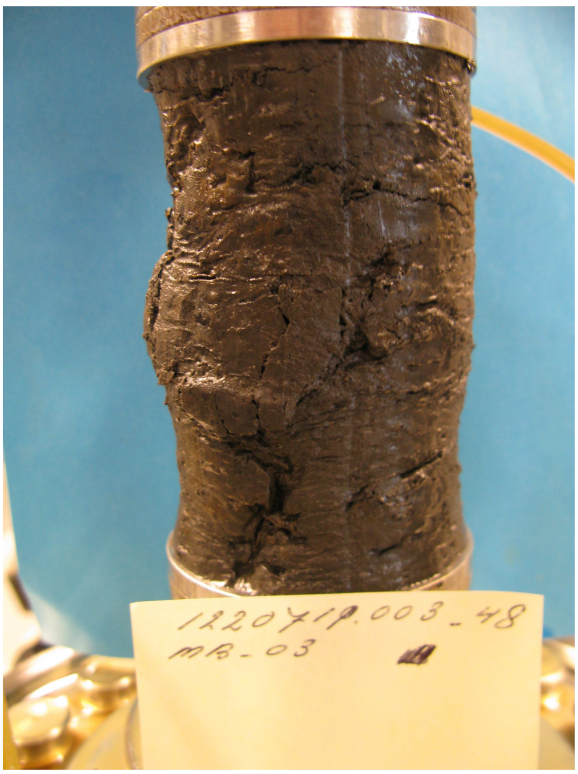
Consolidatiefase




Belastingsfase

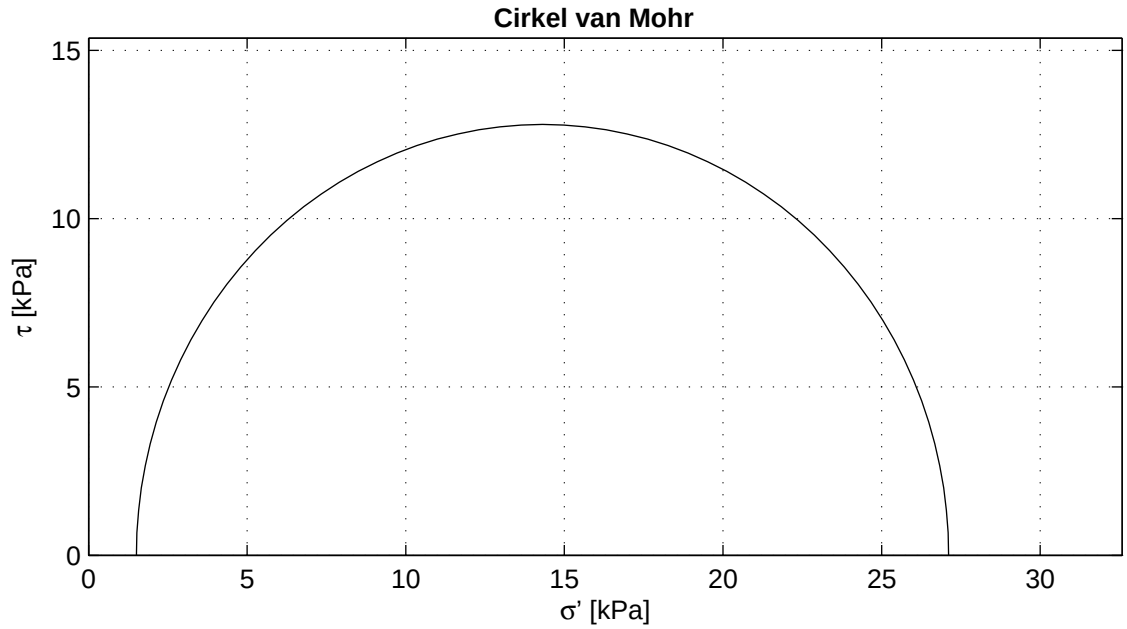



1220719.003_48
MB-03


1220719.003_48
MB-03






| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 12.8 |
| Eindwaarde $c_u$ [kPa] | 9.6 |
| Nummer Boring | MB−03 |
| Monsternaam | 51 |
| Diepte NAP [m] | −6.93/−7.13 |
| NEN5104 code | Vm<br>kleiig |
| $m_i$ [g] | 622.6 |
| $D_i$ [mm] | 67.0 |
| $h_i$ [mm] | 144.6 |
| $w_i$ [%] | 184.3 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1221 |
| $\rho_{i,dry}$ [kg/m$^3$] | 429 |
| Grondsoort | veen |

Voor beproeving

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Homepage:
www.deltares.nl

| datum | get. |
|---|---|
| 2016−10−25 | luije_sa |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

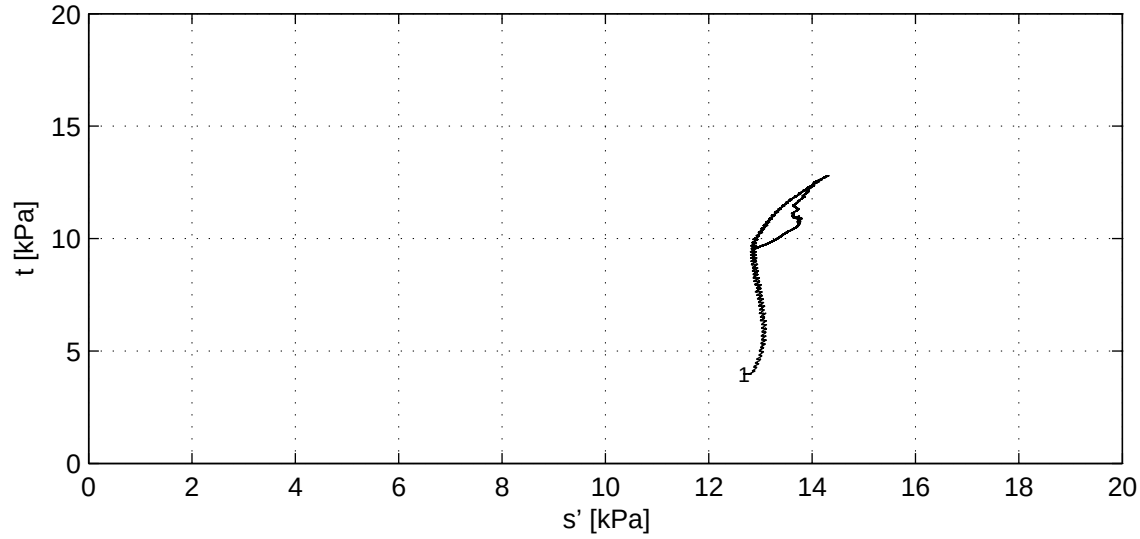
CU_51

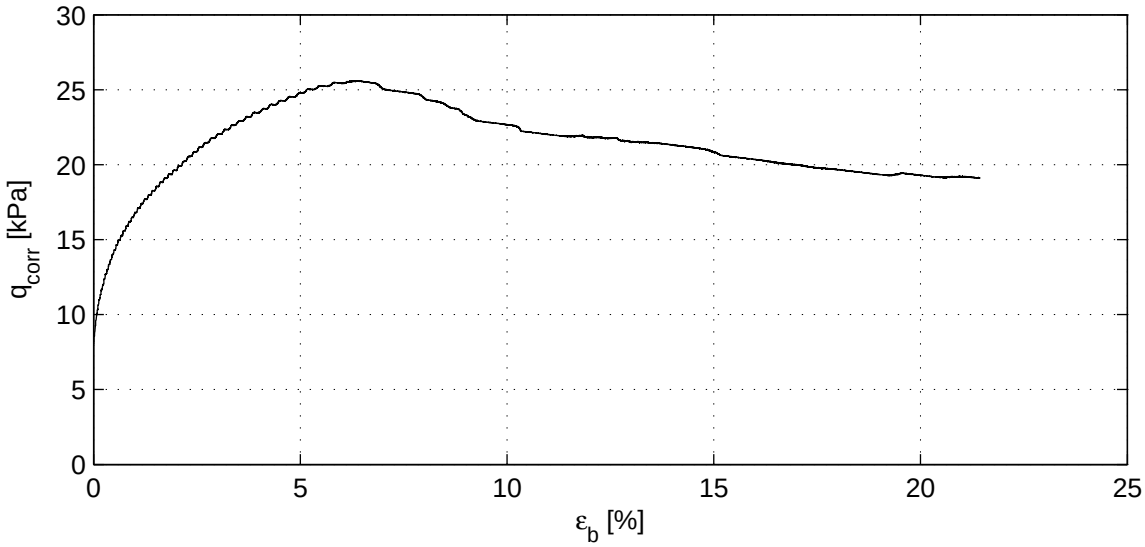
| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

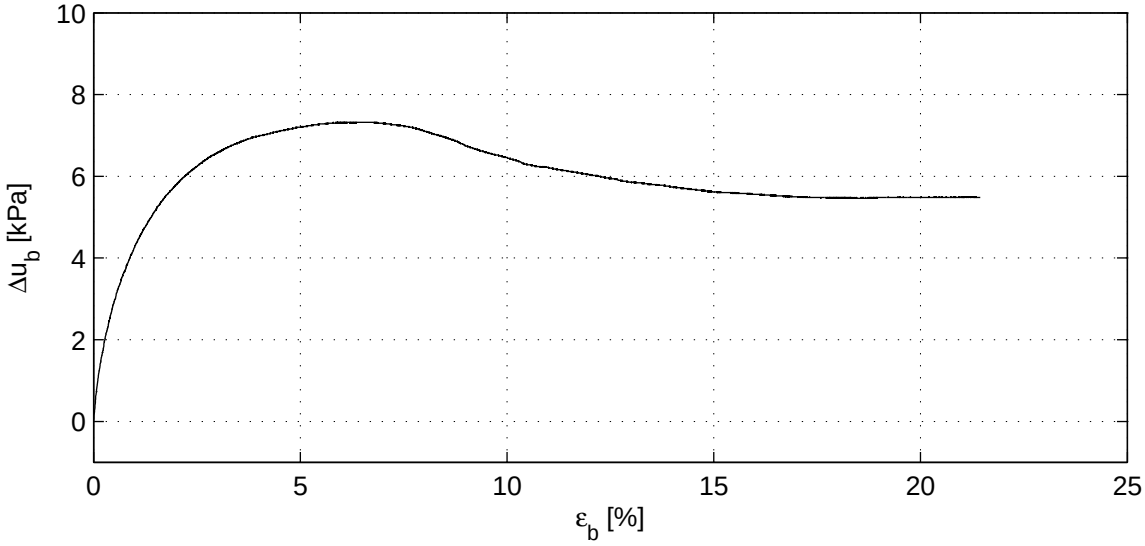
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
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| TX51 | 1 |

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| datum | get. |
|---|---|
| 2016−10−25 | luije_sa |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

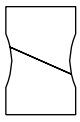
CU_51

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX51 | 2 |

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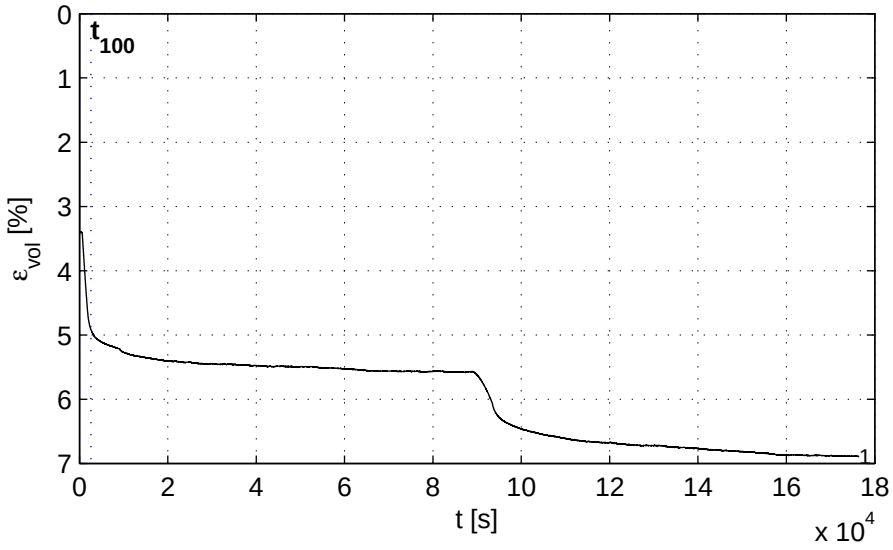
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.91 | | |
| | $B_1$ [−] | 0.99 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 15.7 | | |
| | $t_{100}$ [min] | 44 | | |
| | $h_c$ [mm] | 141.38 | | |
| | $V_c$ [$cm^3$] | 474.66 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1238 | | |
| | $w_c$ [%] | 168.3 | | |
| | $u_{bk}$ [kPa] | 300 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 3.1 | | |
| | v [%/h] | 0.99 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 25.6 | | |
| | $f_{undr}$ [kPa] | 12.8 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 1.00 | | |
| | $E_{50}$ [MPa] | 0.9 | | |
| | $w_e$ [%] | 179.1 | | |
| | Bezwijkfiguur |  | | |

| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 12.8 | | | 9.8 | | | | 9.8 |
| 5.0 | 14.0 | | | 12.4 | | | | 12.4 |
| 10.0 | 13.7 | | | 11.3 | | | | 11.3 |
| $t_{max}$ [kPa] | 14.3 | | | 12.8 | | | | 12.8 |

