Appendix E: Stress-Strain Curves for Treated Kaolin, Carbonated, and Post Freeze-Thaw Specimens.

E1: Stress-strain curves for non-carbonated and non-saturated treated kaolin.

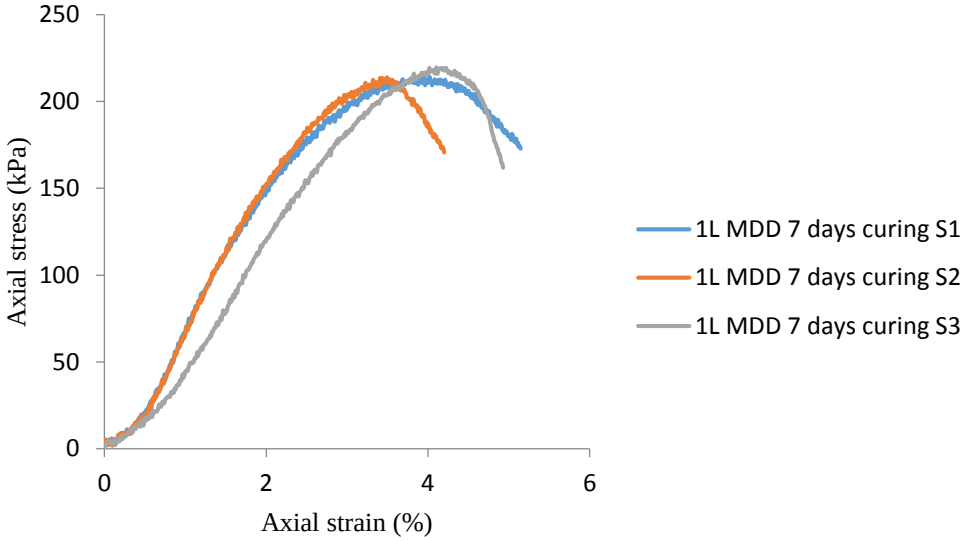


Figure E1.1: Stress-strain behaviour of treated kaolin at 1 % $Ca(OH)_2$ and maximum dry density (MDD) combination, 7 days curing.

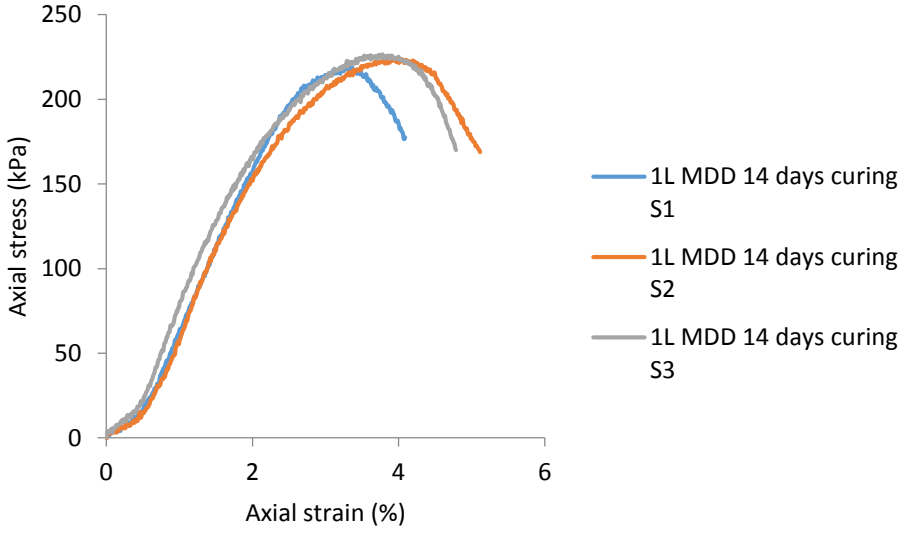


Figure E1.2: Stress-strain behaviour of treated kaolin at 1 % $Ca(OH)_2$ and maximum dry density (MDD) combination, 14 days curing.

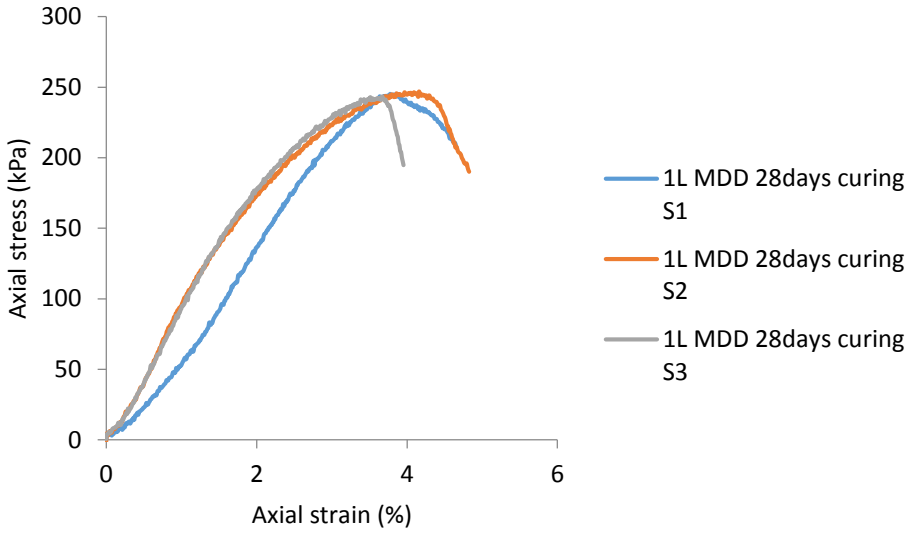


Figure E1.3: Stress-strain behaviour of treated kaolin at 1 % $Ca(OH)_2$ and maximum dry density (MDD) combination, 28 days curing.

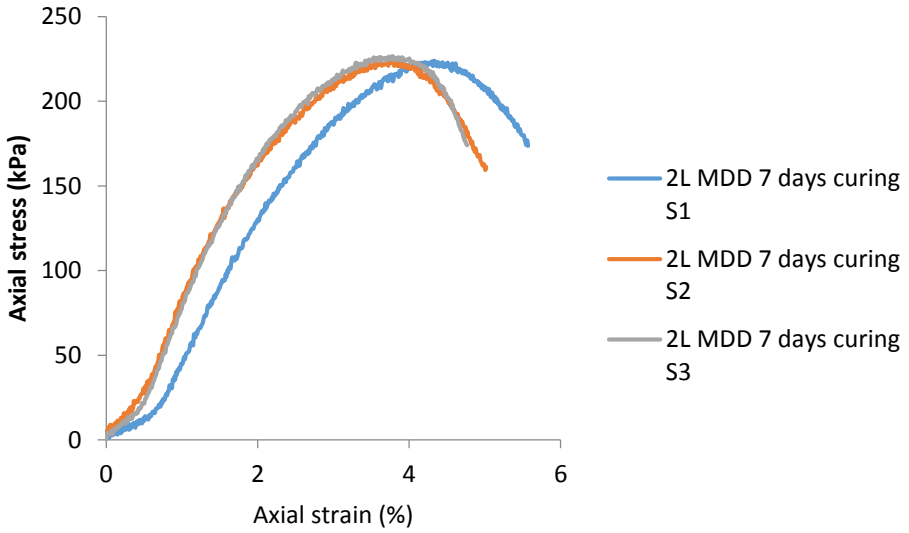


Figure E1.4: Stress-strain behaviour of treated kaolin at 2 % $Ca(OH)_2$ and maximum dry density (MDD) combination, 7 days curing.

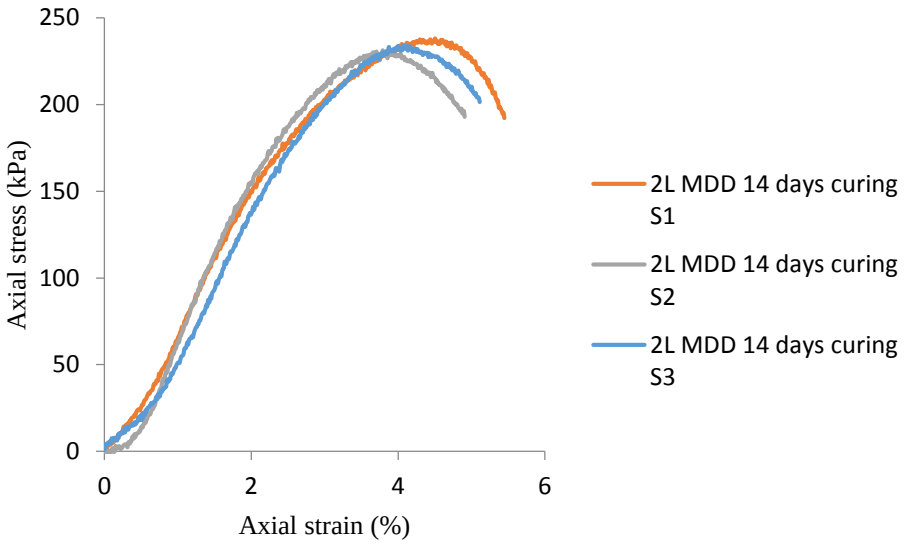


Figure E1.5: Stress-strain behaviour of treated kaolin at 2 % $Ca(OH)_2$ and maximum dry density (MDD) combination, 14 days curing.

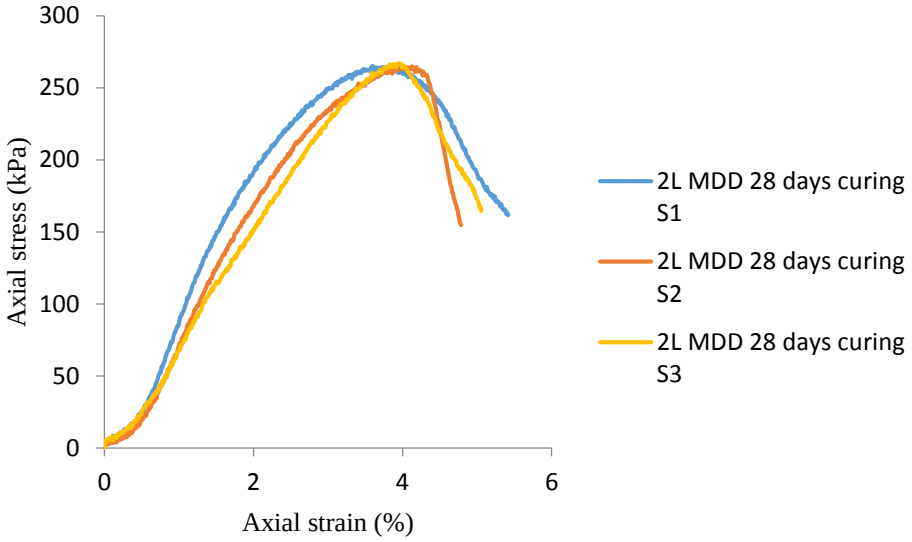


Figure E1.6: Stress-strain behaviour of treated kaolin at 2 % $Ca(OH)_2$ and maximum dry density (MDD) combination, 28 days curing.

