

# Electronic Supplementary Material

for

## Carbonation rate of alkali-activated concretes and high-volume SCM concretes: a literature data analysis of RILEM TC 281-CCC

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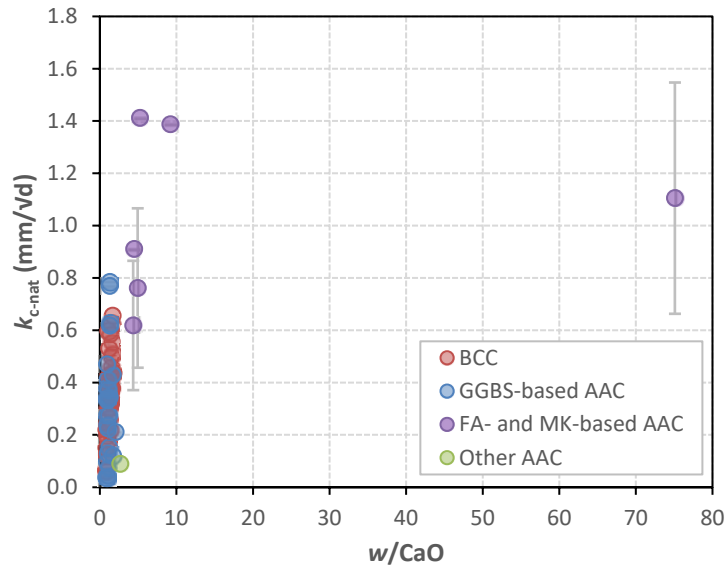
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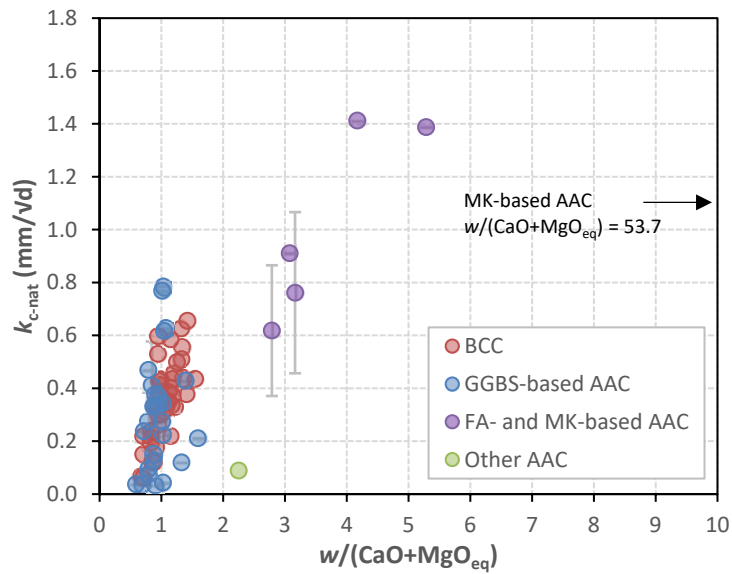
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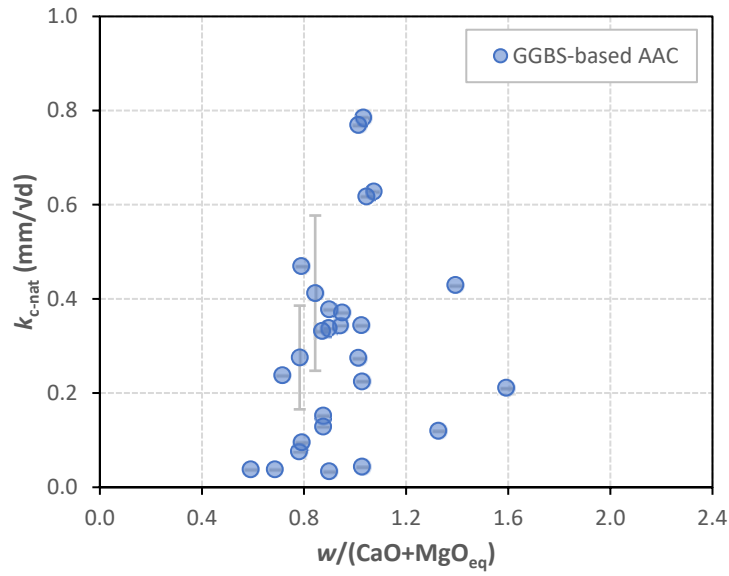
Supplementary Figures S1–S24