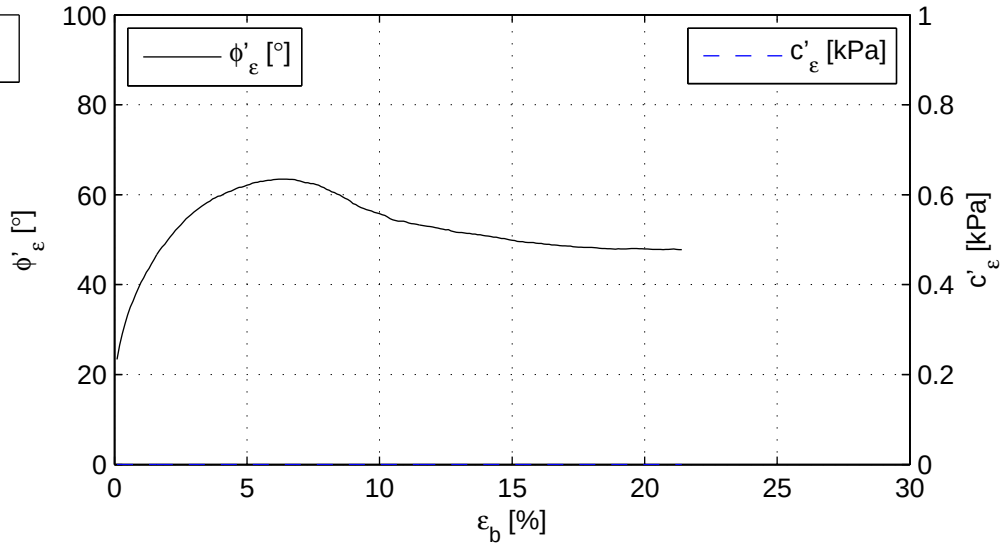


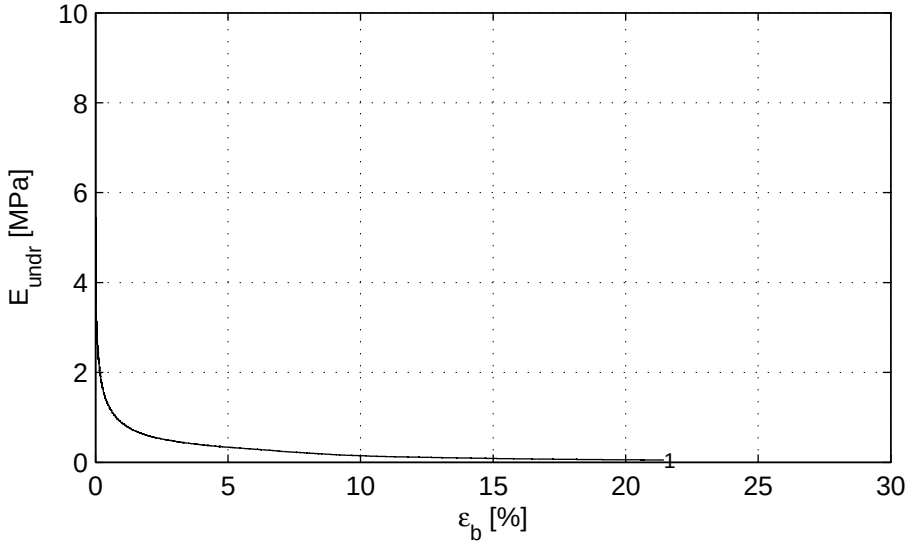
*) Gecontroleerd en vrijgegeven door grw op 2016-10-25

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Belastingsfase




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|---|---|
| 2016−10−25 | luije_sa |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

CU_51

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX51 | 4 |

*) Gecontroleerd en vrijgegeven door grw op 2016-10-25







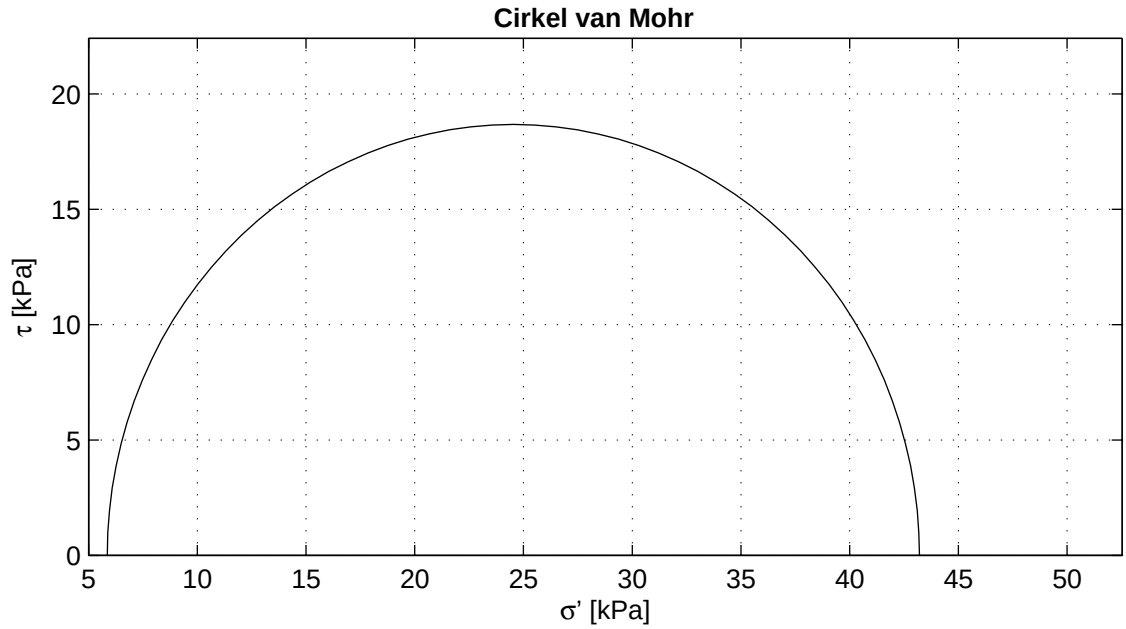








*) Gecontroleerd en vrijgegeven door grw op 2016-10-25




| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 18.7 |
| Eindwaarde $c_u$ [kPa] | 16.5 |
| Nummer Boring | MB−04 |
| Monsternaam | 72 |
| Diepte NAP [m] | −5.79/−5.94 |
| NEN5104 code | Vm houtstukjes |
| $m_i$ [g] | 566.2 |
| $D_i$ [mm] | 66.6 |
| $h_i$ [mm] | 142.7 |
| $w_i$ [%] | 250.8 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1139 |
| $\rho_{i,dry}$ [kg/m$^3$] | 325 |
| Grondsoort | veen |

Voor beproeving

Breukvlak zichtbaar bij preparatie.

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|---|---|
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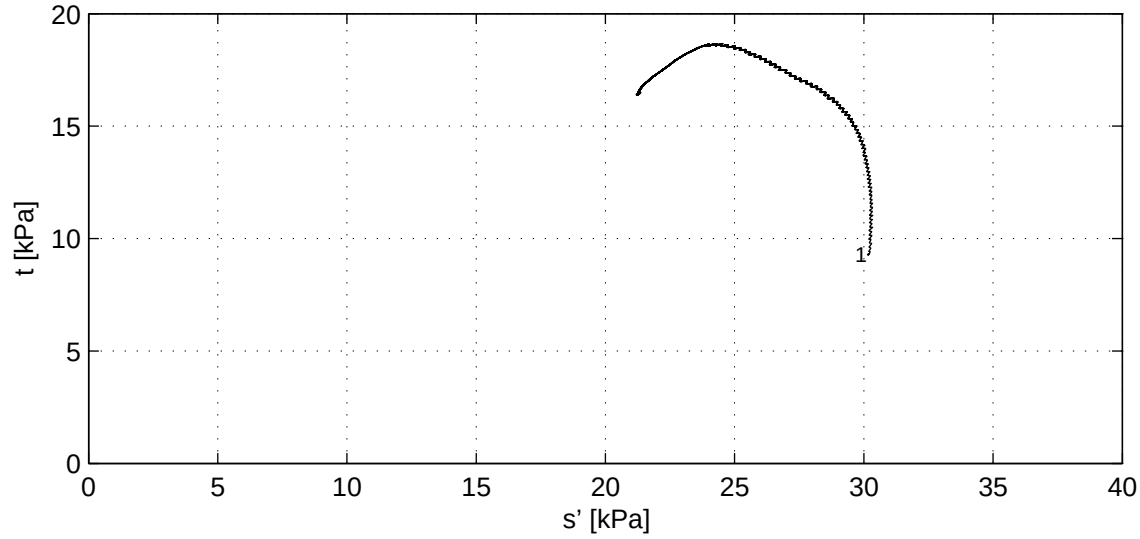
POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

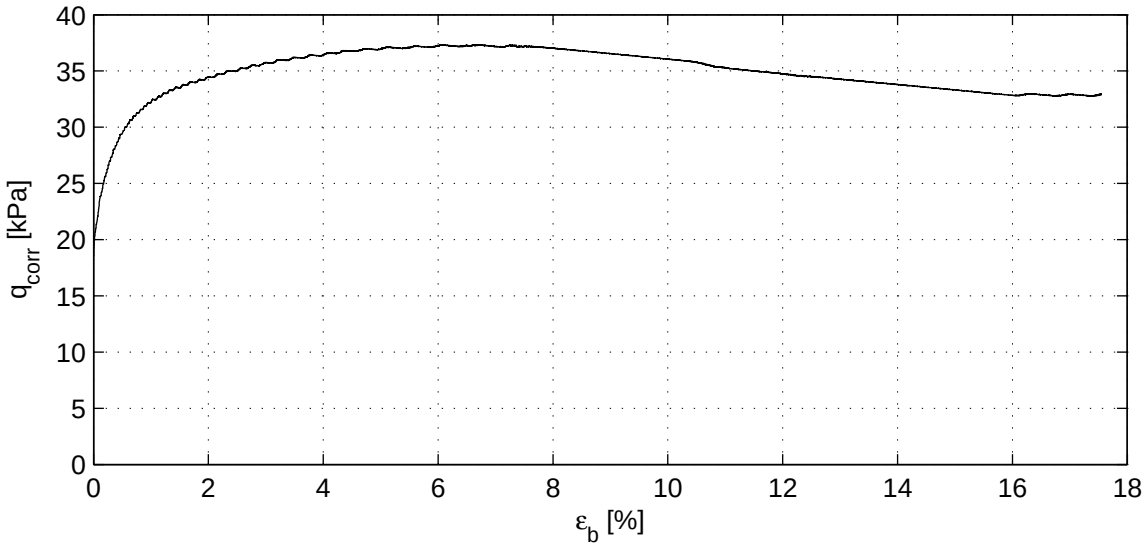
CU_72

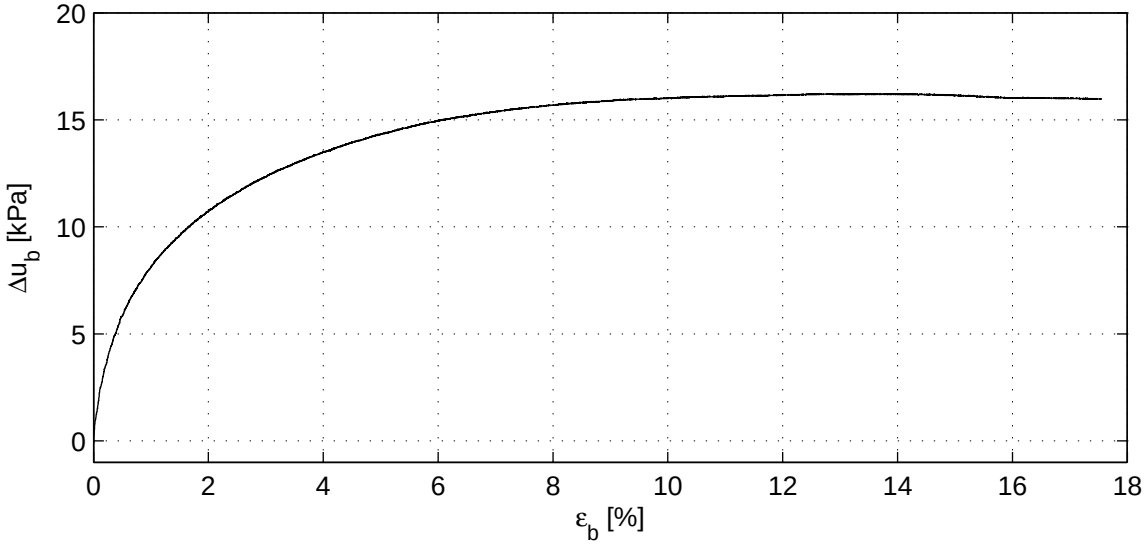
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |
| bijlage | pag. |
| TX72 | 1 |

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| 2016−09−05 | luije_sa |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

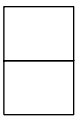
CU_72

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX72 | 2 |

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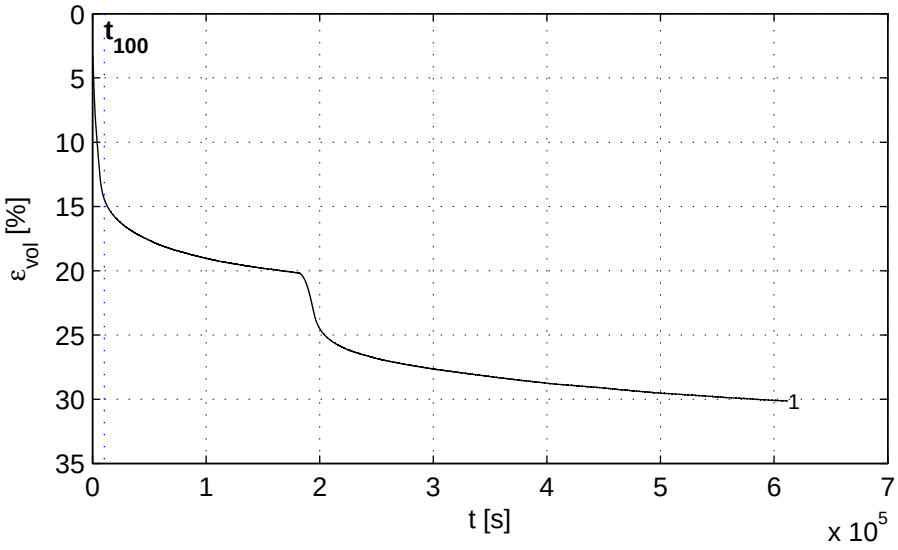
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.93 | | |
| | $B_1$ [−] | 1.00 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 38.2 | | |
| | $t_{100}$ [min] | 174 | | |
| | $h_c$ [mm] | 119.59 | | |
| | $V_c$ [$cm^3$] | 347.24 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1199 | | |
| | $w_c$ [%] | 158.0 | | |
| | $u_{bk}$ [kPa] | 300 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 0.8 | | |
| | v [%/h] | 0.83 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 37.3 | | |
| | $f_{undr}$ [kPa] | 18.7 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 0.35 | | |
| | $E_{50}$ [MPa] | 2.7 | | |
| | $w_e$ [%] | 206.4 | | |
| | Bezwijkfiguur |  | | |

| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 27.3 | | | 17.2 | | | | 17.2 |
| 5.0 | 25.0 | | | 18.5 | | | | 18.5 |
| 10.0 | 22.8 | | | 18.0 | | | | 18.0 |
| $t_{max}$ [kPa] | 24.5 | | | 18.7 | | | | 18.7 |