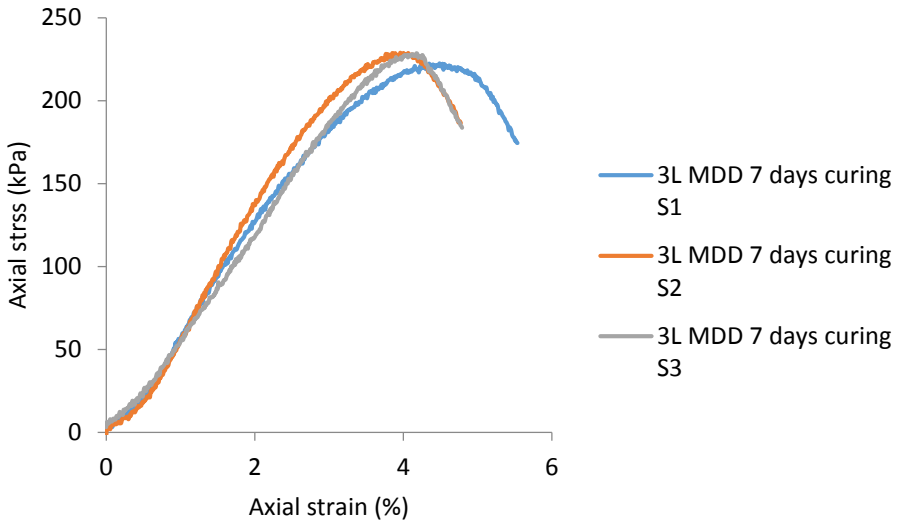


Figure E1.7: Stress-strain behaviour of treated kaolin at 3 % $Ca(OH)_2$ and maximum dry density (MDD) combination, 7 days curing.

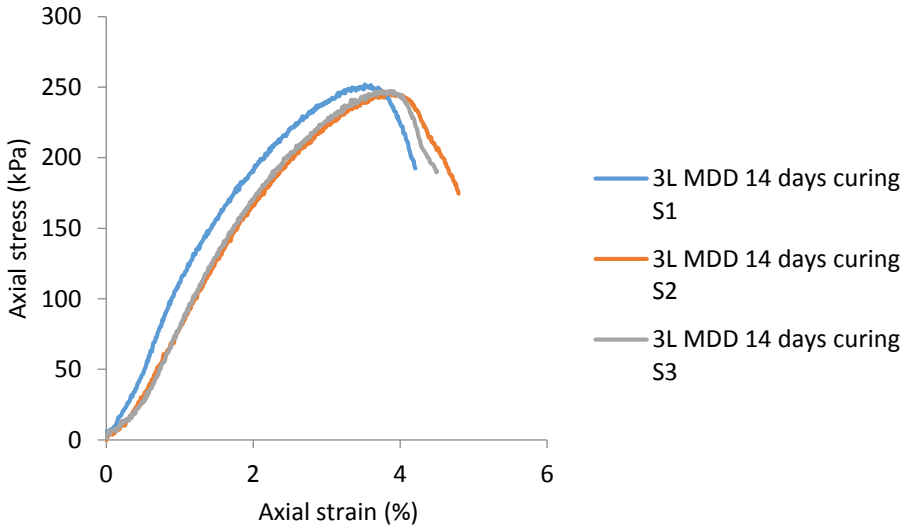


Figure E1.8: Stress-strain behaviour of treated kaolin at 3 % $Ca(OH)_2$ and maximum dry density (MDD) combination, 14 days curing.

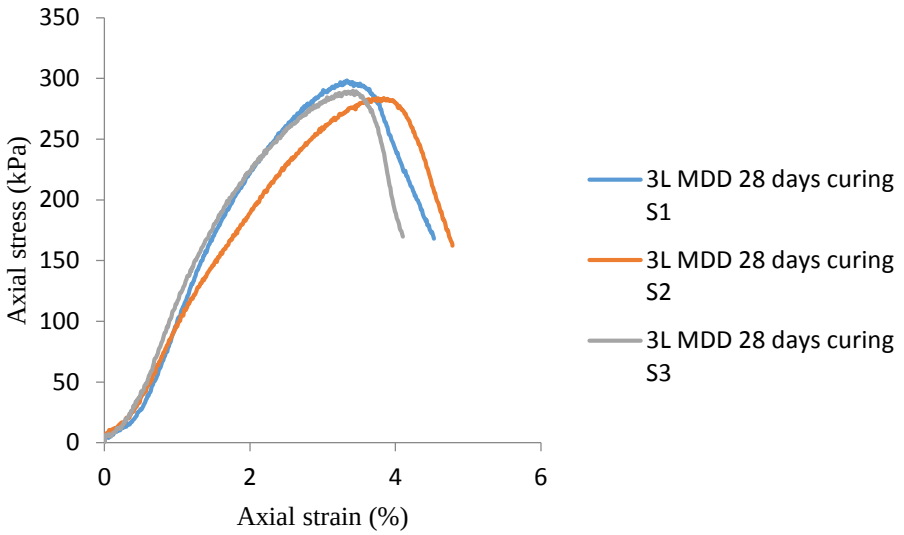


Figure E1.9: Stress-strain behaviour of treated kaolin at 3 % $Ca(OH)_2$ and maximum dry density (MDD) combination, 28 days curing.

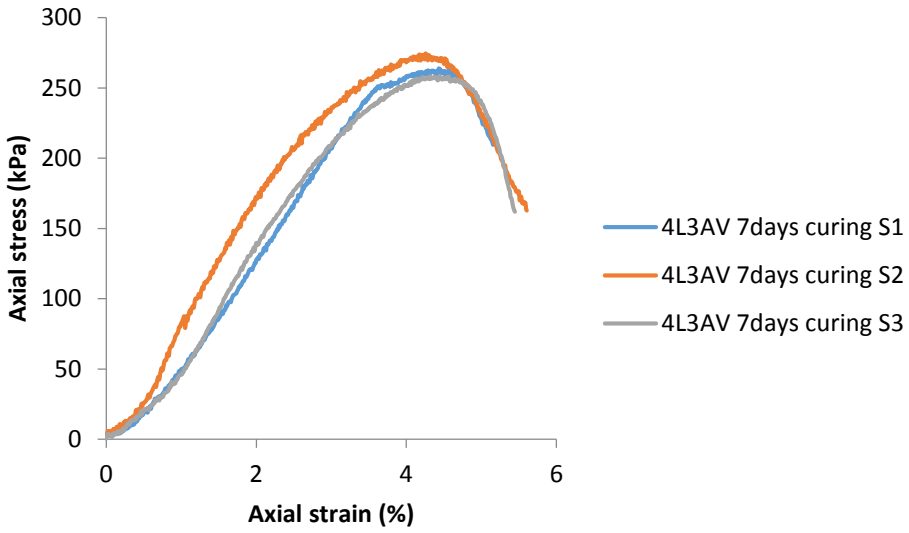


Figure E1.10: Stress-strain behaviour of treated kaolin at 4 % $Ca(OH)_2$ and 3% air voids (3AV) combination, 7 days curing.

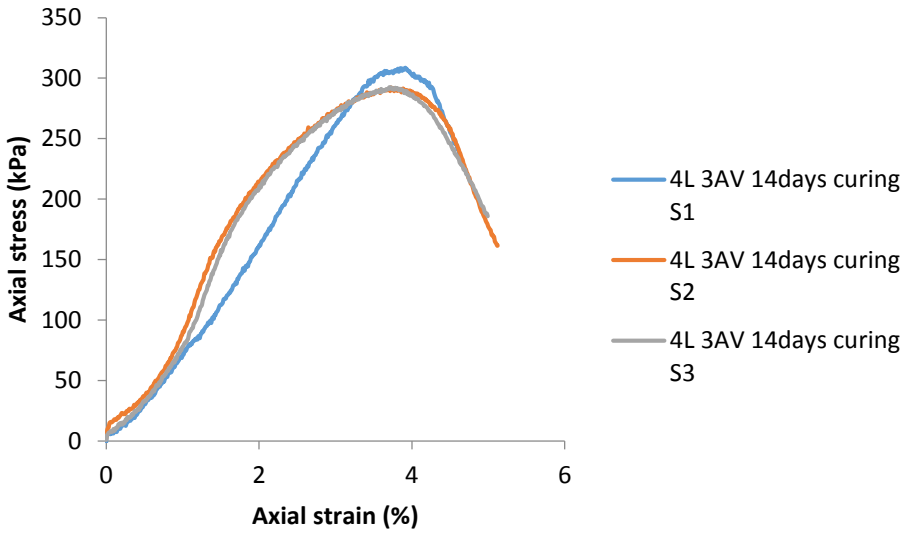


Figure E1.11: Stress-strain behaviour of treated kaolin at 4 % $Ca(OH)_2$ and 3% air voids (3AV) combination, 14 days curing.