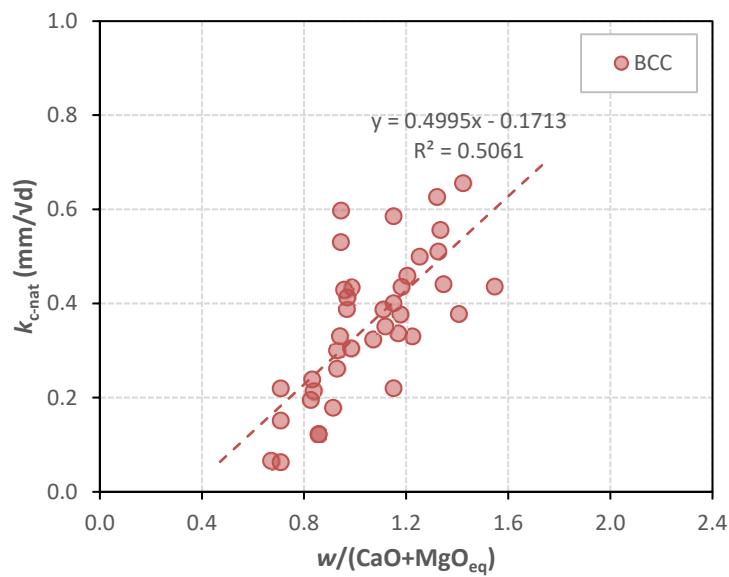
**Supplementary Figure S1.** Carbonation coefficients obtained under conditions approximating natural carbonation (in-door/sheltered) *versus*  $w/CaO$  ratio, including the data point for the MK-based AAC. *Error bars* represent the estimated standard deviations of the results obtained in the round robin testing programme by RILEM TC 247-DTA.



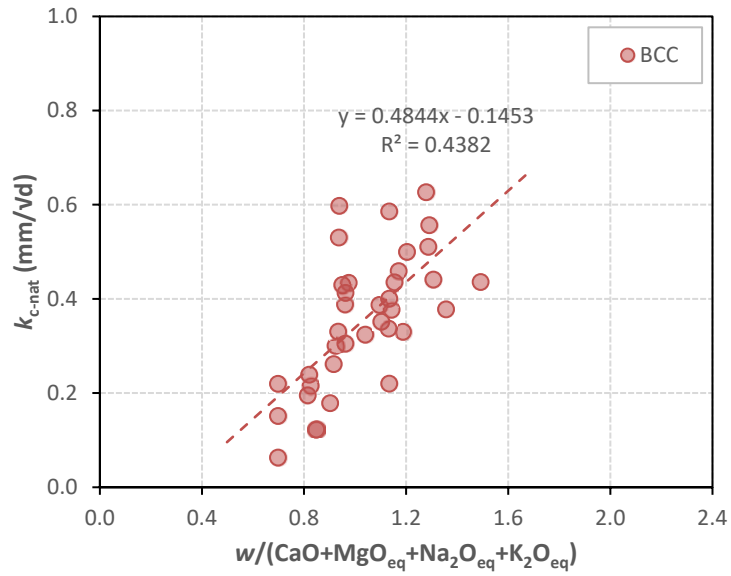
**Supplementary Figure S2.** Carbonation coefficients obtained under conditions approximating natural carbonation (in-door/sheltered) *versus*  $w/(CaO + MgO_{eq})$  ratio. *Error bars* represent the estimated standard deviations of the results obtained in the round robin testing programme by RILEM TC 247-DTA.