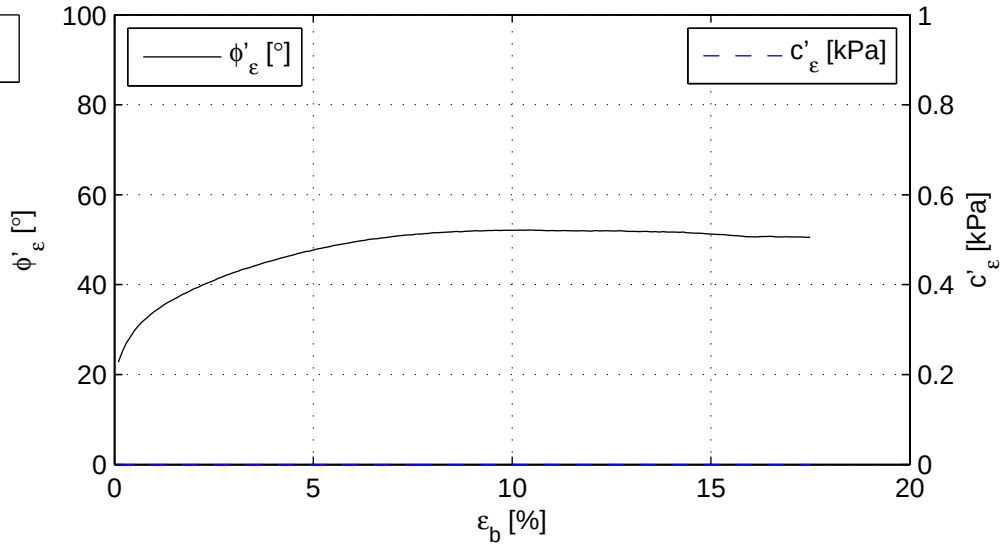


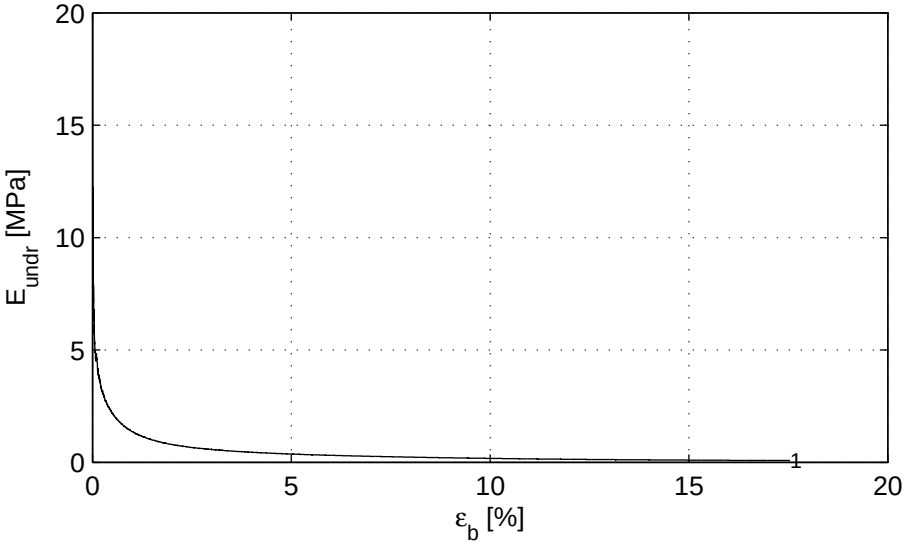
*) Gecontroleerd en vrijgegeven door grw op 2016-09-05

Consolidatiefase




Belastingsfase




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POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

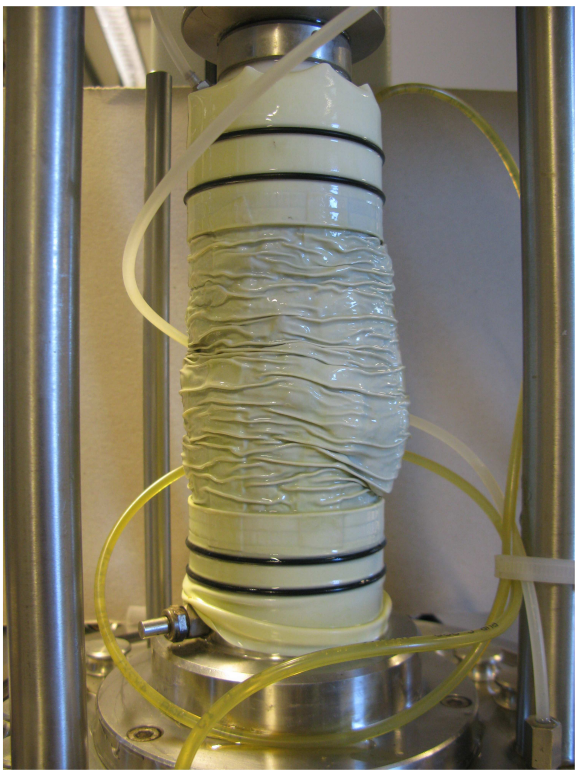
CU_72

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

CU Triaxiaalproef (Singlestage) volgens NEN 5117

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|---|---|
| TX72 | 4 |

*) Gecontroleerd en vrijgegeven door grw op 2016-09-05

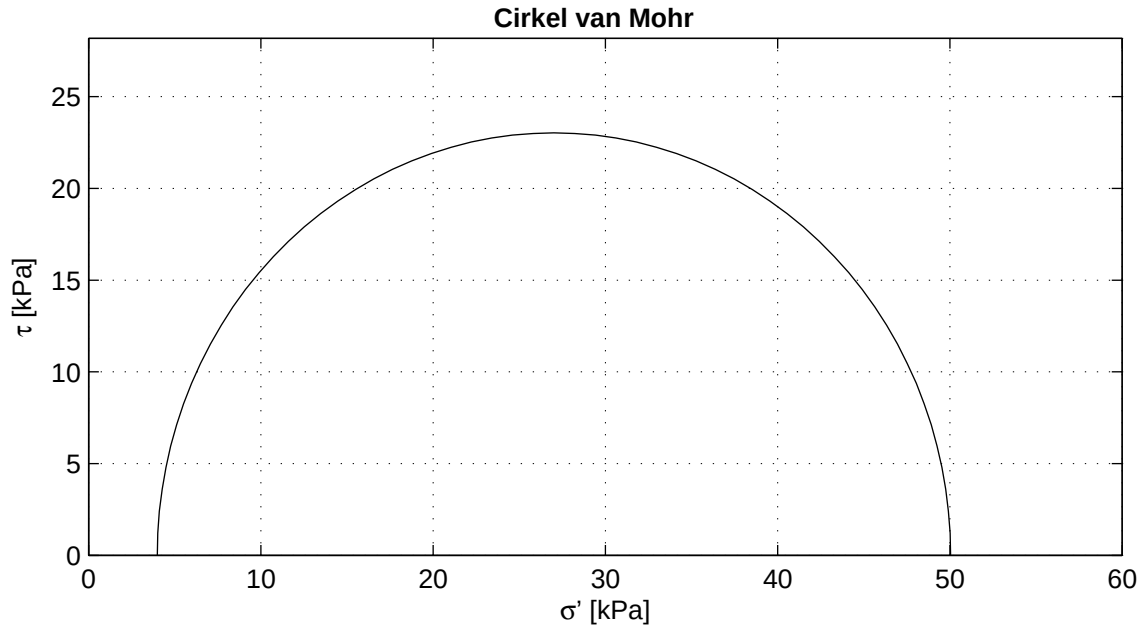








*) Gecontroleerd en vrijgegeven door grw op 2016-09-05




| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 23.0 |
| Eindwaarde $c_u$ [kPa] | 18.5 |
| Nummer Boring | MB−04 |
| Monsternaam | 78 |
| Diepte NAP [m] | −6.59/−6.79 |
| NEN5104 code | Vm |
| $m_i$ [g] | 623.3 |
| $D_i$ [mm] | 66.7 |
| $h_i$ [mm] | 144.4 |
| $w_i$ [%] | 201.7 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1235 |
| $\rho_{i,dry}$ [kg/m$^3$] | 410 |
| Grondsoort | veen |

Voor beproeving

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| datum | get. |
|---|---|
| 2016−11−09 | luije_sa |

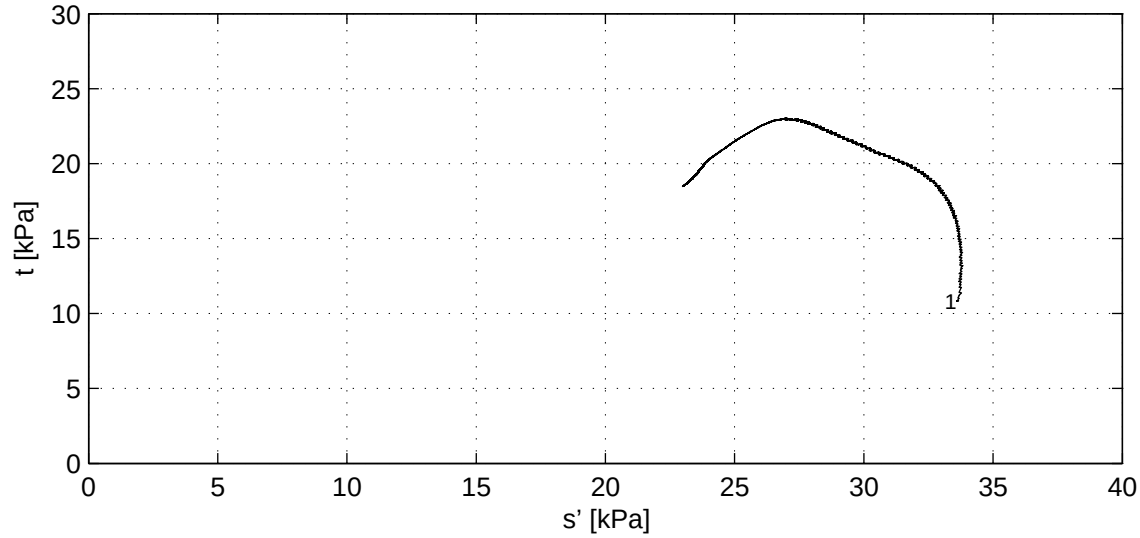
POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

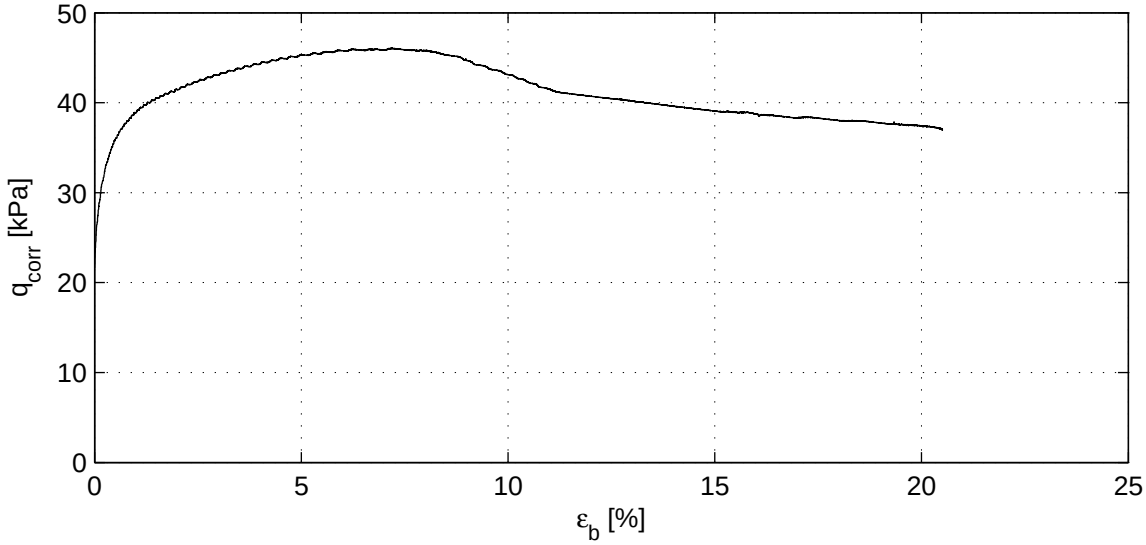
CU_78

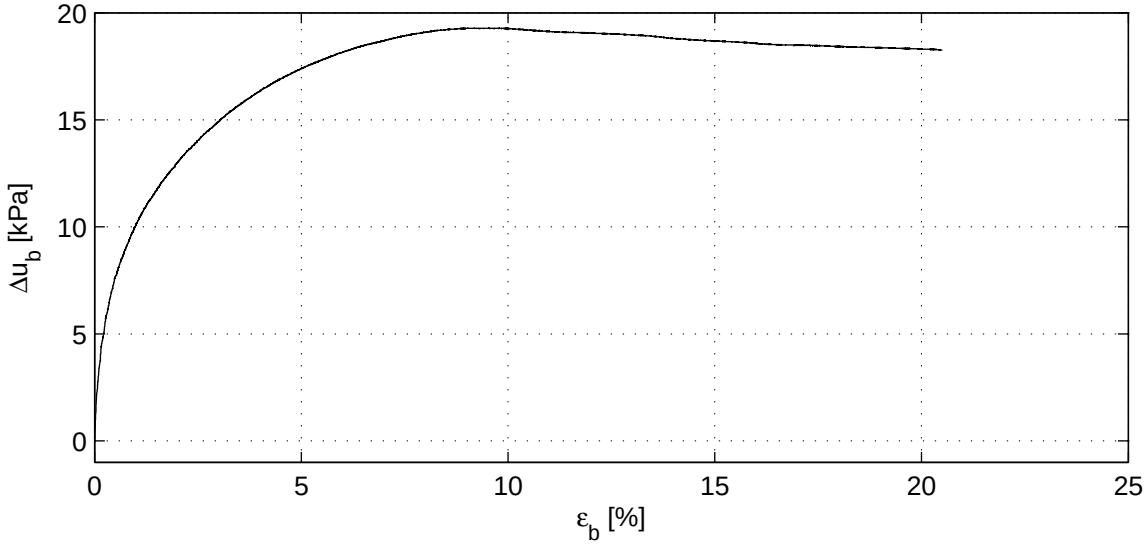
| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

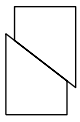
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

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|---|---|
| TX78 | 1 |


t [kPa]
s' [kPa]
1

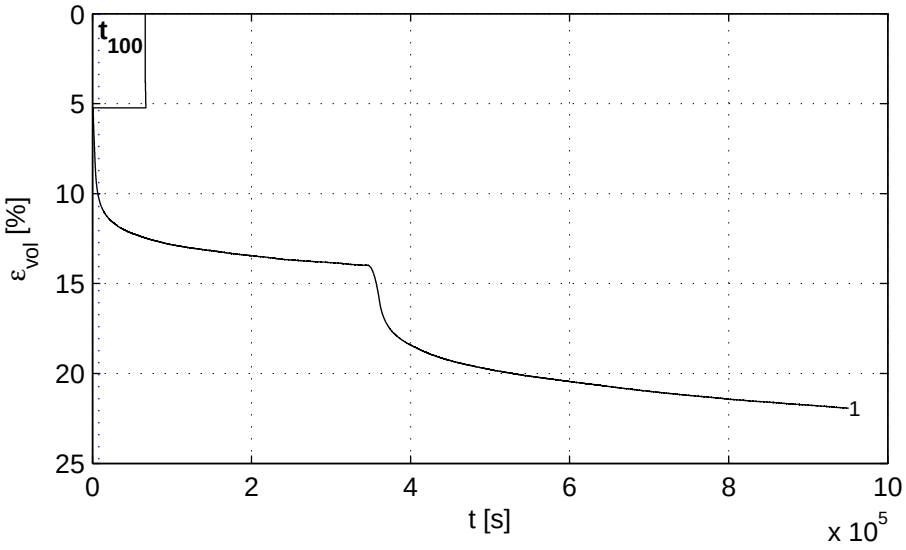

q_corr [kPa]
ε_b [%]