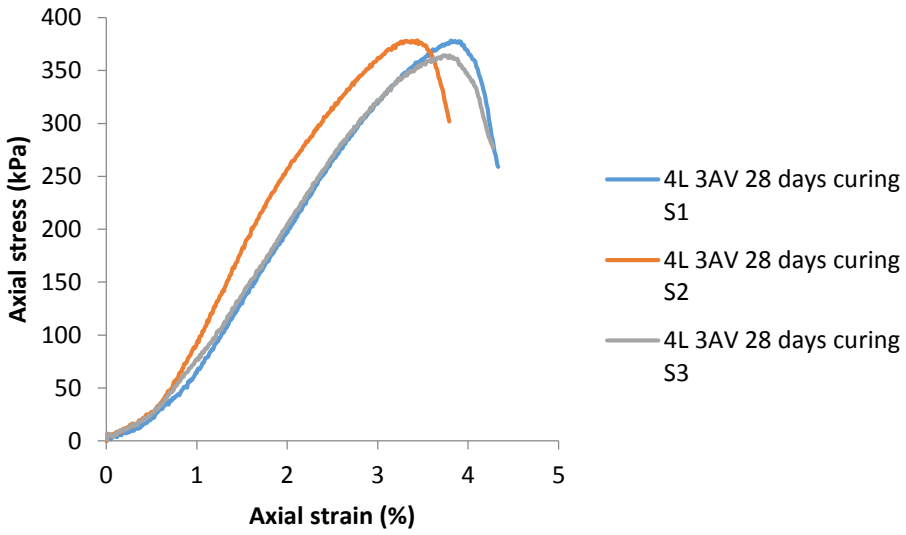


Figure E1.12: Stress-strain behaviour of treated kaolin at 4 % $Ca(OH)_2$ and 3% air voids (3AV) combination, 28 days curing.

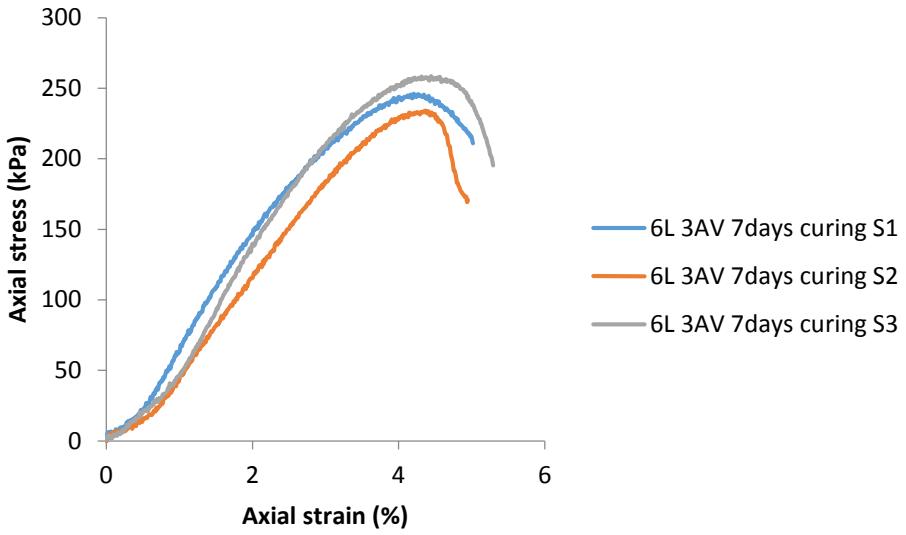


Figure E1.13: Stress-strain behaviour of treated kaolin at 6 % $Ca(OH)_2$ and 3% air voids (3AV) combination, 7 days curing.

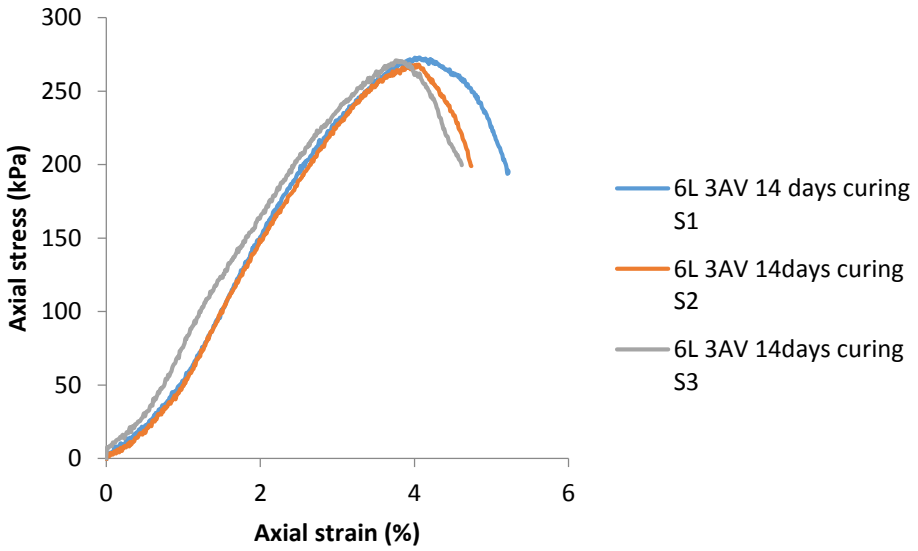


Figure E1.14: Stress-strain behaviour of treated kaolin at 6 % $Ca(OH)_2$ and 3% air voids (3AV) combination, 14 days curing.

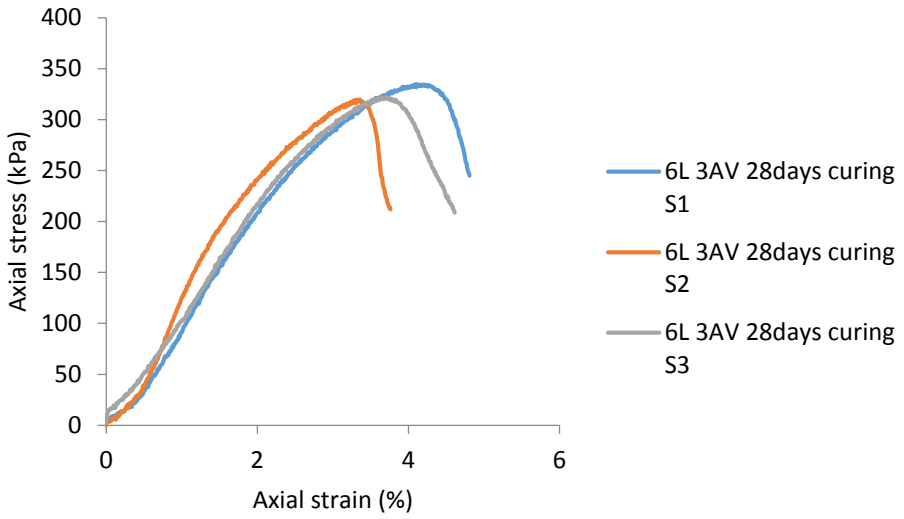


Figure E1.15: Stress-strain behaviour of treated kaolin at 6 % $Ca(OH)_2$ and 3% air voids (3AV) combination, 28 days curing.

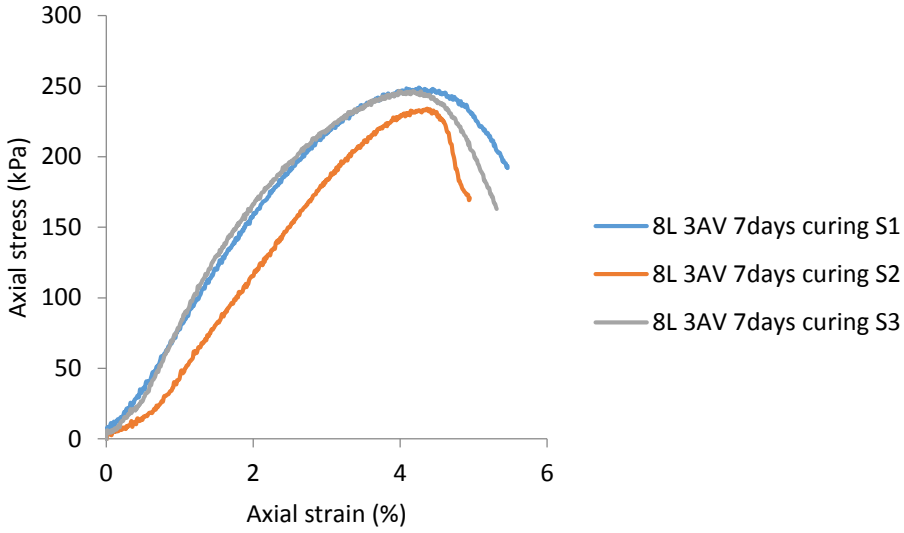


Figure E1.16: Stress-strain behaviour of treated kaolin at 8 % $Ca(OH)_2$ and 3% air voids (3AV) combination, 7 days curing.

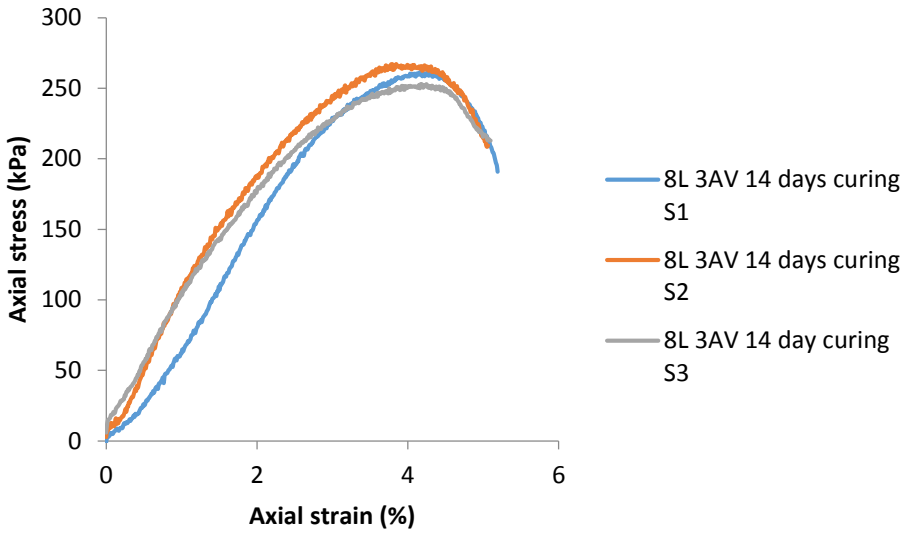


Figure E1.17: Stress-strain behaviour of treated kaolin at 8 % $Ca(OH)_2$ and 3% air voids (3AV) combination, 14 days curing.