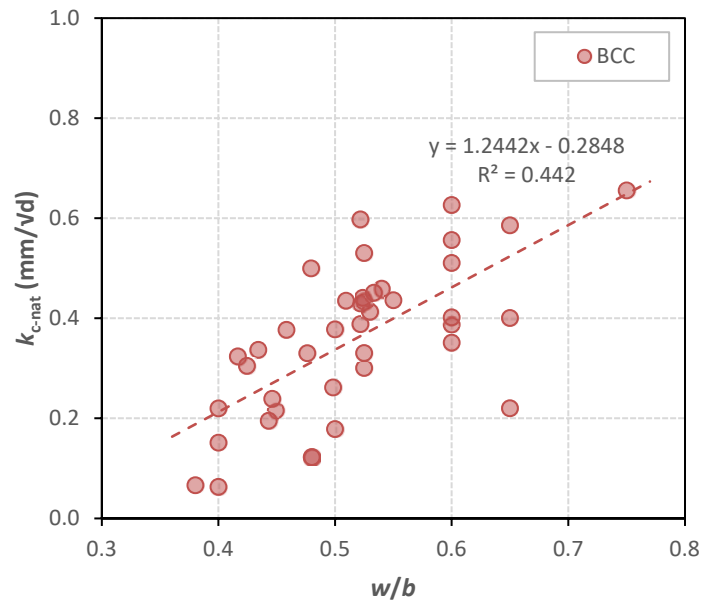
**Supplementary Figure S3.** Carbonation coefficients of the GGBS-based AAC obtained under conditions approximating natural carbonation (indoor/sheltered) *versus*  $w/(CaO + MgO_{eq})$  ratio. *Error bars* represent the estimated standard deviations of the results obtained in the round robin testing programme by RILEM TC 247-DTA.



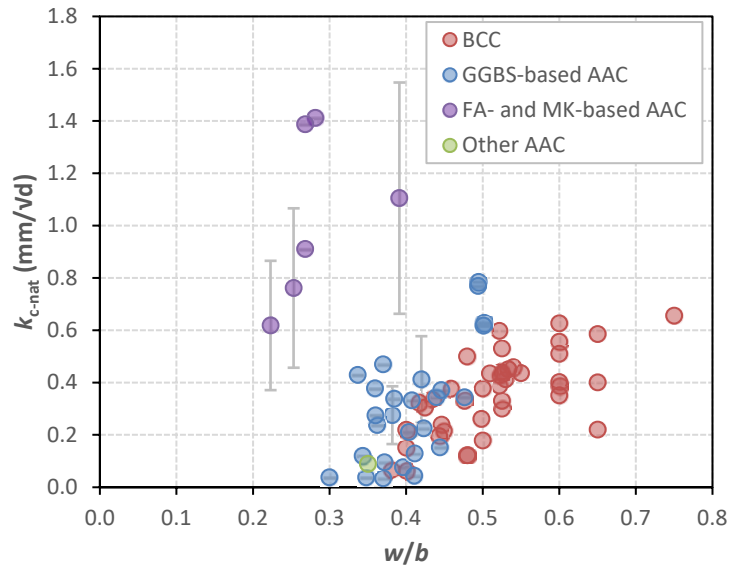
**Supplementary Figure S4.** Carbonation coefficients of the BCC obtained under conditions approximating natural carbonation (indoor/sheltered) *versus*  $w/(CaO + MgO_{eq})$  ratio.



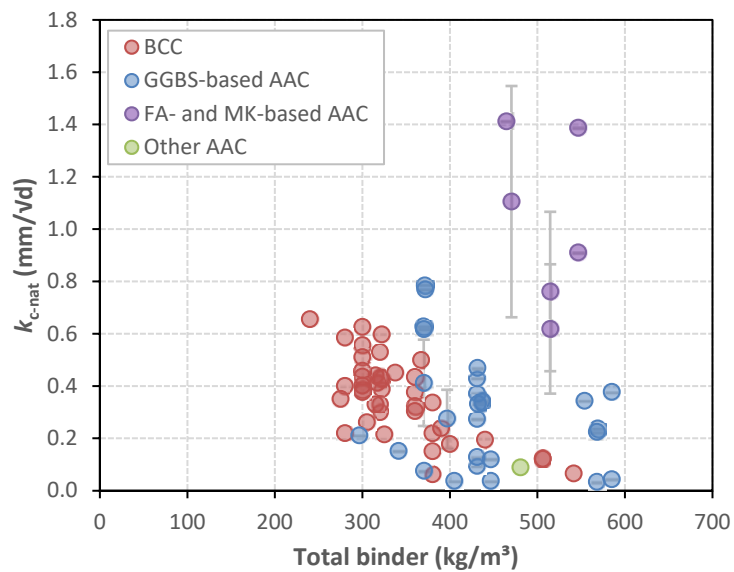
**Supplementary Figure S5.** Carbonation coefficients of the BCC obtained under conditions approximating natural carbonation (indoor/sheltered) *versus*  $w/(CaO + MgO_{eq} + Na_2O_{eq} + K_2O_{eq})$  ratio.