Δu_b [kPa]
ε_b [%]

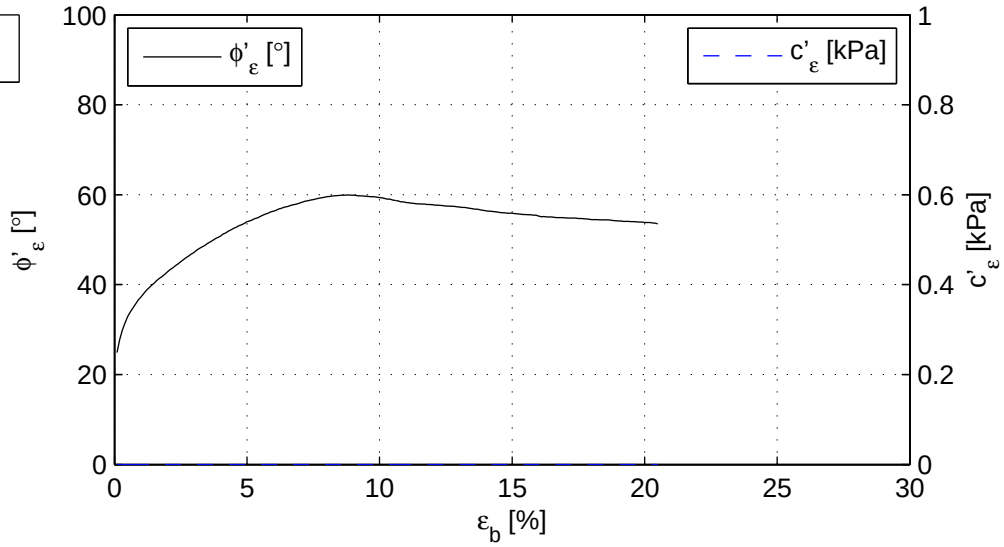
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.86 | | |
| | $B_1$ [−] | 1.00 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 42.9 | | |
| | $t_{100}$ [min] | 131 | | |
| | $h_c$ [mm] | 126.30 | | |
| | $V_c$ [$cm^3$] | 393.92 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1302 | | |
| | $w_c$ [%] | 148.1 | | |
| | $u_{bk}$ [kPa] | 300 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 1.0 | | |
| | v [%/h] | 0.86 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 46.1 | | |
| | $f_{undr}$ [kPa] | 23.0 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 0.34 | | |
| | $E_{50}$ [MPa] | 3.6 | | |
| | $w_e$ [%] | 131.7 | | |
| | Bezwijkfiguur |  | | |

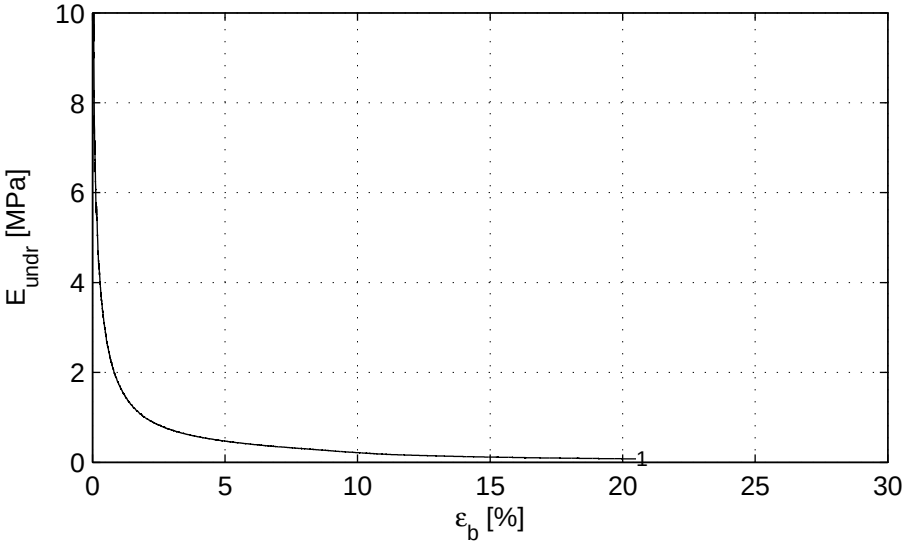
| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 30.5 | | | 20.7 | | | | 20.7 |
| 5.0 | 28.0 | | | 22.7 | | | | 22.7 |
| 10.0 | 25.1 | | | 21.6 | | | | 21.6 |
| $t_{max}$ [kPa] | 27.0 | | | 23.0 | | | | 23.0 |

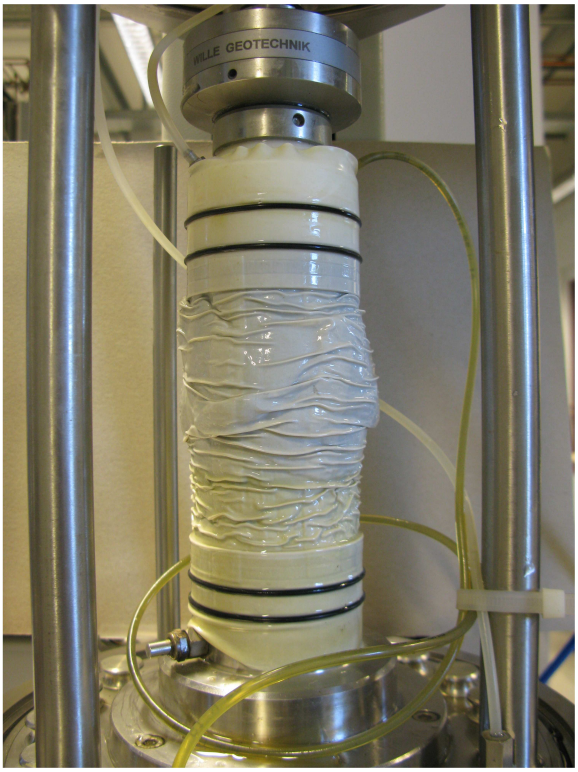
Consolidatiefase




Belastingsfase

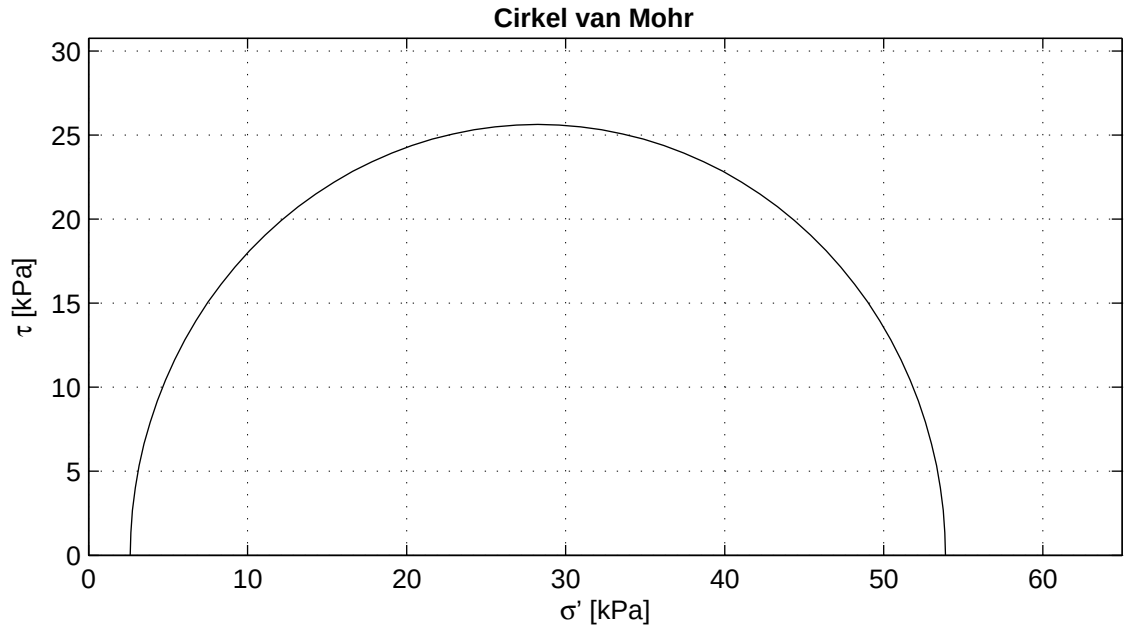



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| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 25.6 |
| Eindwaarde $c_u$ [kPa] | 19.0 |
| Nummer Boring | MB−04 |
| Monsternaam | 80 |
| Diepte NAP [m] | −6.94/−7.09 |
| NEN5104 code | Vm |
| $m_i$ [g] | 588.2 |
| $D_i$ [mm] | 67.1 |
| $h_i$ [mm] | 142.8 |
| $w_i$ [%] | 219.3 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1165 |
| $\rho_{i,dry}$ [kg/m$^3$] | 365 |
| Grondsoort | veen |

Voor beproeving

Anisotrope consolidatie 23.5 kPa horizontaal en 47 kPa verticaal.

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| datum | get. |
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| 2016−09−15 | grw |

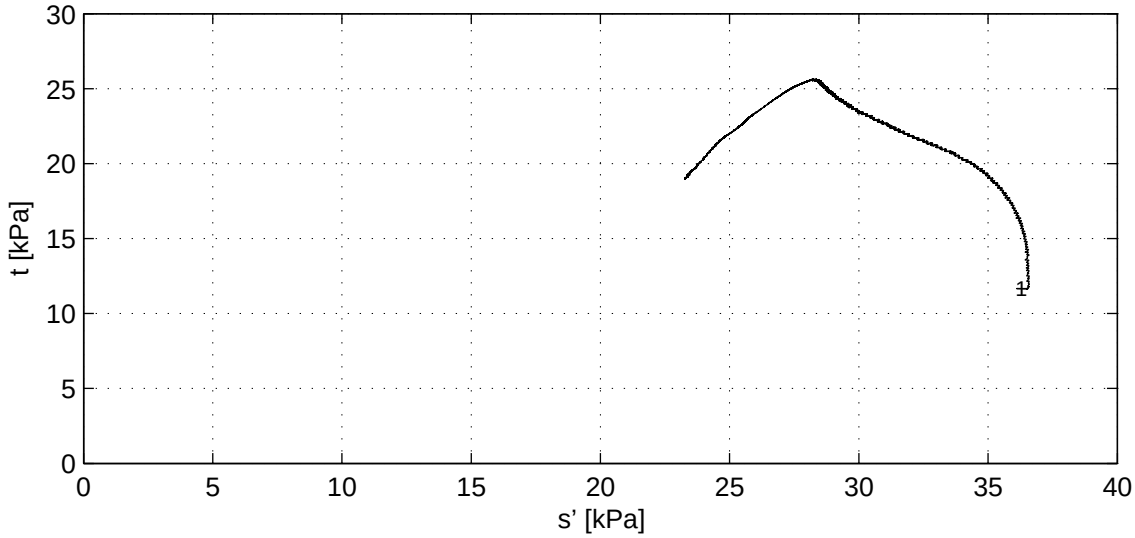
POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

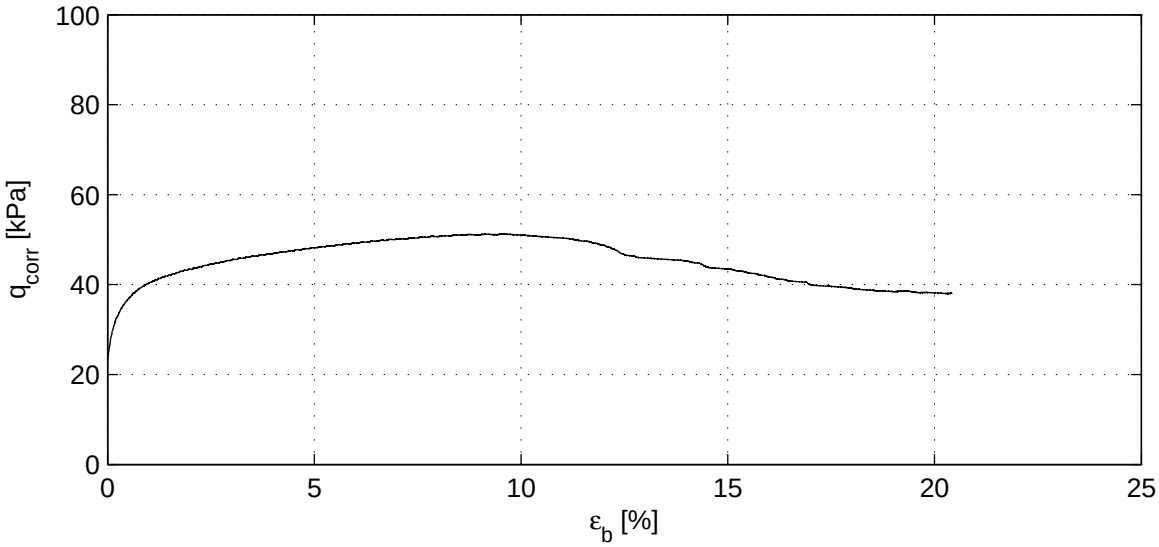
CU_80

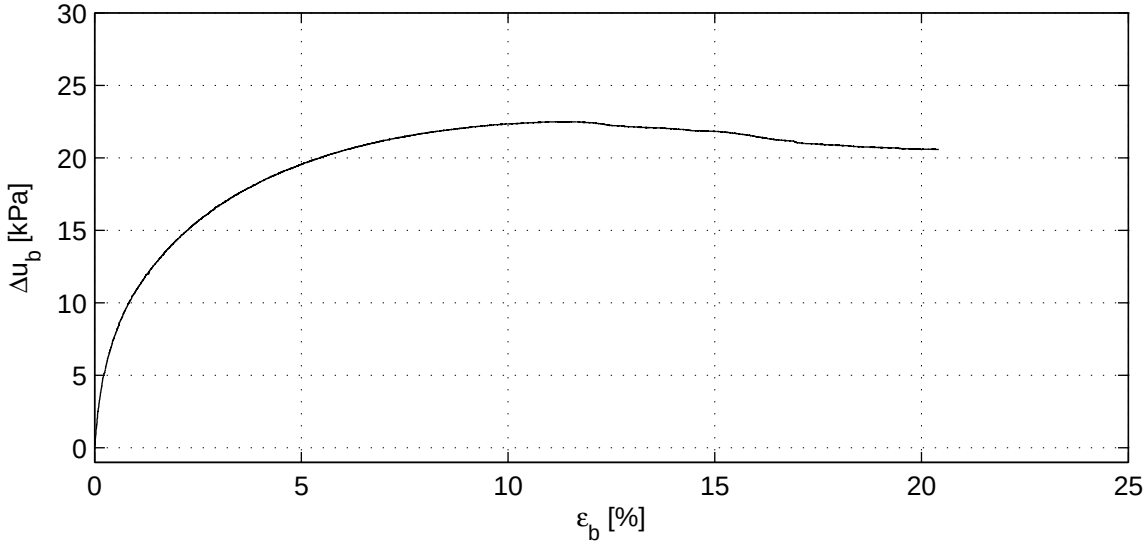
| project | Versie |
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| 1220719.3 | 1.4 |