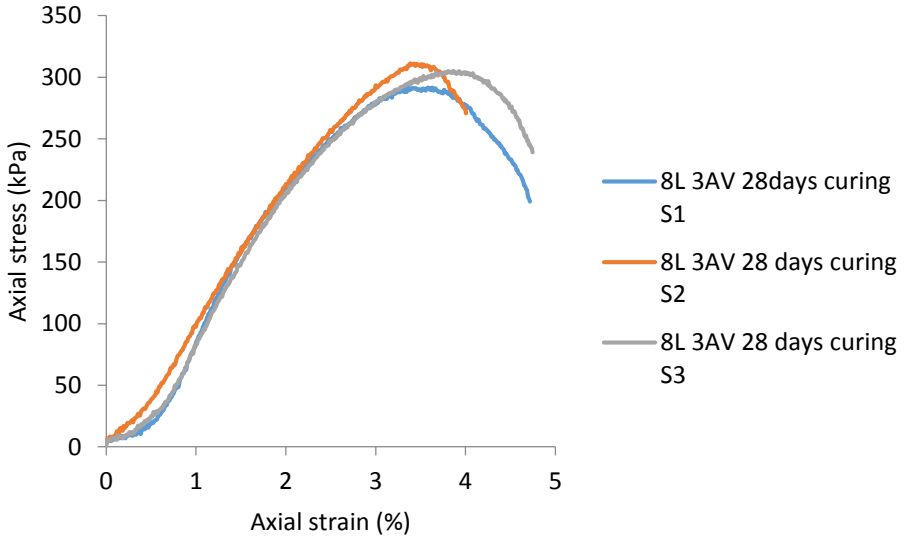


Figure E1.18: Stress-strain behaviour of treated kaolin at 8 % $Ca(OH)_2$ and 3% air voids (3AV) combination, 28 days curing.

E2: Stress-Strain behaviour of carbonated treated kaolin

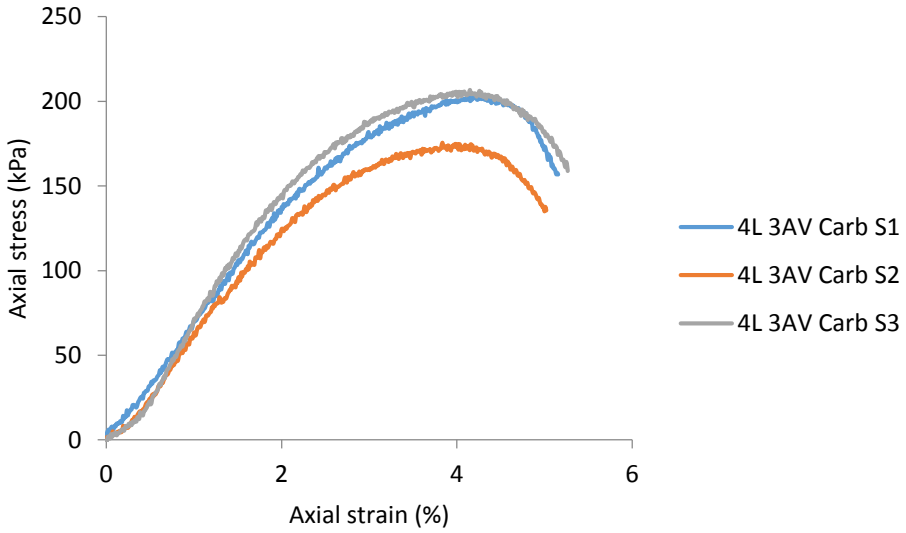


Figure E2.1: Stress-strain behaviour of carbonated treated kaolin at 4 % $Ca(OH)_2$ with 3 % air voids (4L3AV) content. Carb represents carbonated.

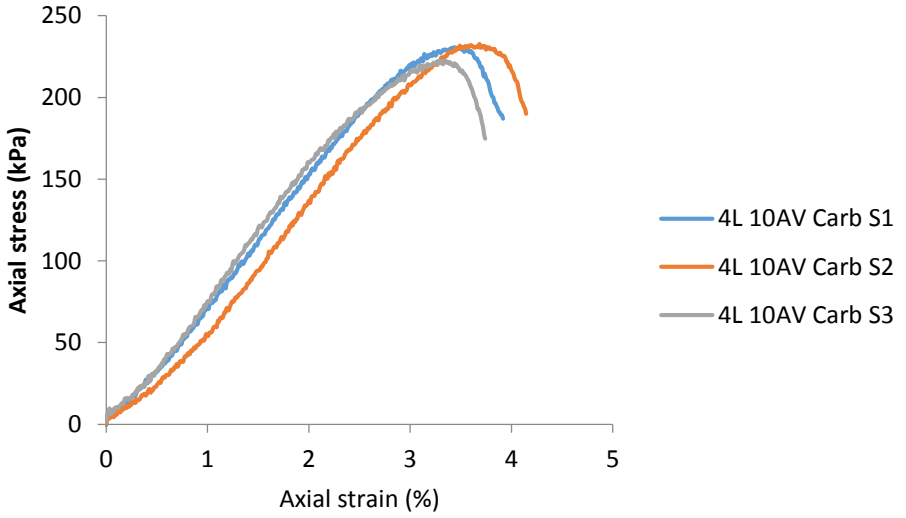


Figure E2.2: Stress-strain behaviour of carbonated treated kaolin at 4 % $Ca(OH)_2$ with 10 % air voids (4L10AV) content. Carb represents carbonated.

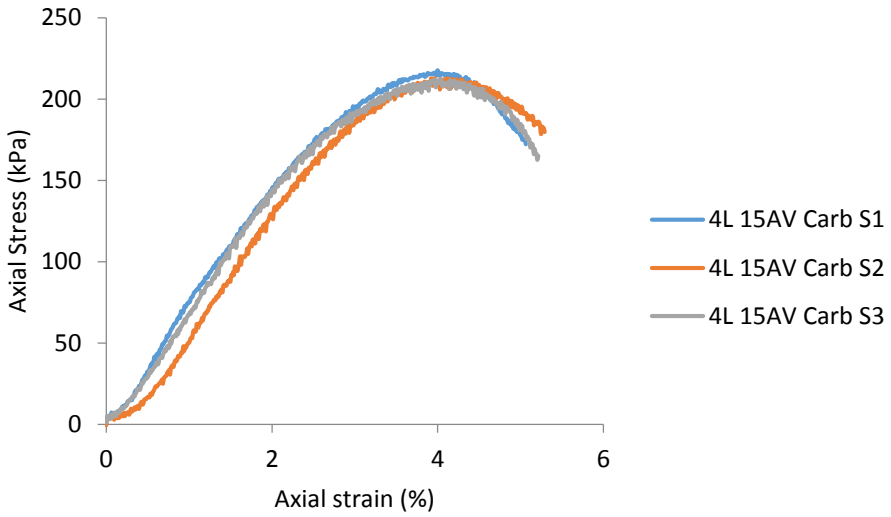


Figure E2.3: Stress-strain behaviour of carbonated treated kaolin at 4% $Ca(OH)_2$ with 15 % air voids (4L15AV) content. Carb represents carbonated.

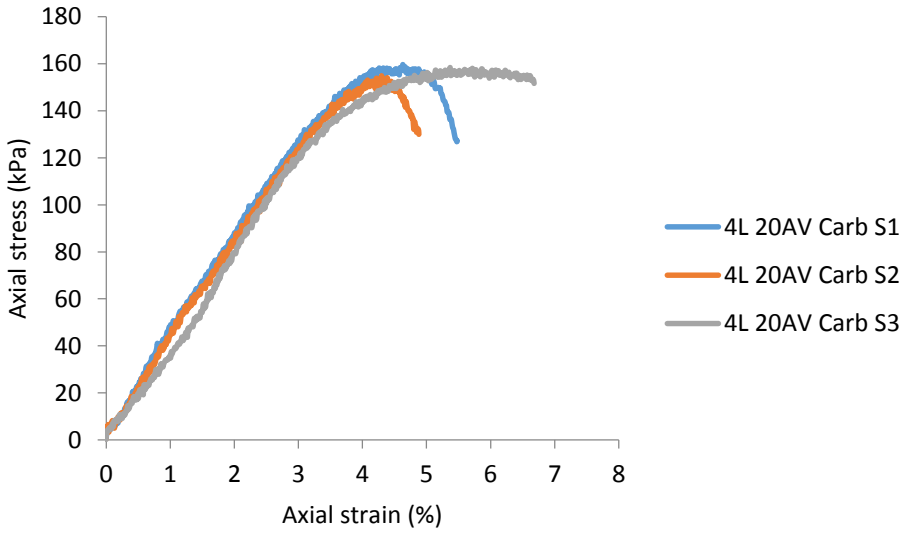


Figure E2.4: Stress-strain behaviour of carbonated treated kaolin at 4% $Ca(OH)_2$ with 20 % air voids (4L20AV) content. Carb represents carbonated.

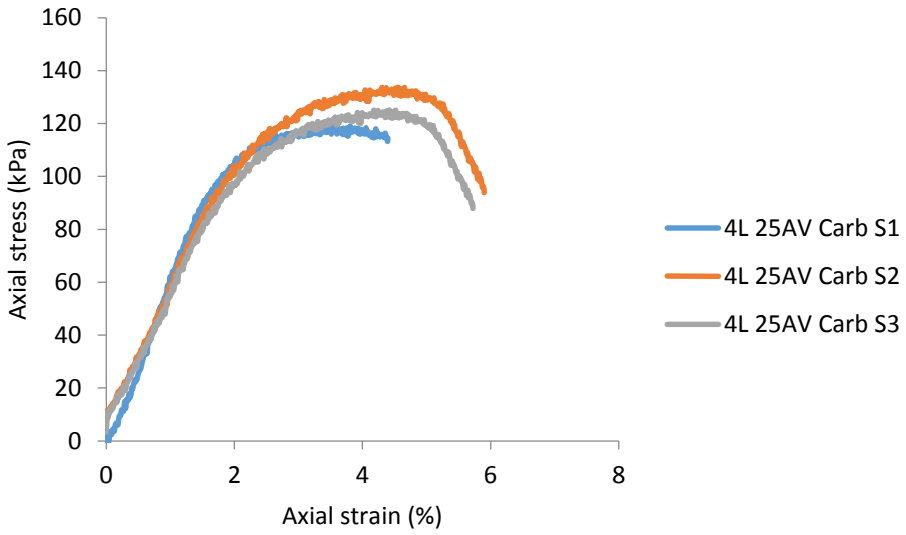


Figure E2.5: Stress-strain behaviour of carbonated treated kaolin at 4% $Ca(OH)_2$ with 25 % air voids (4L25AV) content. Carb represents carbonated.