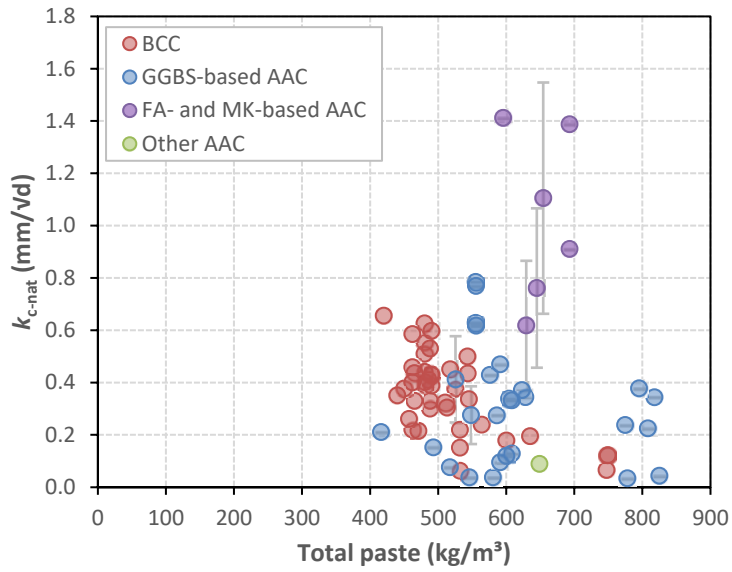
**Supplementary Figure S6.** Carbonation coefficients of the BCC obtained under conditions approximating natural carbonation (indoor/sheltered) *versus*  $w/b$  ratio.



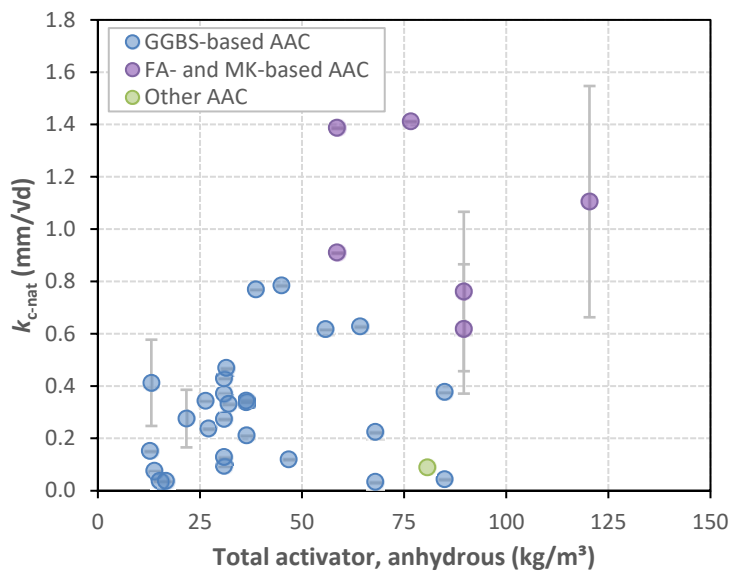
**Supplementary Figure S7.** Carbonation coefficients obtained under conditions approximating natural carbonation (indoor/sheltered) *versus*  $w/b$  ratio. *Error bars* represent the estimated standard deviations of the results obtained in the round robin testing programme by RILEM TC 247-DTA.