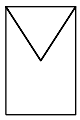
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

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|---|---|
| TX80 | 1 |


t [kPa]
s' [kPa]

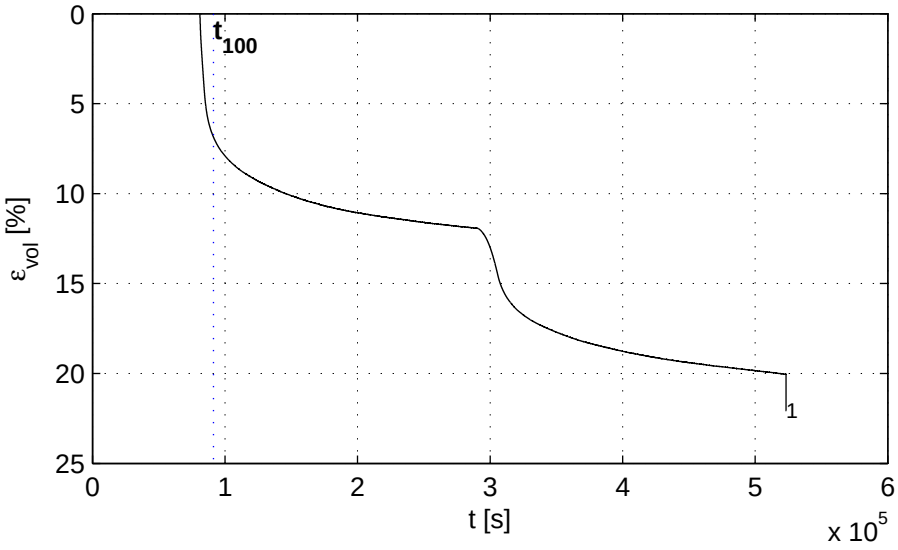

$q_{corr}$ [kPa]
$\varepsilon_b$ [%]


$\Delta u_b$ [kPa]
$\varepsilon_b$ [%]

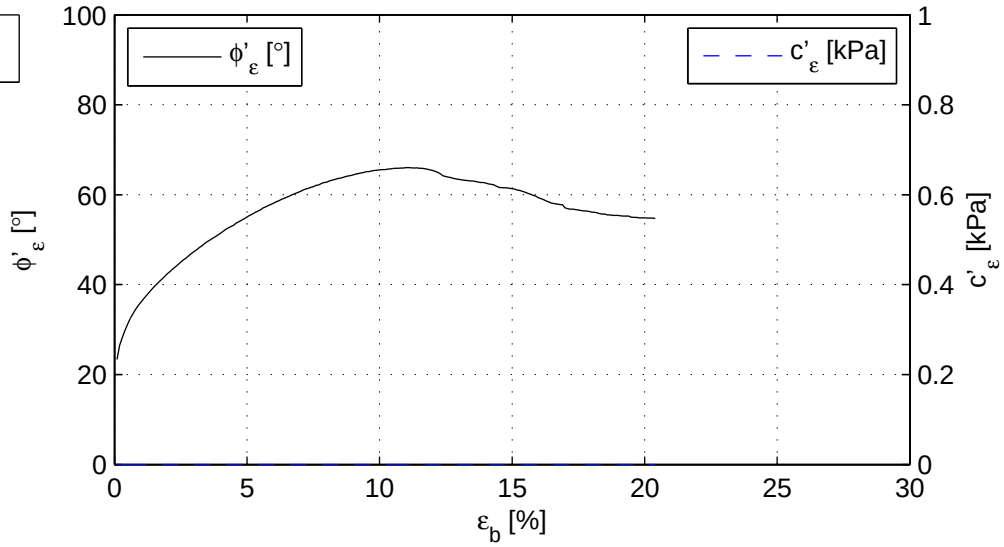
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.90 | | |
| | $B_1$ [−] | 1.00 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 46.7 | | |
| | $t_{100}$ [min] | 1521 | | |
| | $h_c$ [mm] | 124.09 | | |
| | $V_c$ [$cm^3$] | 393.46 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1212 | | |
| | $w_c$ [%] | 158.8 | | |
| | $u_{bk}$ [kPa] | 300 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 0.1 | | |
| | v [%/h] | 0.83 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 51.3 | | |
| | $f_{undr}$ [kPa] | 25.6 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 0.55 | | |
| | $E_{50}$ [MPa] | 2.6 | | |
| | $w_e$ [%] | 185.9 | | |
| | Bezwijkfiguur |  | | |

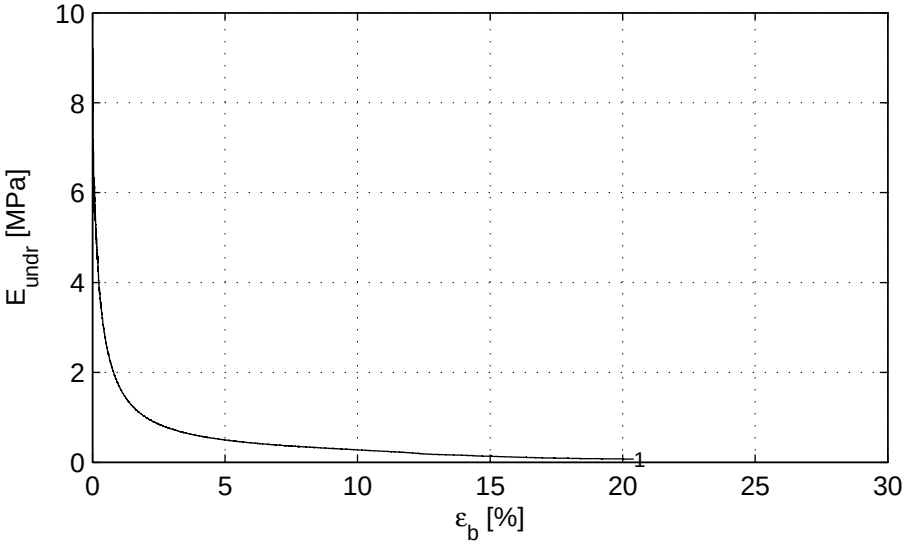
| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 32.2 | | | 21.7 | | | | 21.7 |
| 5.0 | 29.4 | | | 24.1 | | | | 24.1 |
| 10.0 | 28.0 | | | 25.5 | | | | 25.5 |
| $t_{max}$ [kPa] | 28.3 | | | 25.6 | | | | 25.6 |

Consolidatiefase




Belastingsfase

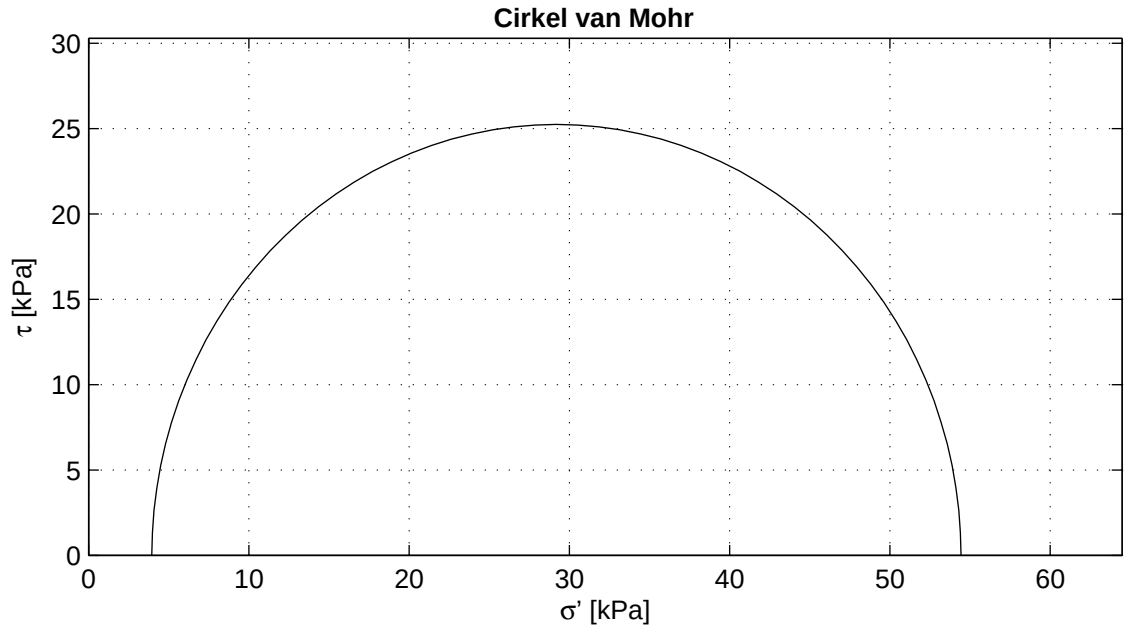











| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 25.2 |
| Eindwaarde $c_u$ [kPa] | 21.2 |
| Nummer Boring | MB−04 |
| Monsternaam | 82 |
| Diepte NAP [m] | −7.29/−7.49 |
| NEN5104 code | Vk1 |
| $m_i$ [g] | 591.3 |
| $D_i$ [mm] | 67.0 |
| $h_i$ [mm] | 142.5 |
| $w_i$ [%] | 202.8 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1177 |
| $\rho_{i,dry}$ [kg/m$^3$] | 389 |
| Grondsoort | veen |

Voor beproeving

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| datum | get. |
|---|---|
| 2016−10−04 | luije_sa |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

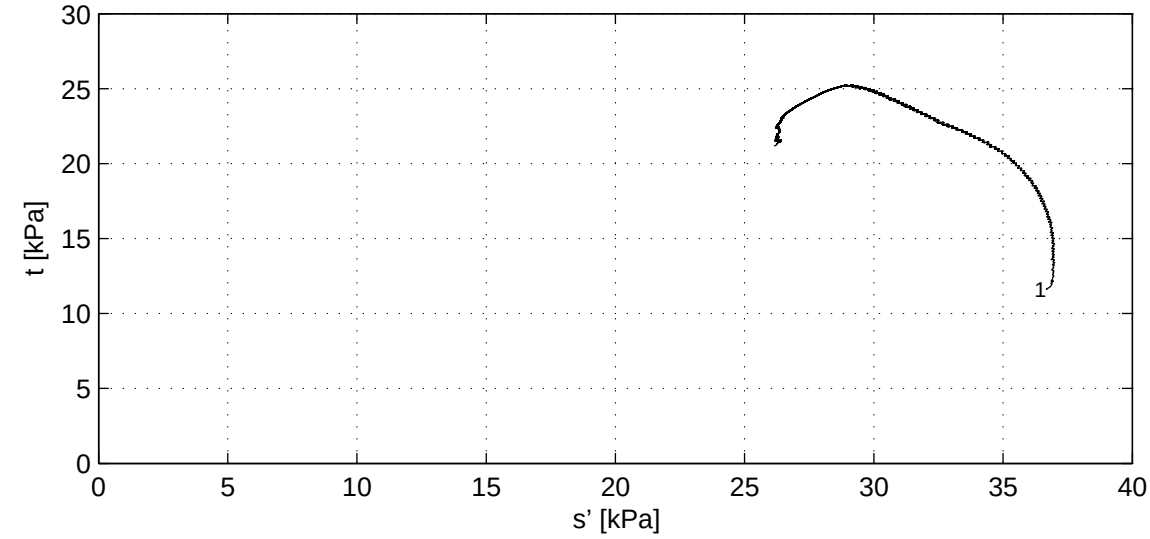
CU_82

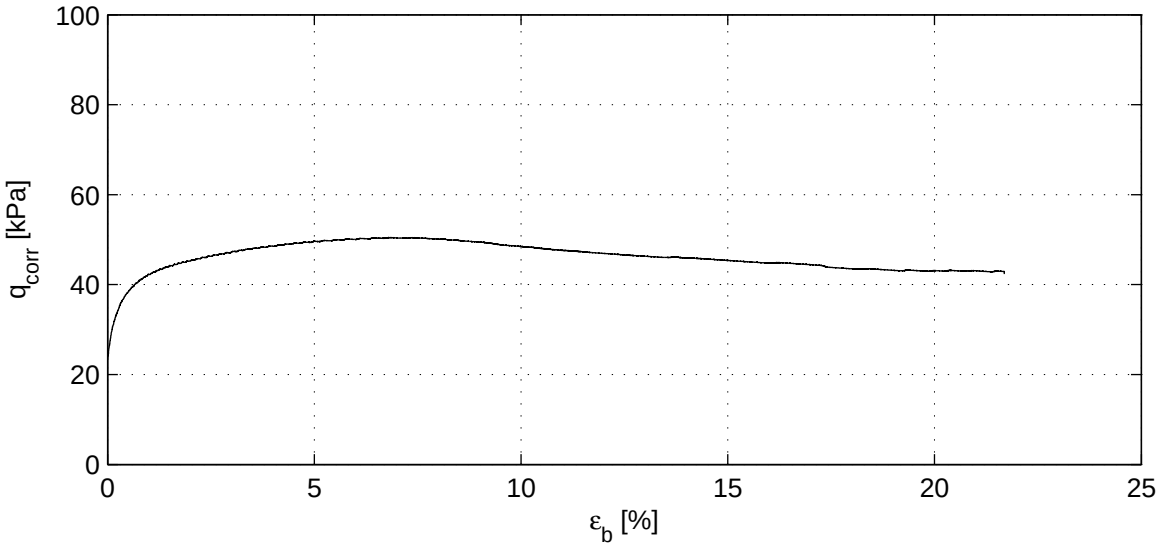
| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

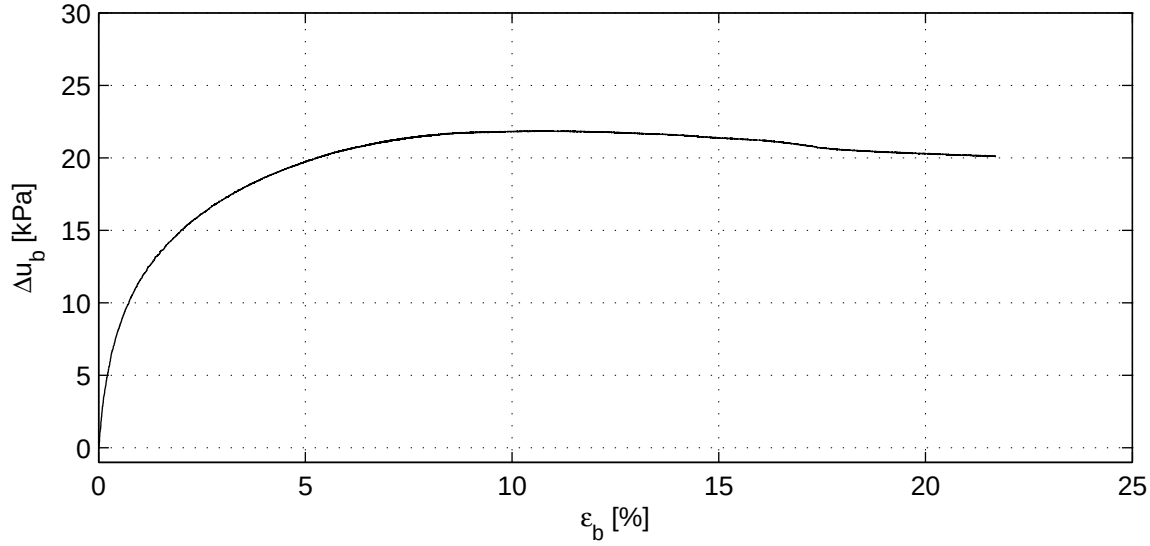
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX82 | 1 |