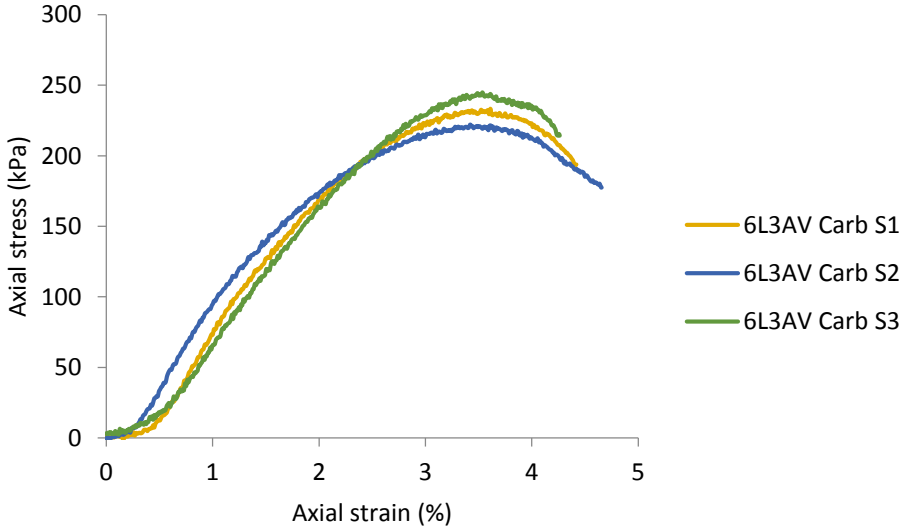


Figure E2.6: Stress-strain behaviour of carbonated treated kaolin at 6% $Ca(OH)_2$ with 3 % air voids (6L3AV) content. Carb represents carbonated.

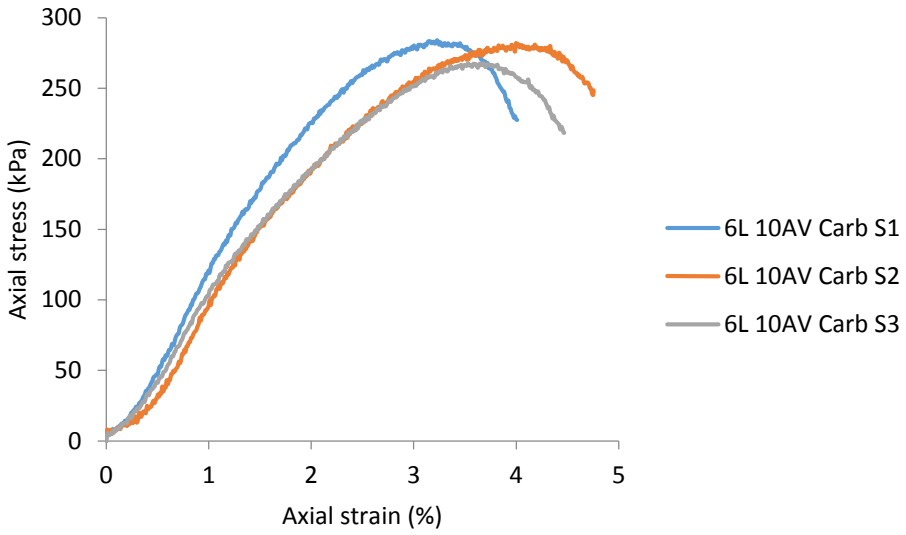


Figure E2.7: Stress-strain behaviour of carbonated treated kaolin at 6% $Ca(OH)_2$ with 10 % air voids (6L10AV) content. Carb represents carbonated.

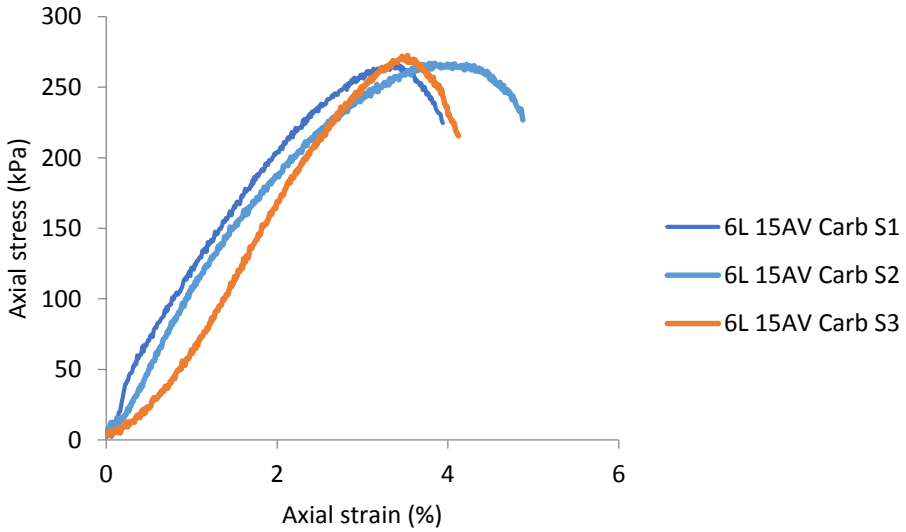


Figure E2.8: Stress-strain behaviour of carbonated treated kaolin at 6% $Ca(OH)_2$ with 15 % air voids (6L15AV) content. Carb represents carbonated.

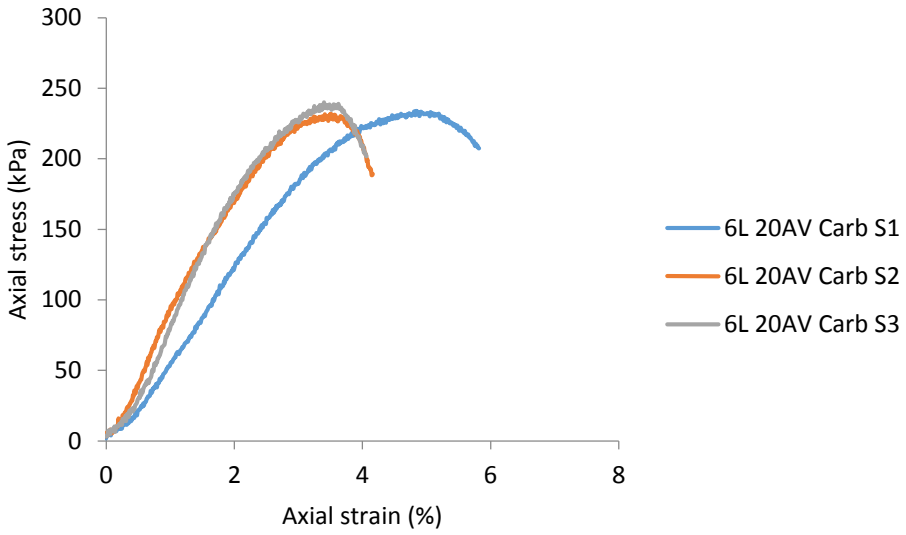


Figure E2.9: Stress-strain behaviour of carbonated treated kaolin at 6% $Ca(OH)_2$ with 20 % air voids (6L20AV) content. Carb represents carbonated.

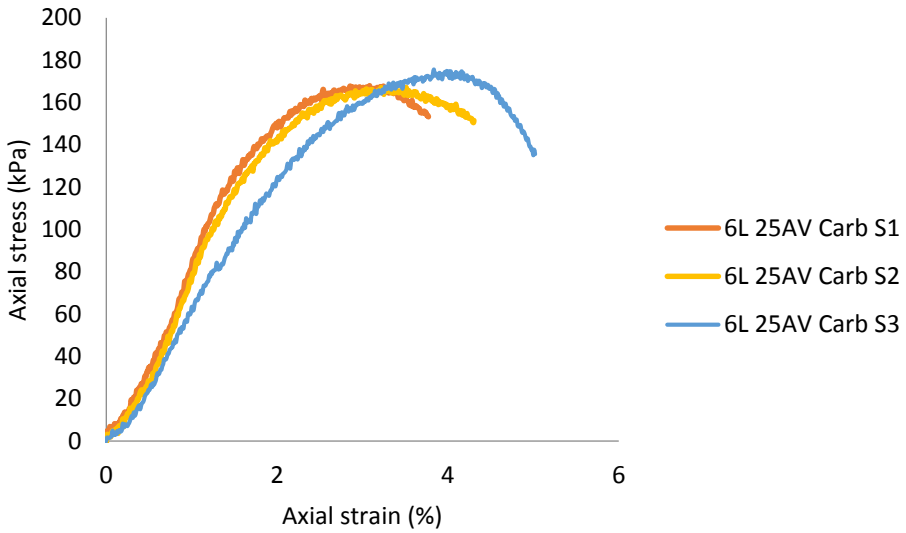


Figure E2.10: Stress-strain behaviour of carbonated treated kaolin at 6% $Ca(OH)_2$ with 25 % air voids (6L25AV) content. Carb represents carbonated.

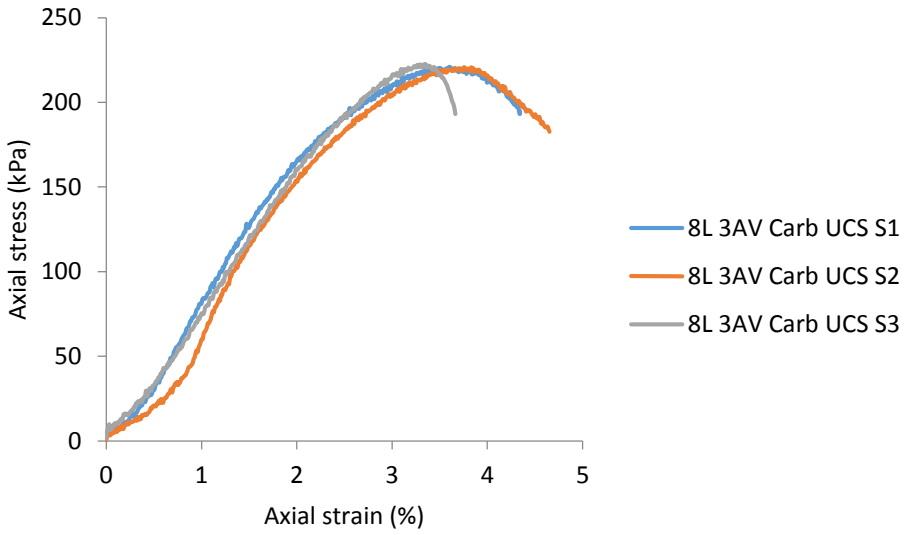


Figure E2.11: Stress-strain behaviour of carbonated treated kaolin at 8% $Ca(OH)_2$ with 3 % air voids (8L3AV) content. Carb represents carbonated.