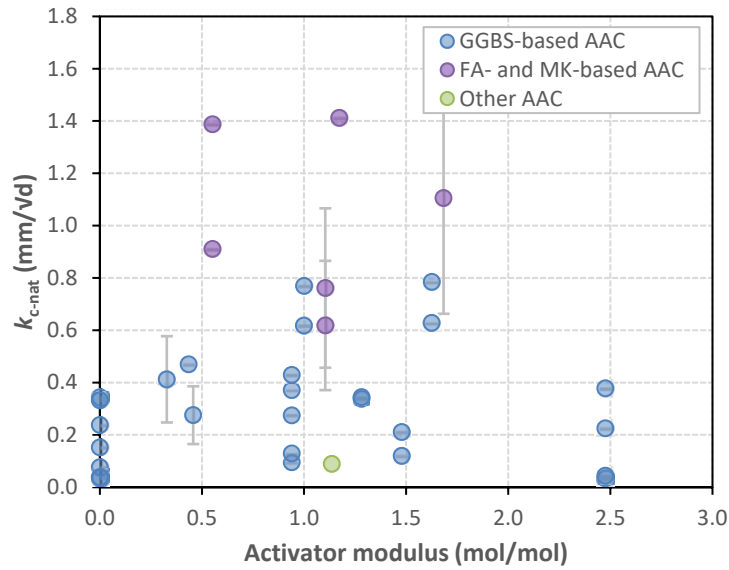
**Supplementary Figure S8.** Carbonation coefficients obtained under conditions approximating natural carbonation (indoor/sheltered) *versus* binder content. *Error bars* represent the estimated standard deviations of the results obtained in the round robin testing programme by RILEM TC 247-DTA.



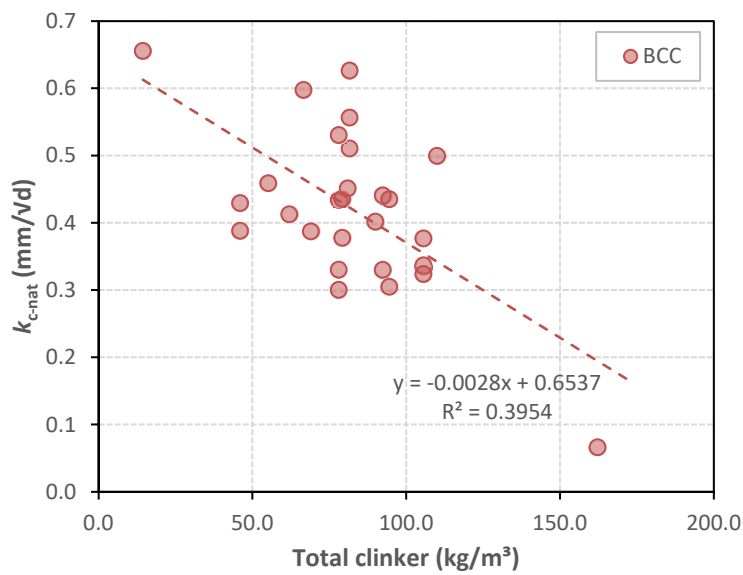
**Supplementary Figure S9.** Carbonation coefficients obtained under conditions approximating natural carbonation (indoor/sheltered) *versus* paste content. *Error bars* represent the estimated standard deviations of the results obtained in the round robin testing programme by RILEM TC 247-DTA.



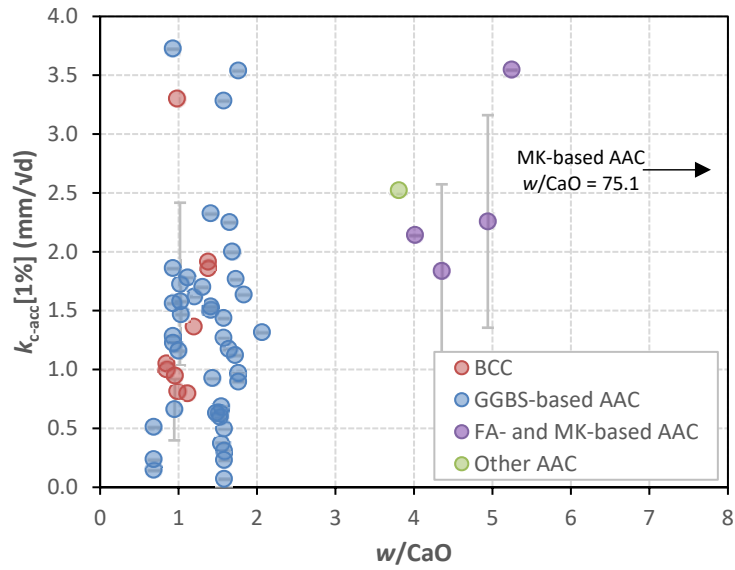
**Supplementary Figure S10.** Carbonation coefficients of the AAC obtained under conditions approximating natural carbonation (indoor/ sheltered) *versus* activator content. *Error bars* represent the estimated standard deviations of the results obtained in the round robin testing programme by RILEM TC 247-DTA.