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| datum | get. |
|---|---|
| 2016−10−04 | luije_sa |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

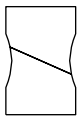
CU_82

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX82 | 2 |

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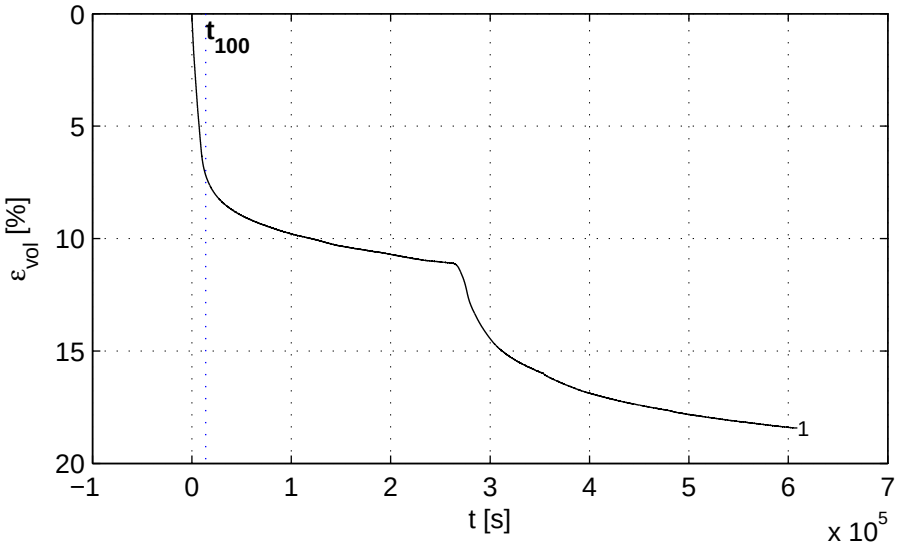
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.93 | | |
| | $B_1$ [−] | 0.99 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 49.0 | | |
| | $t_{100}$ [min] | 231 | | |
| | $h_c$ [mm] | 124.47 | | |
| | $V_c$ [cm$^3$] | 409.87 | | |
| | $\rho_{n,c}$ [kg/m$^3$] | 1217 | | |
| | $w_c$ [%] | 155.4 | | |
| | $u_{bk}$ [kPa] | 299 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | 0.6 | | |
| | v [%/h] | 0.88 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | $\Delta q < 1$ kPa | | |
| | $q_u$ [kPa] | 50.5 | | |
| | $f_{undr}$ [kPa] | 25.2 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 0.39 | | |
| | $E_{50}$ [MPa] | 3.5 | | |
| | $w_e$ [%] | 180.4 | | |
| | Bezwijkfiguur |  | | |

| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 32.7 | | | 22.7 | | | | 22.7 |
| 5.0 | 30.1 | | | 24.8 | | | | 24.8 |
| 10.0 | 27.5 | | | 24.2 | | | | 24.2 |
| $t_{max}$ [kPa] | 29.2 | | | 25.2 | | | | 25.2 |

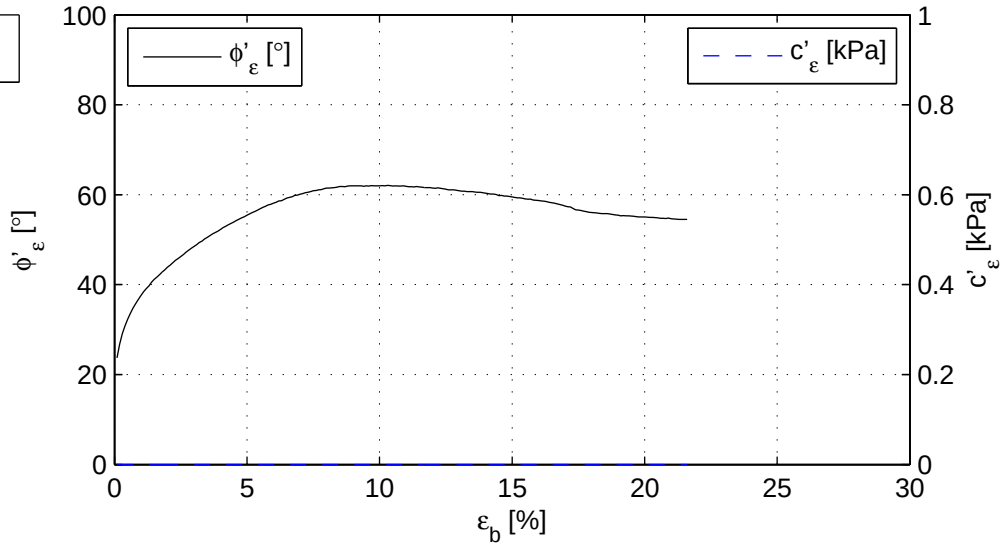


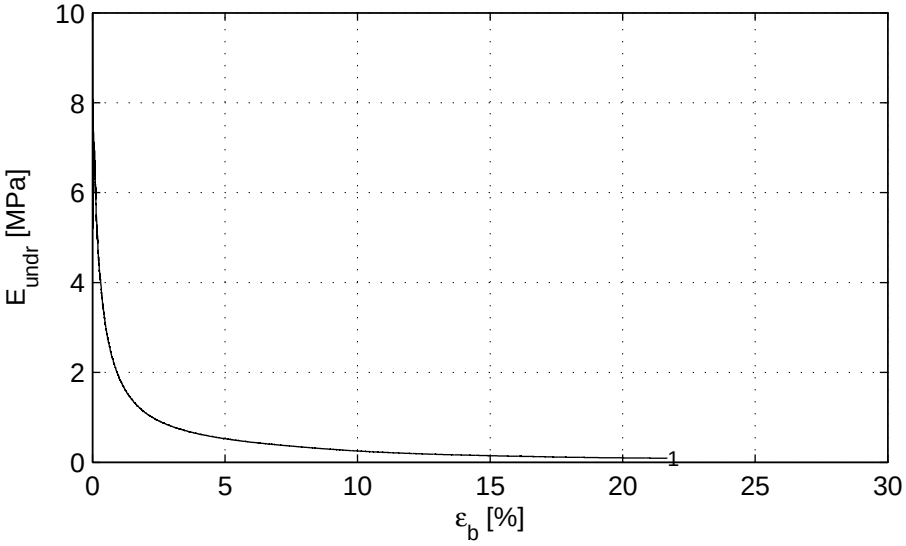
*) Gecontroleerd en vrijgegeven door grw op 2016-10-04

Consolidatiefase




Belastingsfase




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|---|---|
| 2016−10−04 | luije_sa |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

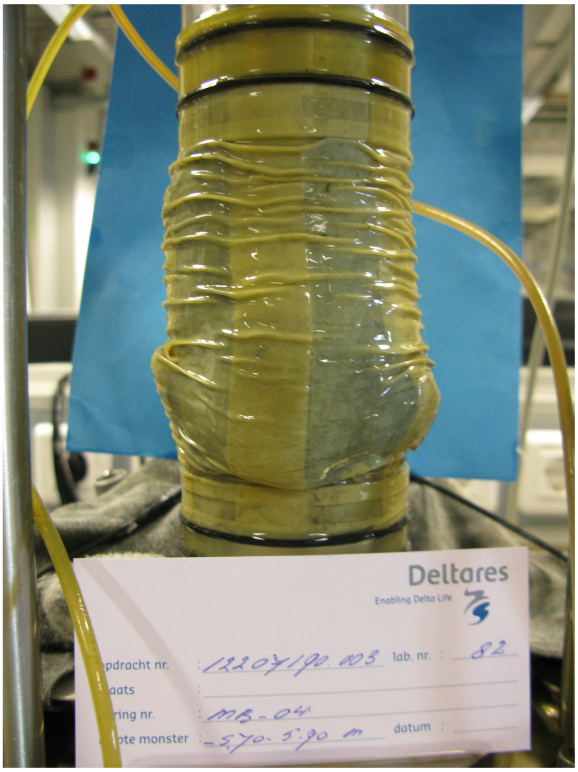
CU_82

| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX82 | 4 |

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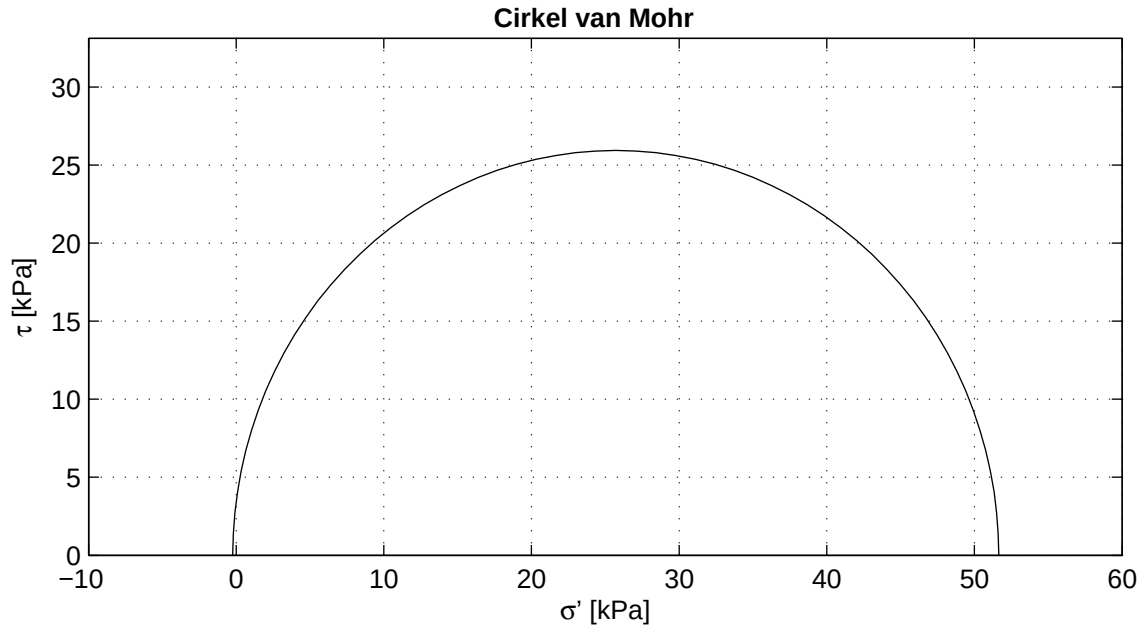









*) Gecontroleerd en vrijgegeven door grw op 2016-10-04




| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 25.9 |
| $c_u$ at 25% strain [kPa] | 25.6 |
| Nummer Boring | MB−05 |
| Monsternaam | 99 |
| Diepte NAP [m] | −6.10/−6.30 |
| NEN5104 code | Vm |
| $m_i$ [g] | 564.9 |
| $D_i$ [mm] | 66.9 |
| $h_i$ [mm] | 142.8 |
| $w_i$ [%] | 258.2 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1125 |
| $\rho_{i,dry}$ [kg/m$^3$] | 314 |
| Grondsoort | veen |

Voor beproeving

Vacuumconsolidatie na aanbrengen in−situ druk (5.9 kPa horizontaal, 11.8 kPa verticaal).
Volumemeting met extra balans; geen continue meetwaarden, schematisch verloop in plot.
Vacuumdruk was −30 kPa. Na consolidatie vacuumdruk terug naar nul en consolidatie op in−situ druk.

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| datum | get. |
|---|---|
| 2016−08−26 | grw |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

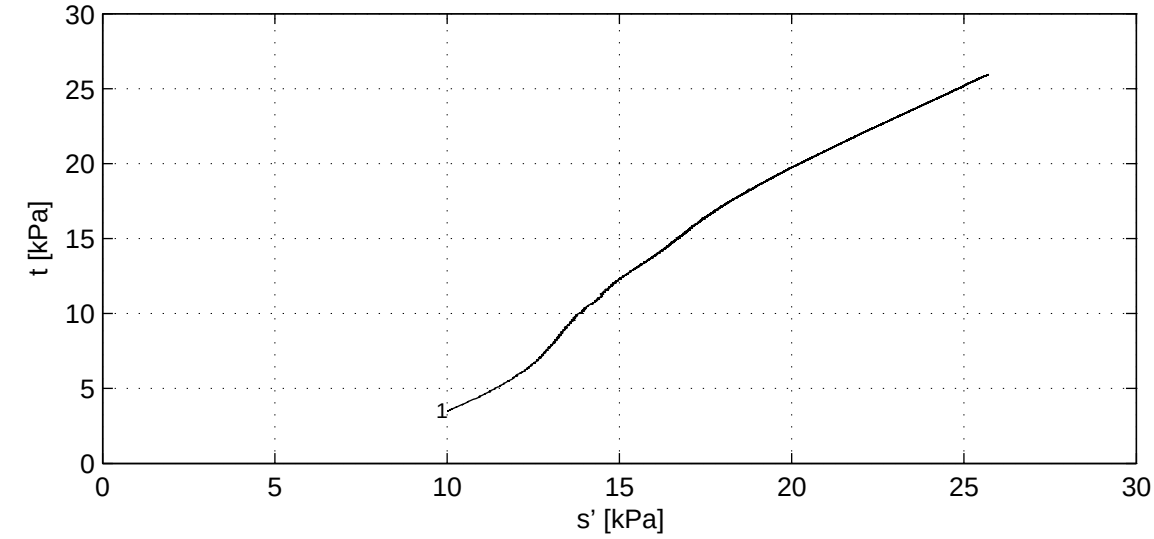
CU_99

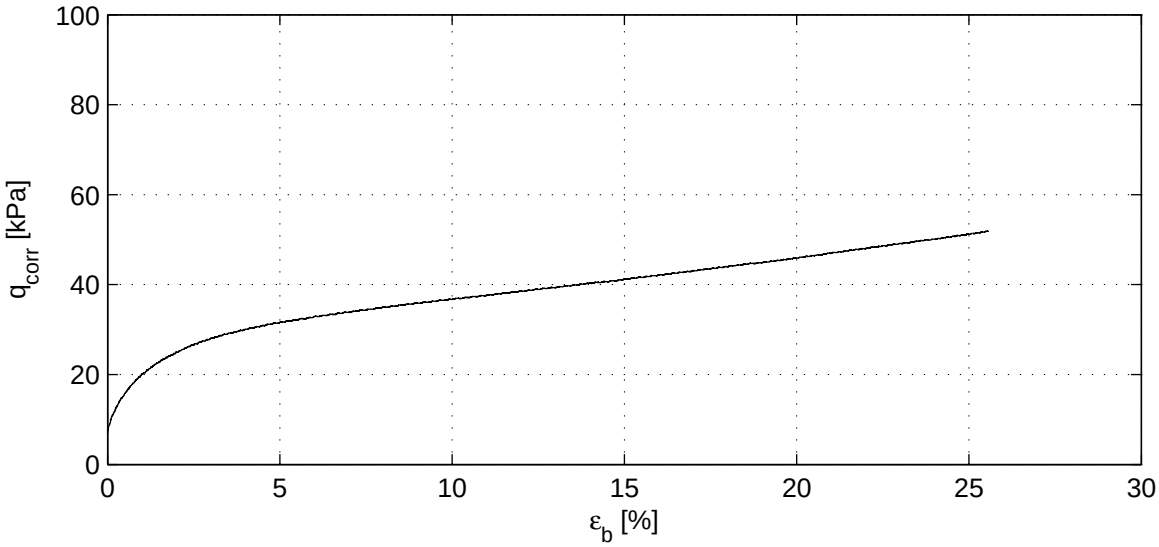
| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