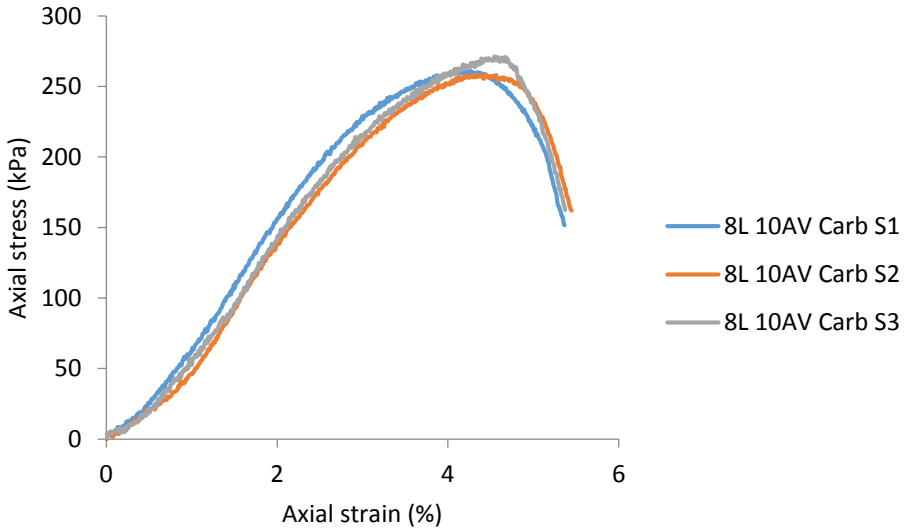


Figure E2.12: Stress-strain behaviour of carbonated treated kaolin at 8 % $Ca(OH)_2$ with 10 % air voids (8L 10AV) content. Carb represents carbonated.

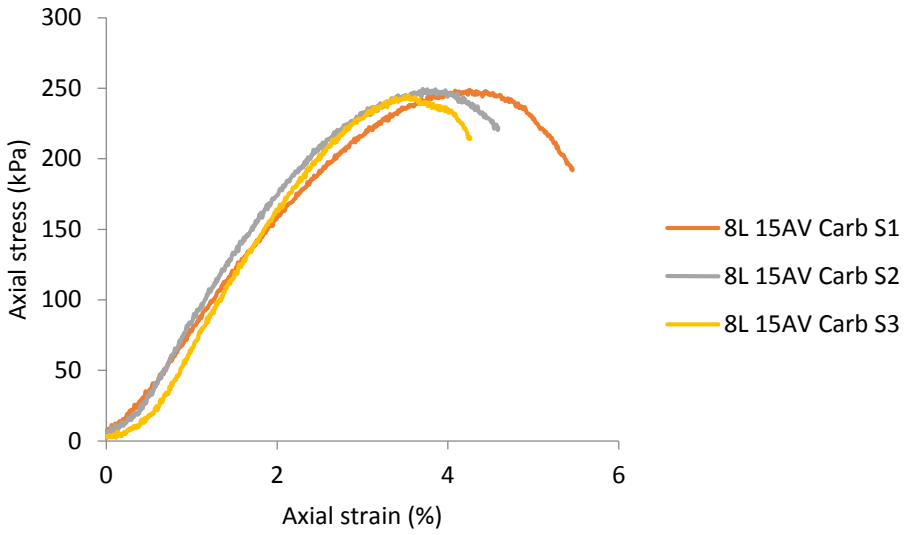


Figure E2.13: Stress-strain behaviour of carbonated treated kaolin at 8 % $Ca(OH)_2$ with 15 % air voids (8L 15AV) content. Carb represents carbonated.

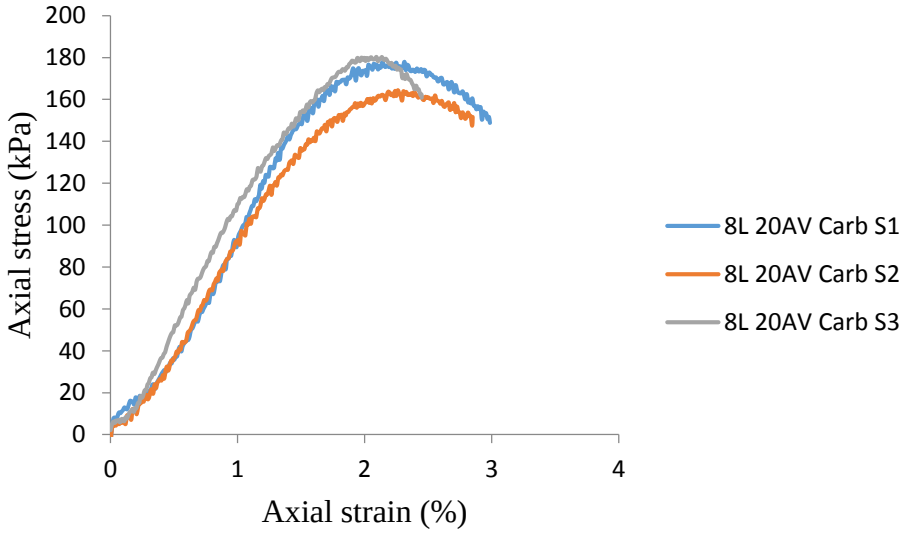


Figure E2.14: Stress-strain behaviour of carbonated treated kaolin at 8 % $Ca(OH)_2$ with 20 % air voids (8L 20AV) content. Carb represents carbonated.

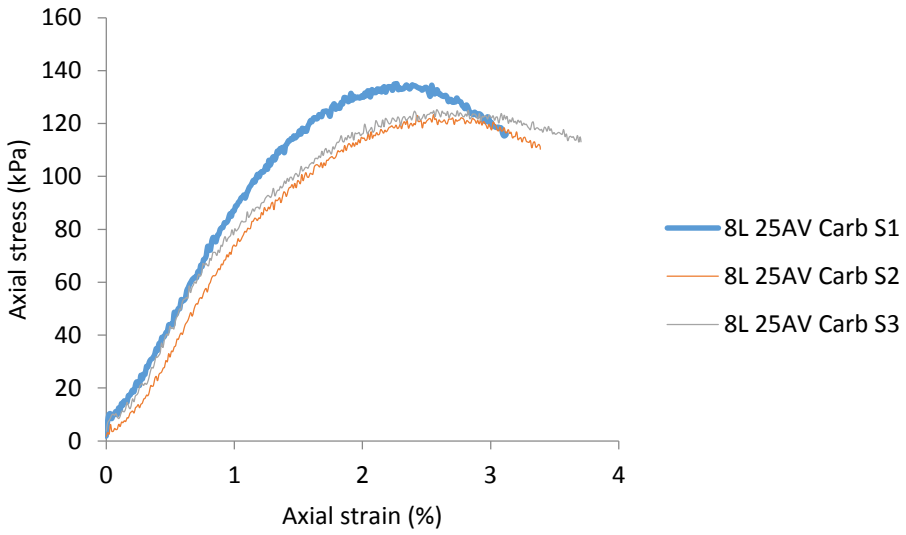


Figure E2.15: Stress-strain behaviour of carbonated treated kaolin at 8 % $Ca(OH)_2$ with 25 % air voids (8L 25AV) content. Carb represents carbonated.

E3: Stress-strain curves of water-saturated non-carbonated treated, and non-treated kaolin.

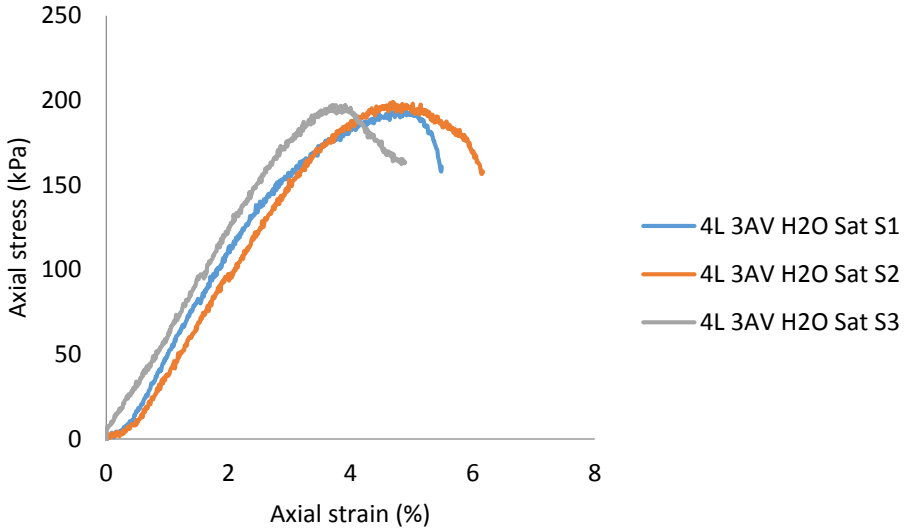


Figure E3.1: Stress-strain behaviour of water saturated non-carbonated treated kaolin at 4 % $Ca(OH)_2$ with 3 % air voids (4L 3AV) content.