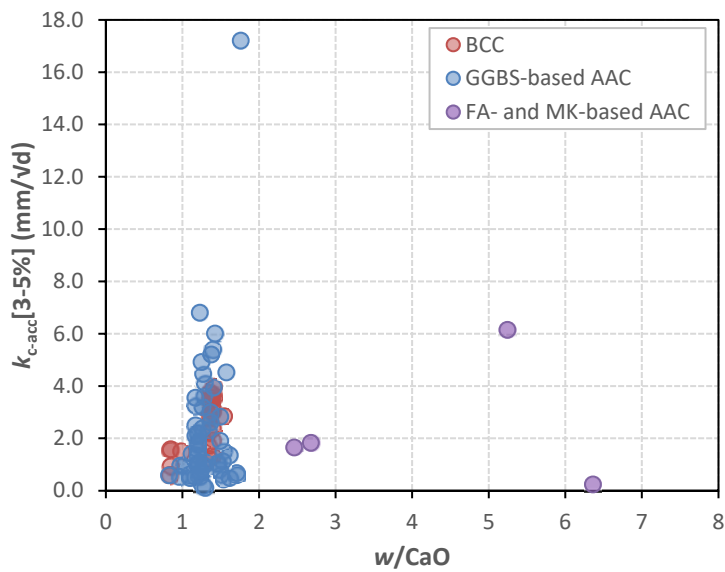
**Supplementary Figure S11.** Carbonation coefficients of the AAC obtained under conditions approximating natural carbonation (indoor/ sheltered) *versus* activator modulus (molar SiO<sub>2</sub>/M<sub>2</sub>O ratio). *Error bars* represent the estimated standard deviations of the results obtained in the round robin testing programme by RILEM TC 247-DTA.



**Supplementary Figure S12.** Carbonation coefficients of the BCC obtained under conditions approximating natural carbonation (indoor/sheltered) *versus* Portland clinker content.

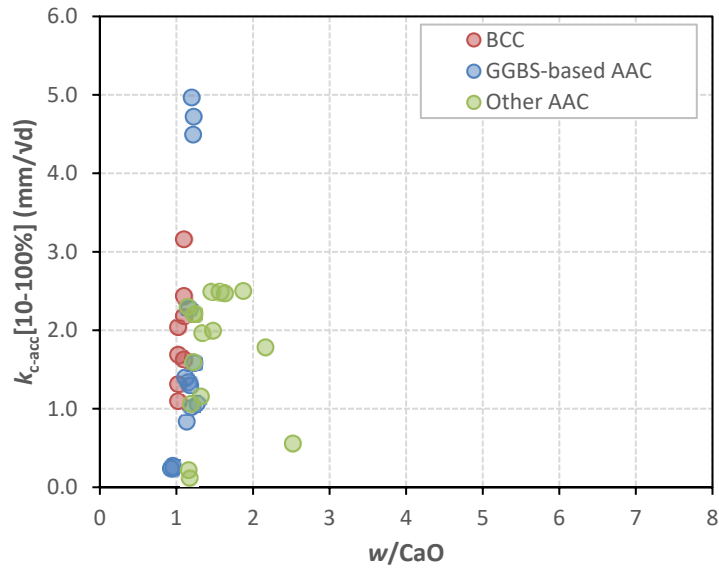


**Supplementary Figure S13.** Carbonation coefficients obtained with a  $CO_2$  concentration of 1 % (accelerated conditions) versus  $w/CaO$  ratio. Error bars represent the estimated standard deviations of the results obtained in the round robin testing programme by RILEM TC 247-DTA.