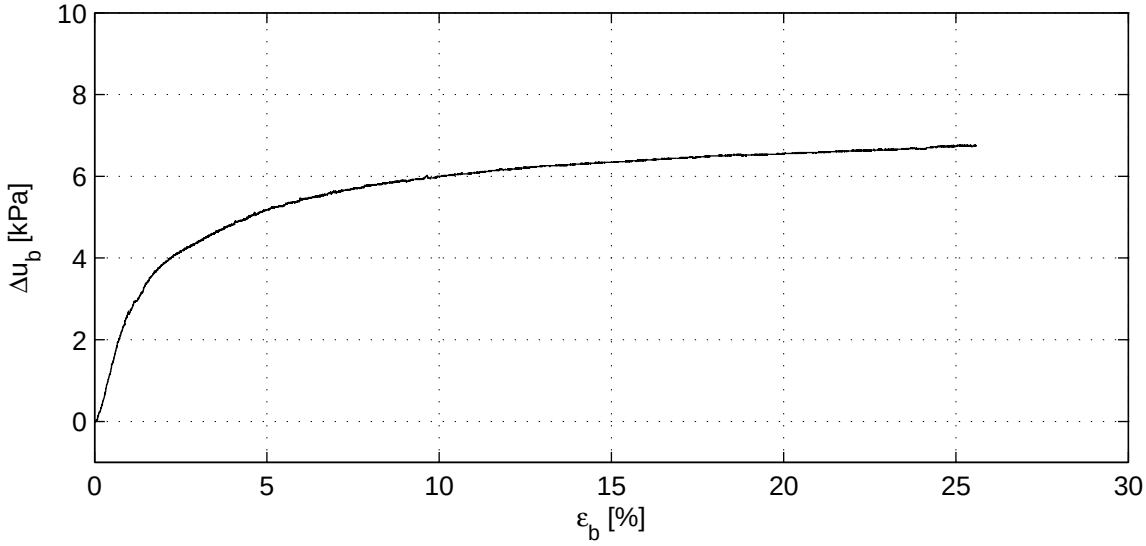
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX99 | 1 |

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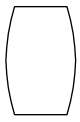
| | | |
|---|---|---|
| datum | 2016−08−26 | get. grw |
| project | 1220719.3 | Versie 1.4 |
| bijlage | TX99 | pag. 2 |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

CU_99

# CU Triaxiaalproef (Singlestage) volgens NEN 5117

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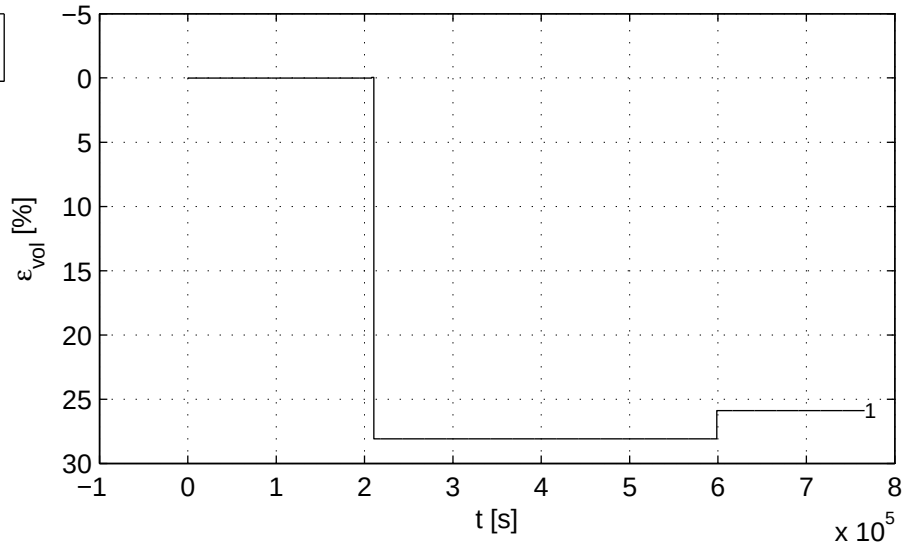
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 0.90 | | |
| | $B_1$ [−] | 0.96 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 15.3 | | |
| | $t_{100}$ [min] | – | | |
| | $h_c$ [mm] | 119.72 | | |
| | $V_c$ [$cm^3$] | 371.96 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1169 | | |
| | $w_c$ [%] | 175.8 | | |
| | $u_{bk}$ [kPa] | 5 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | – | | |
| | v [%/h] | 0.95 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | ε_b 15% | | |
| | $q_u$ [kPa] | 51.9 | | |
| | $f_{undr}$ [kPa] | 25.9 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 3.67 | | |
| | $E_{50}$ [MPa] | 0.6 | | |
| | $w_e$ [%] | 165.2 | | |
| | Bezwijkfiguur |  | | |

| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 15.1 | | | 12.5 | | | | 12.5 |
| 5.0 | 17.1 | | | 15.8 | | | | 15.8 |
| 10.0 | 18.9 | | | 18.4 | | | | 18.4 |
| $t_{max}$ [kPa] | 25.7 | | | 25.9 | | | | 25.9 |

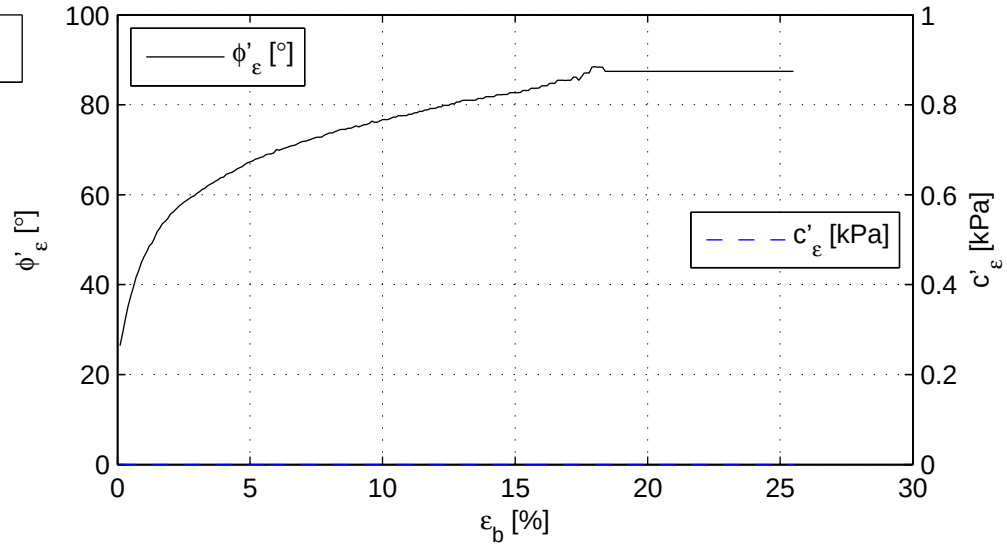


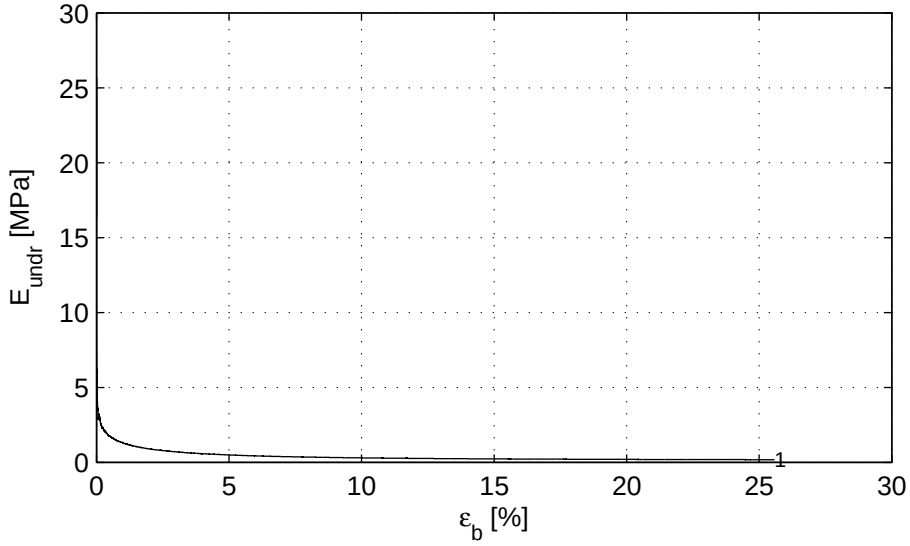
*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

Consolidatiefase



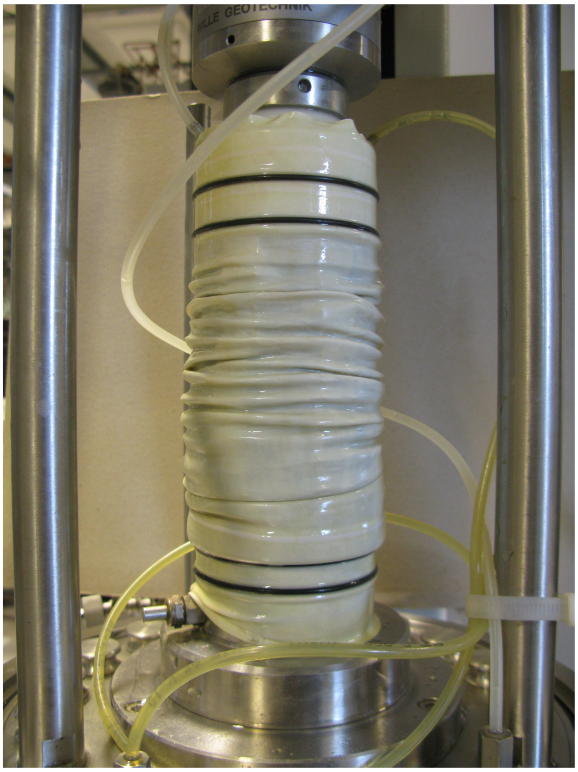

Belastingsfase




| | | | | | |
|---|---|---|---|---|---|
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| POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten<br>CU_99 | | | | project<br>1220719.3 | Versie<br>1.4 |
| CU Triaxiaalproef (Singlestage) volgens NEN 5117 | | | | bijlage<br>TX99 | pag.<br>4 |

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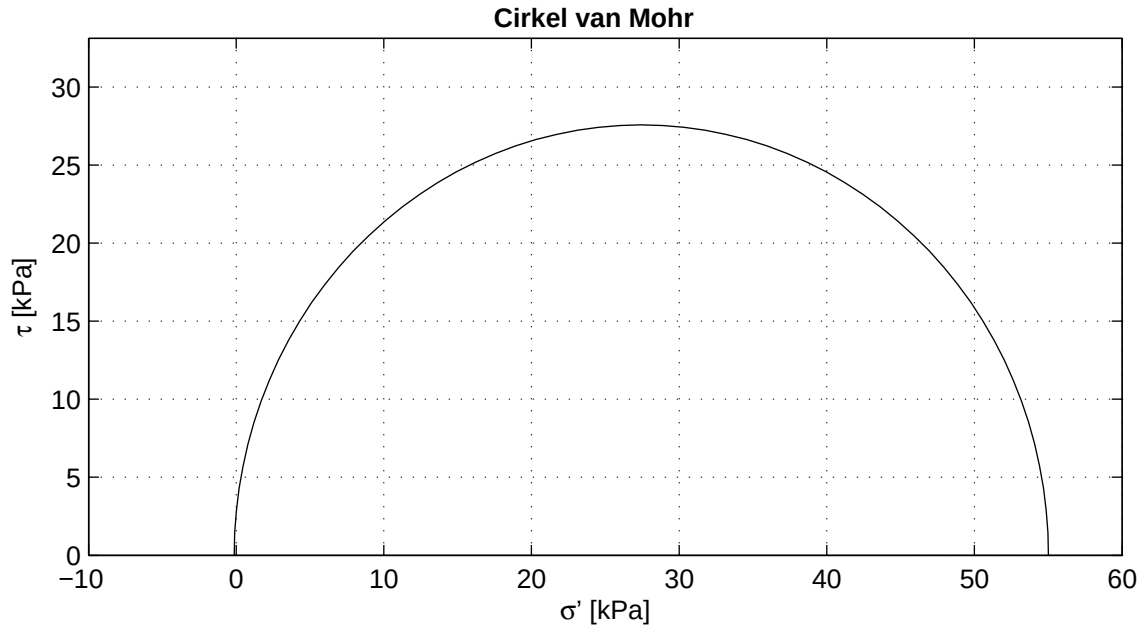








*) Gecontroleerd en vrijgegeven door ess op 2016-09-14




| Cirkels criterium | maximale t |
|---|---|
| $c_u$ [kPa] | 27.6 |
| Eindwaarde $c_u$ [kPa] | 27.6 |
| Nummer Boring | MB−05 |
| Monsternaam | 99 |
| Diepte NAP [m] | −6.10/−6.30 |
| NEN5104 code | Vm |
| $m_i$ [g] | 564.9 |
| $D_i$ [mm] | 66.9 |
| $h_i$ [mm] | 142.8 |
| $w_i$ [%] | 258.2 |
| $\rho_{i,bulk}$ [kg/m$^3$] | 1125 |
| $\rho_{i,dry}$ [kg/m$^3$] | 314 |
| Grondsoort | veen |

Voor beproeving

Vacuumconsolidatie na aanbrengen in−situ druk (5.9 kPa horizontaal, 11.8 kPa verticaal).
Volumemeting met extra balans; geen continue meetwaarden, schematisch verloop in plot.
Vacuumdruk was −30 kPa. Na consolidatie vacuumdruk terug naar nul en consolidatie op in−situ druk.