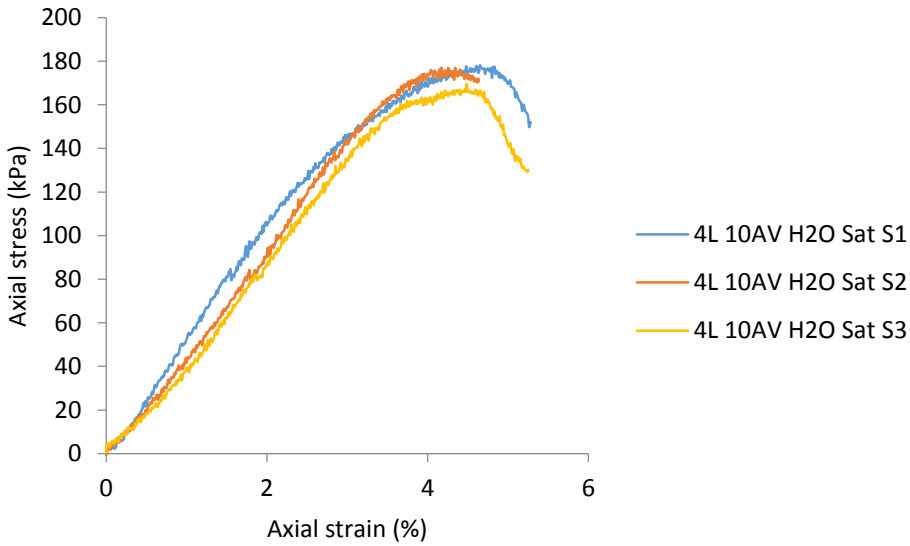


Figure E3.2: Stress-strain behaviour of water saturated non-carbonated treated kaolin at 4 % $Ca(OH)_2$ with 10 % air voids (4L 10AV) content.

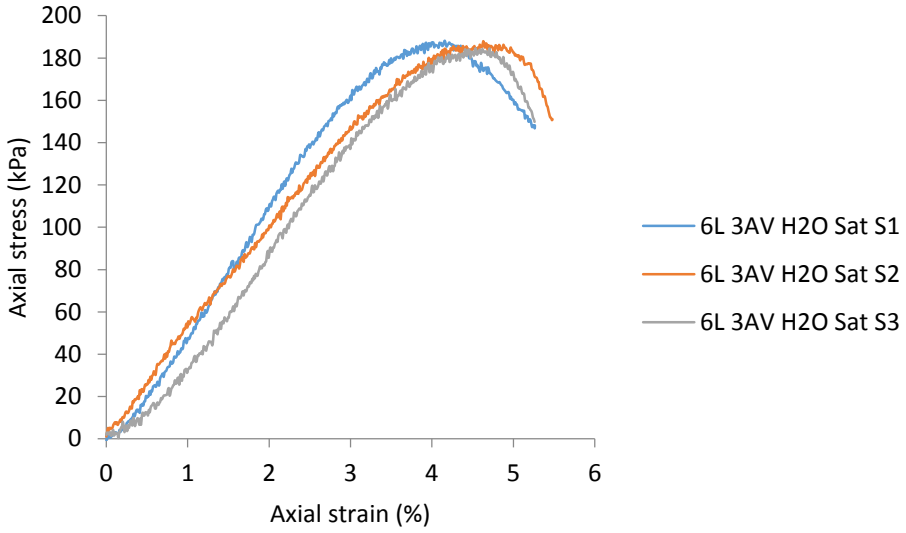


Figure E3.3: Stress-strain behaviour of water saturated non-carbonated treated kaolin at 6% $Ca(OH)_2$ with 3 % air voids (6L 3AV) content.

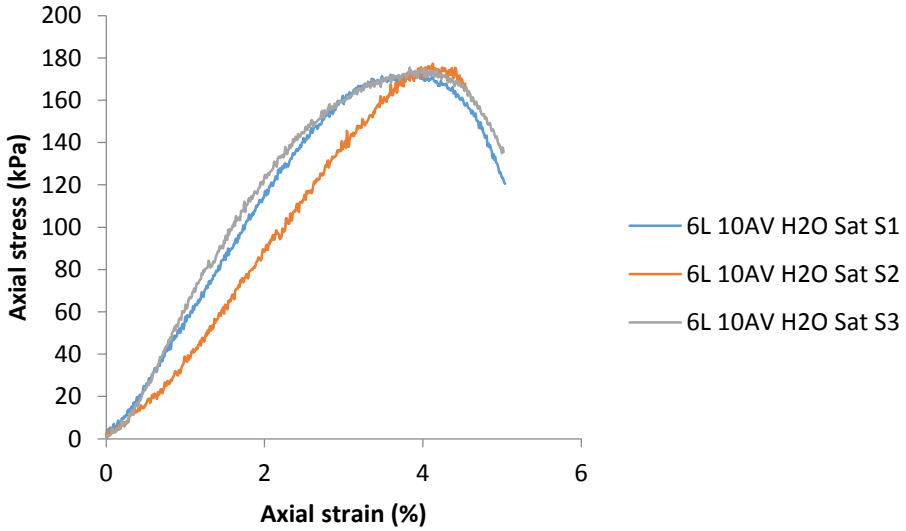


Figure E3.4: Stress-strain behaviour of water saturated non-carbonated treated kaolin at 6 % $Ca(OH)_2$ with 10 % air voids (6L 10AV) content.

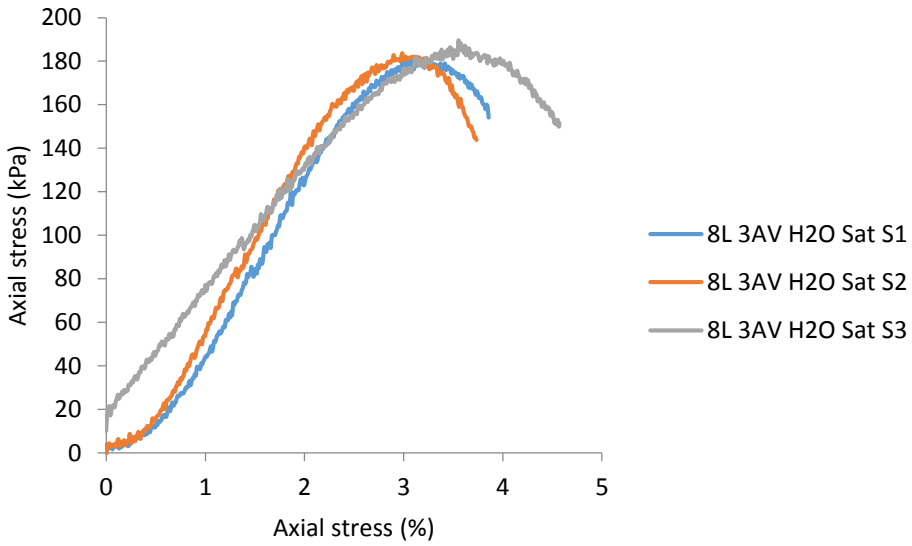


Figure E3.5: Stress-strain behaviour of water saturated non-carbonated treated kaolin at 8 % $Ca(OH)_2$ with 3 % air voids (8L 3AV) content.

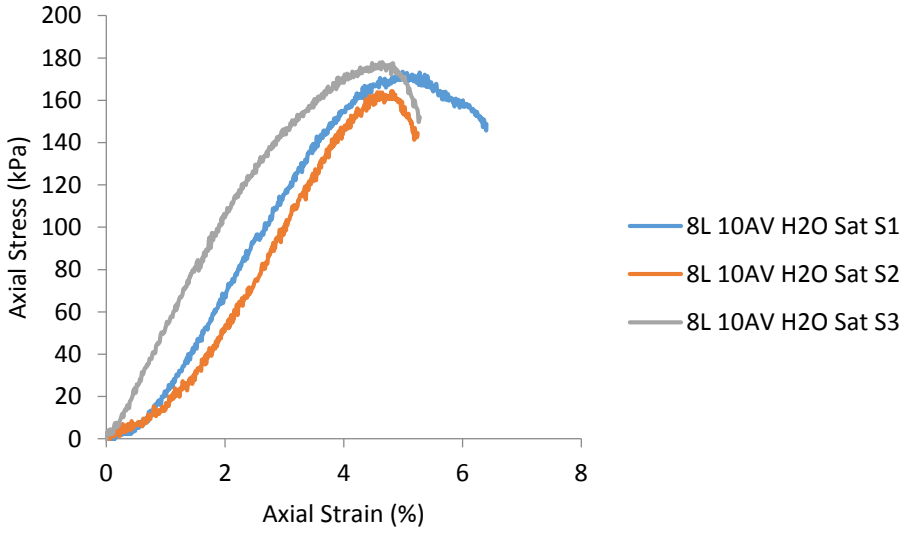


Figure E3.6: Stress-strain behaviour of water saturated non-carbonated treated kaolin at 8 % $Ca(OH)_2$ with 10 % air voids (8L 10AV) content.

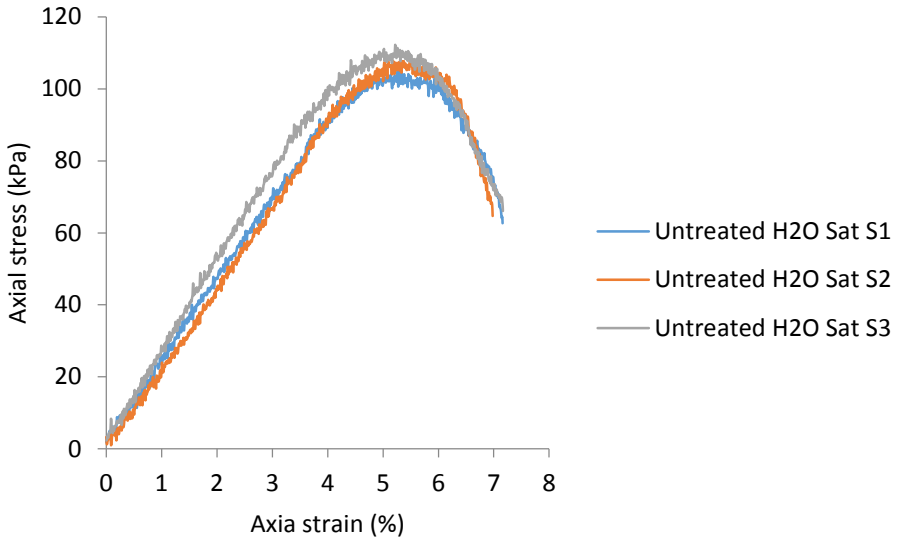
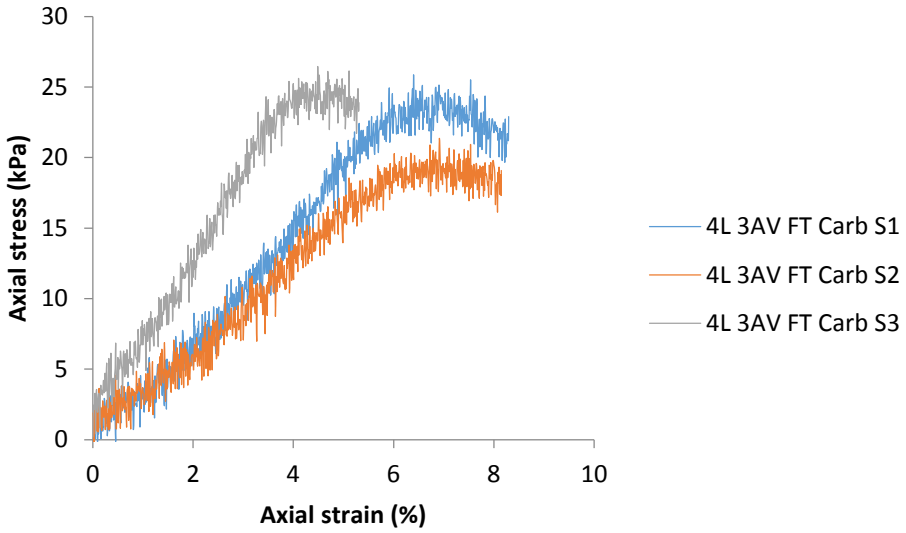
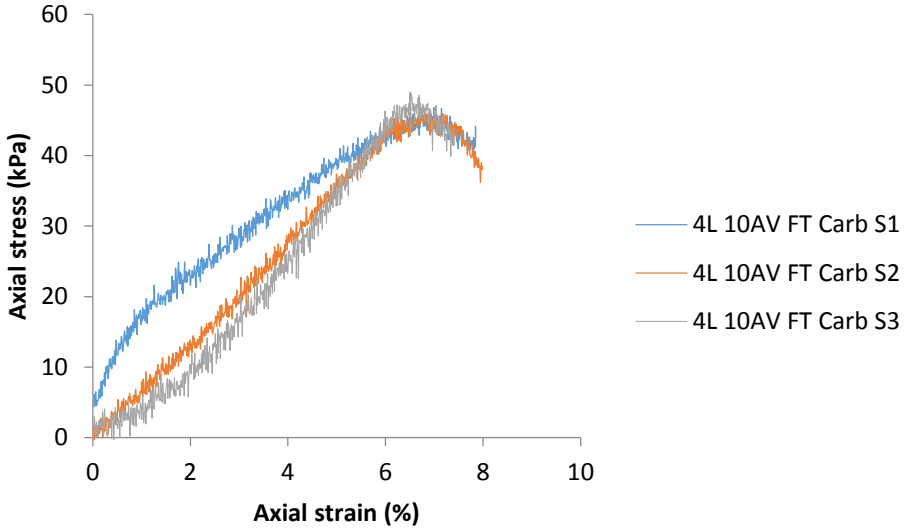


Figure E3.7: Stress-strain behaviour of water saturated non-treated kaolin.

E4: Stress-strain curves of carbonated treated kaolin after exposure to three freeze-thaw (FT) cycles.

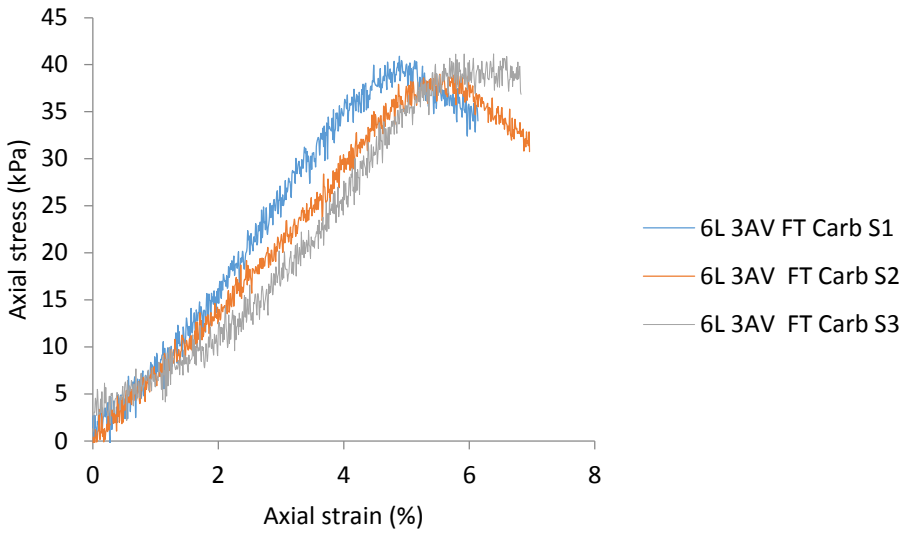


(a)

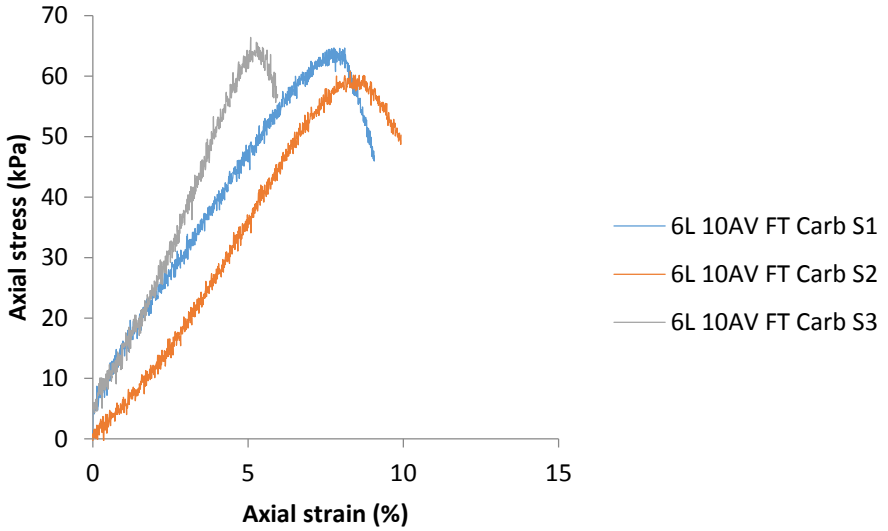


(b)

Figure E4.1: Stress-strain behaviour of carbonated treated kaolin after three freeze-thaw cycles obtained from specimen at: (a) 4L 3AV (4% $Ca(OH)_2$, 3% air voids) (b) 4L 10AV (4% $Ca(OH)_2$, 10% air voids).

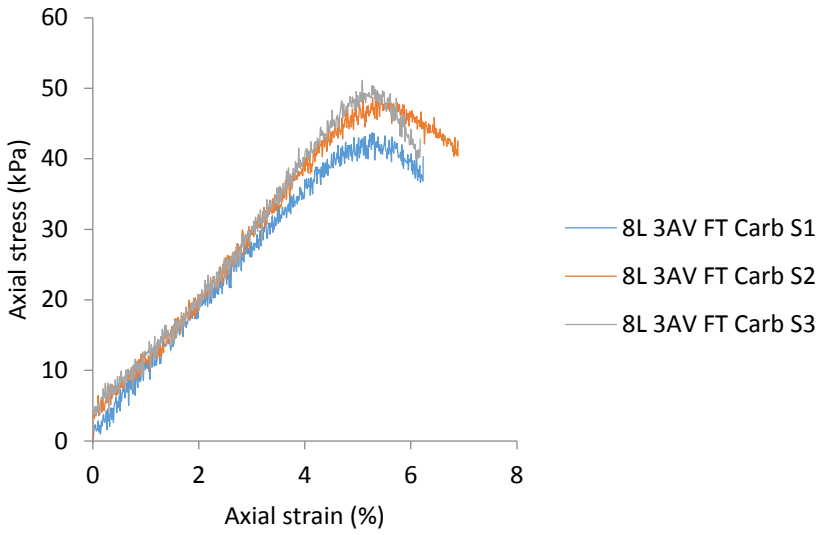


(a)

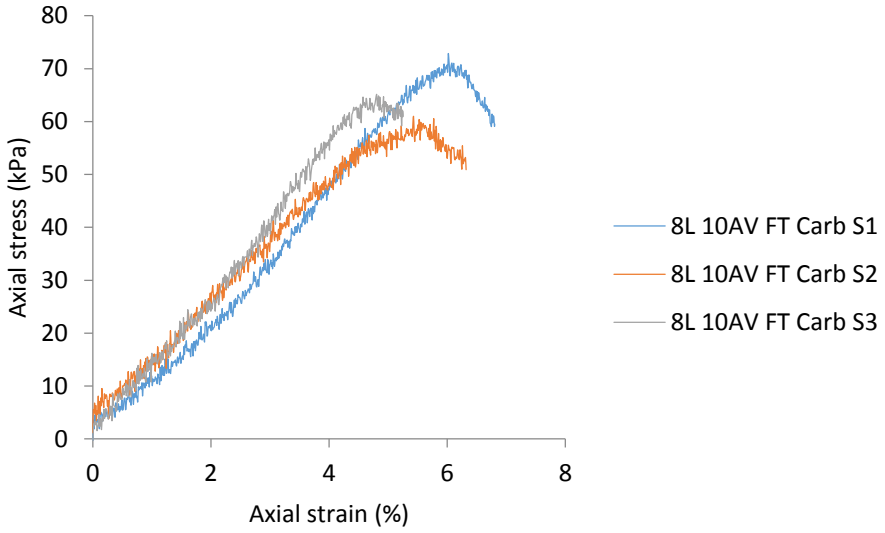


(b)

Figure E4.2: Stress-strain behaviour of carbonated treated kaolin after three freeze-thaw cycles obtained from specimen at: (a) 6L 3AV (6% $Ca(OH)_2$, 3% air voids) (b) 6L 10AV (6% $Ca(OH)_2$, 10% air voids).



(a)



(b)

Figure E4.3: Stress-strain behaviour of carbonated treated kaolin after three freeze-thaw cycles obtained from specimen at: (a) 8L 3AV (8% $Ca(OH)_2$, 3% air voids) (b) 8L 10AV (8% $Ca(OH)_2$, 10% air voids).