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| datum | get. |
|---|---|
| 2016−08−26 | grw |

POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

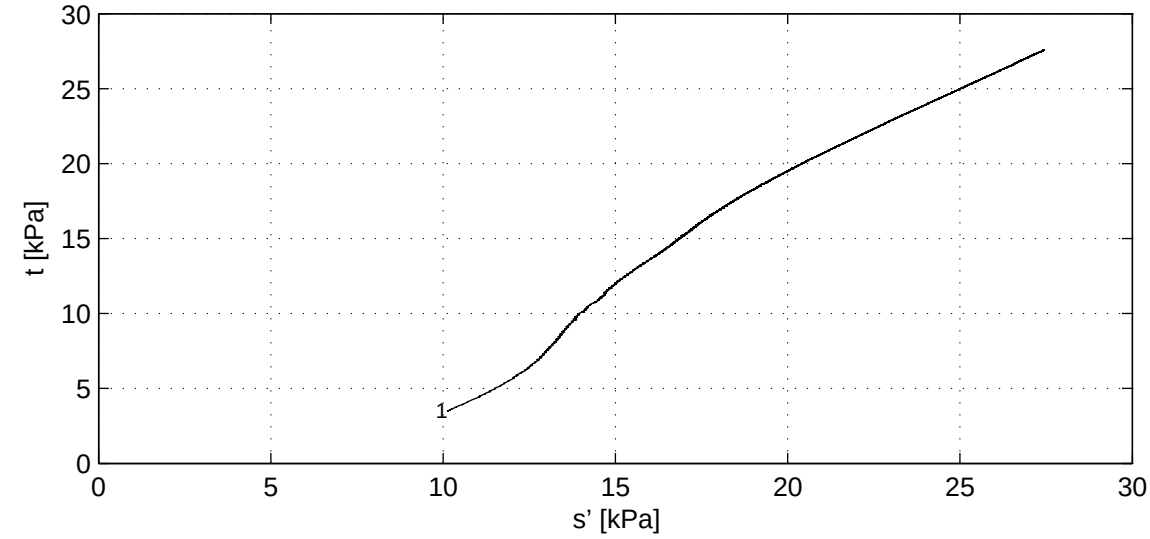
CU_99a

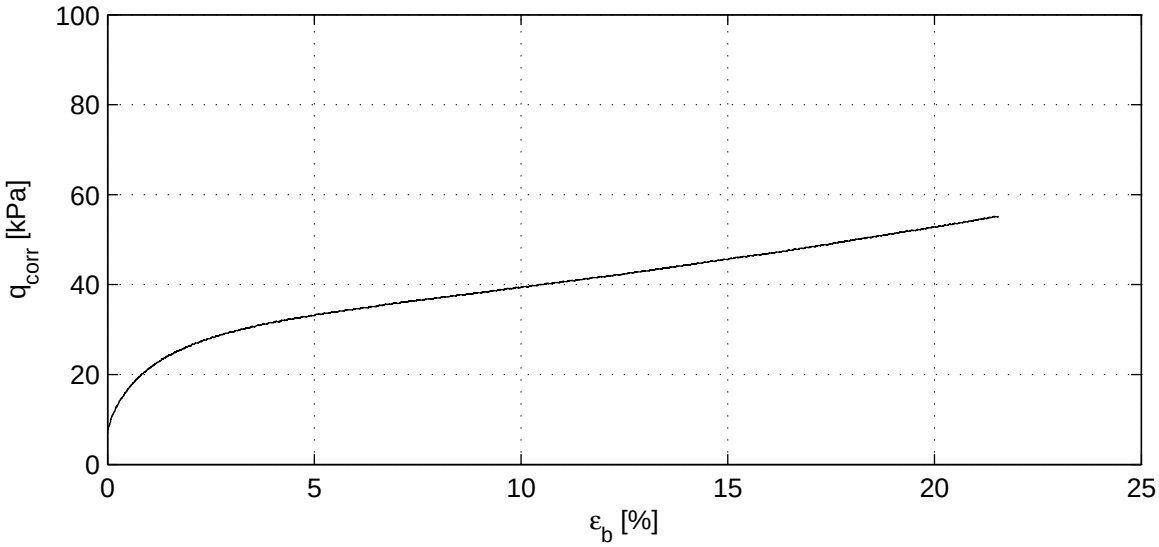
| project | Versie |
|---|---|
| 1220719.3 | 1.4 |

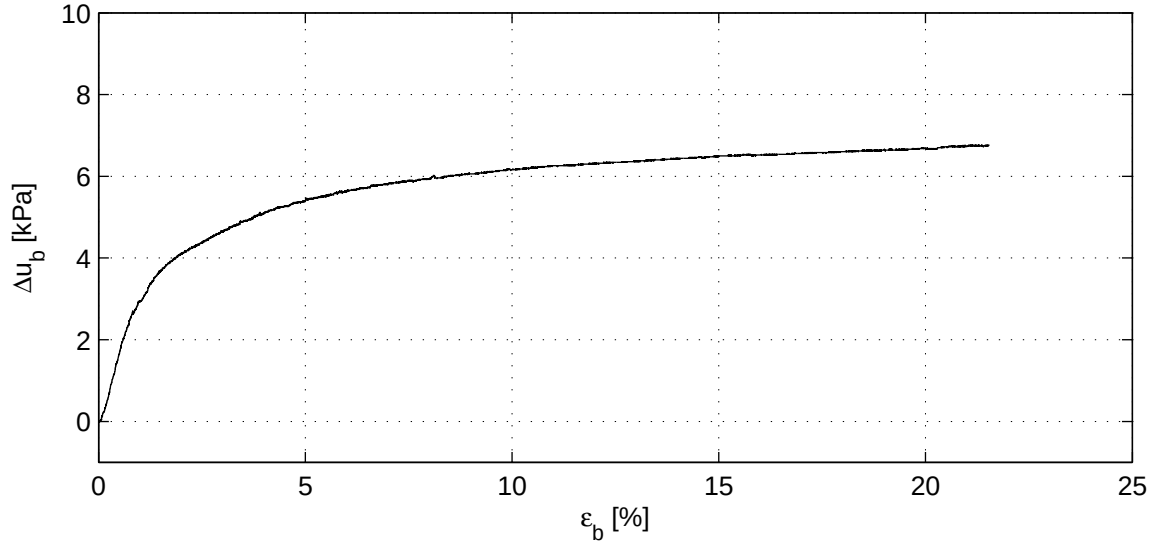
# CU Triaxiaalproef (Singlestage) volgens NEN 5117

| bijlage | pag. |
|---|---|
| TX99a | 1 |

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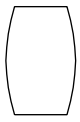





*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

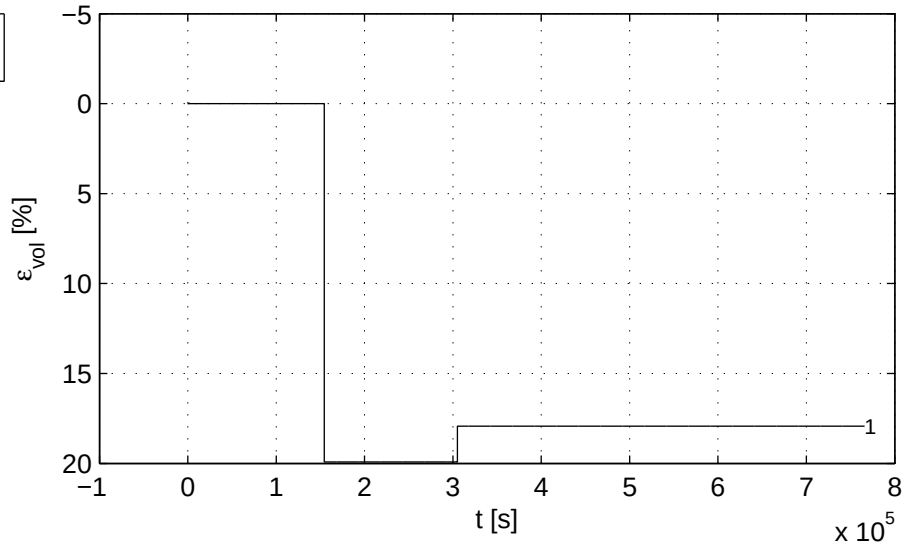
| | Belastingsfase | 1 | 2 | 3 |
|---|---|---|---|---|
| Verzadigingsfase | $B_0$ [−] | 1.00 | | |
| | $B_1$ [−] | 1.00 | | |
| Consolidatiefase | $\sigma'_{1,c}$ [kPa] | 15.3 | | |
| | $t_{100}$ [min] | – | | |
| | $h_c$ [mm] | 119.72 | | |
| | $V_c$ [$cm^3$] | 411.96 | | |
| | $\rho_{n,c}$ [$kg/m^3$] | 1153 | | |
| | $w_c$ [%] | 201.2 | | |
| | $u_{bk}$ [kPa] | 5 | | |
| | P [−] | 2.20 | | |
| | $v_{max}$ [%/h] | – | | |
| | v [%/h] | 0.79 | | |
| Belastingsfase | Corr method | Deltares | | |
| | Stopcriterium | ε_b 15% | | |
| | $q_u$ [kPa] | 55.2 | | |
| | $f_{undr}$ [kPa] | 27.6 | | |
| Na beproeving | $\varepsilon_{b,50}$ [%] | 3.73 | | |
| | $E_{50}$ [MPa] | 0.6 | | |
| | $w_e$ [%] | 165.2 | | |
| | Bezwijkfiguur |  | | |

| Verticale rek [%] | s' [kPa] | | | t [kPa] | | | | $c_u$ [kPa] |
|---|---|---|---|---|---|---|---|---|
| 2.0 | 15.7 | | | 13.2 | | | | 13.2 |
| 5.0 | 17.8 | | | 16.5 | | | | 16.5 |
| 10.0 | 20.2 | | | 19.7 | | | | 19.7 |
| $t_{max}$ [kPa] | 27.4 | | | 27.6 | | | | 27.6 |

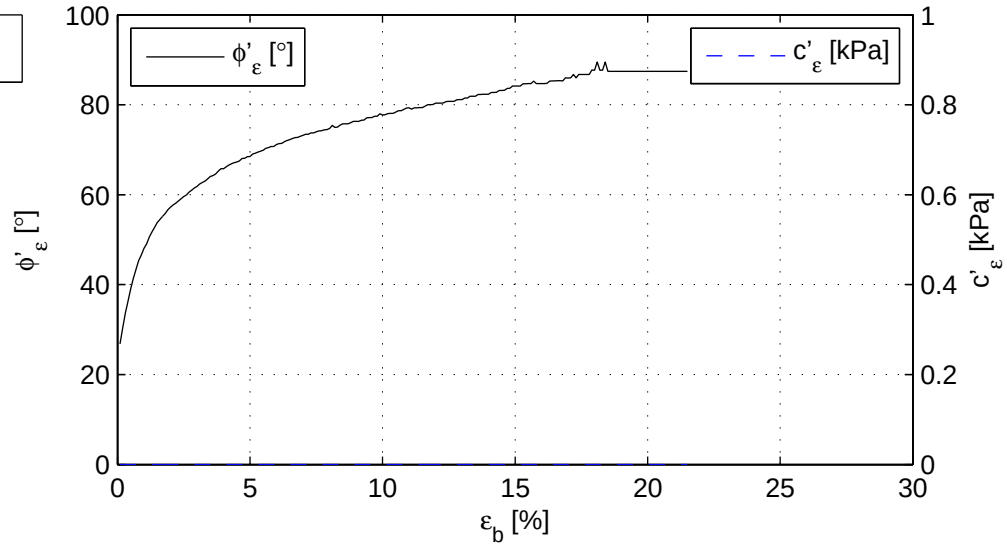


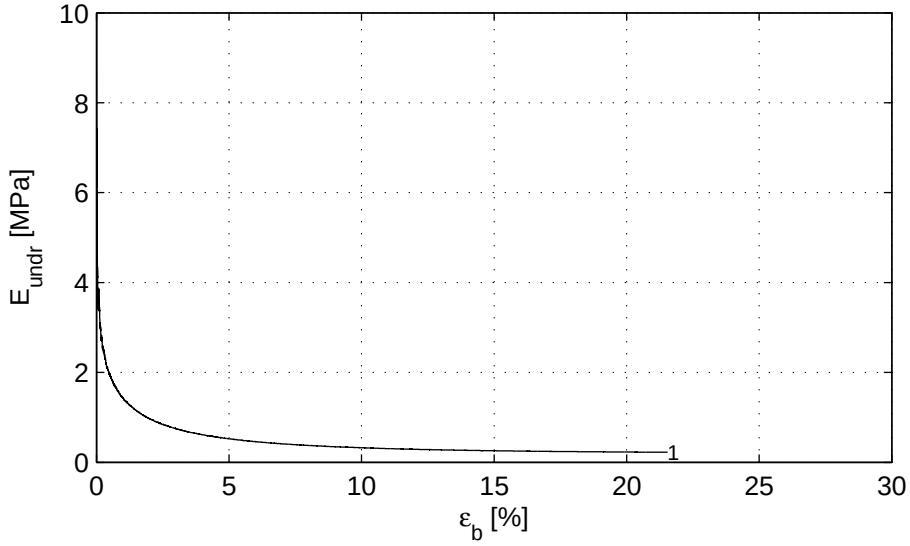
*) Gecontroleerd en vrijgegeven door ess op 2016-09-14

Consolidatiefase




Belastingsfase





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POV−M Vacuümconsolidatie: BLKGR − laboratoriumtesten

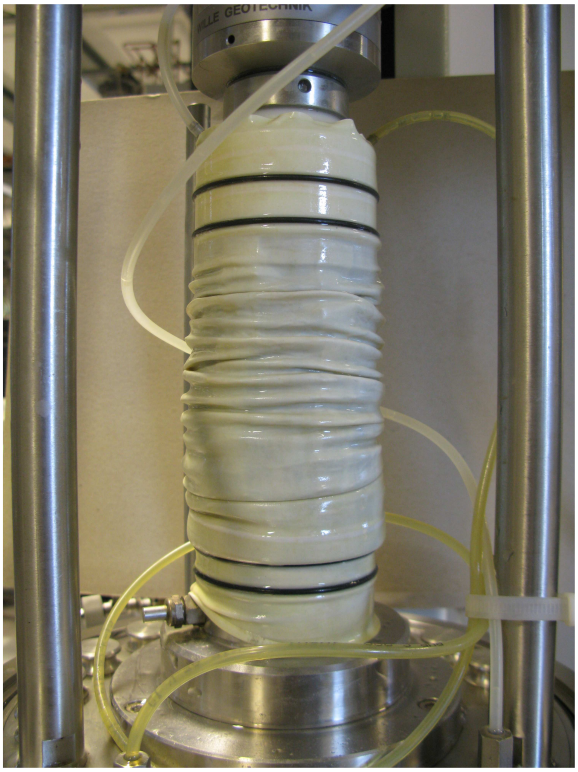
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| 1220719.3 | 1.4 |

CU Triaxiaalproef (Singlestage) volgens NEN 5117

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*) Gecontroleerd en vrijgegeven door ess op 2016-09-14









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