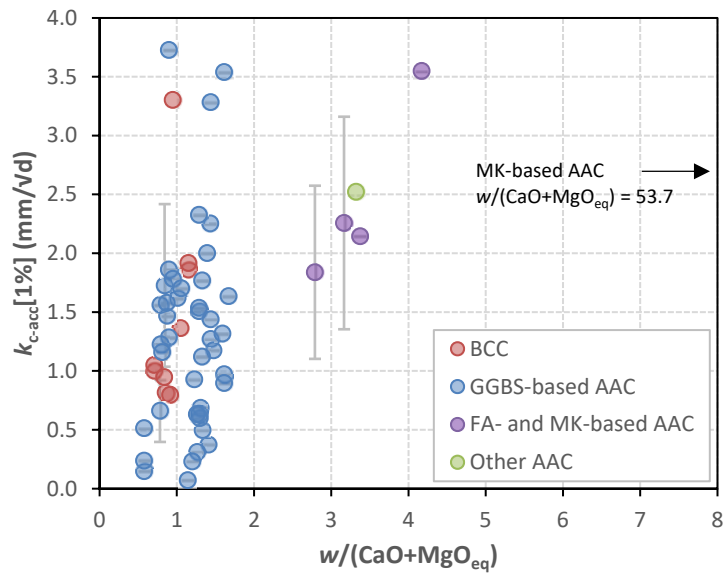


**Supplementary Figure S14.** Carbonation coefficients obtained with a  $CO_2$  concentration in the range 3–5 % (accelerated conditions) versus  $w/CaO$  ratio.

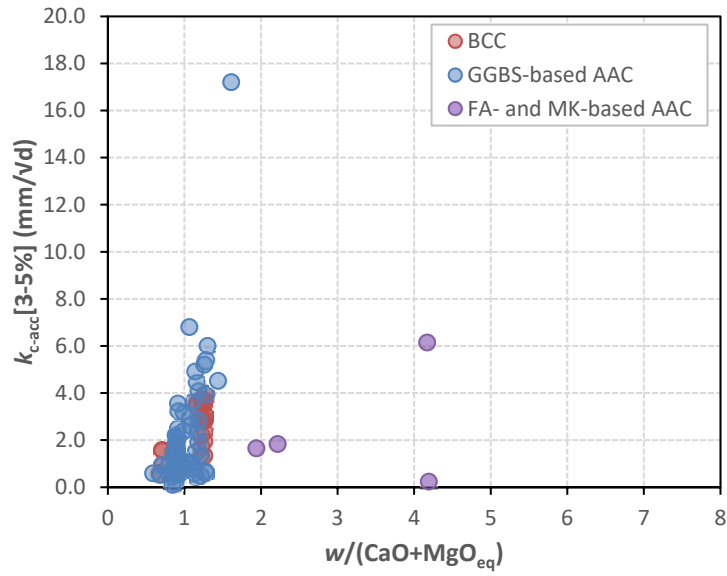




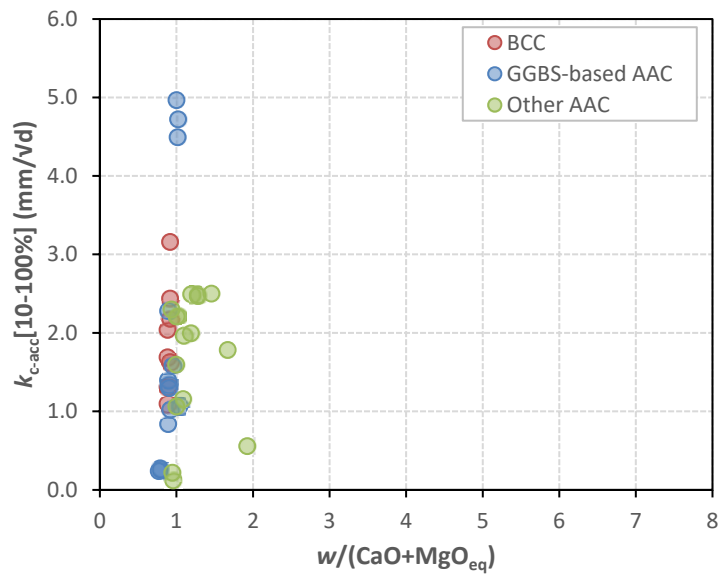
**Supplementary Figure S15.** Carbonation coefficients obtained with a  $CO_2$  concentration in the range 10–100 % (accelerated conditions) versus  $w/CaO$  ratio.



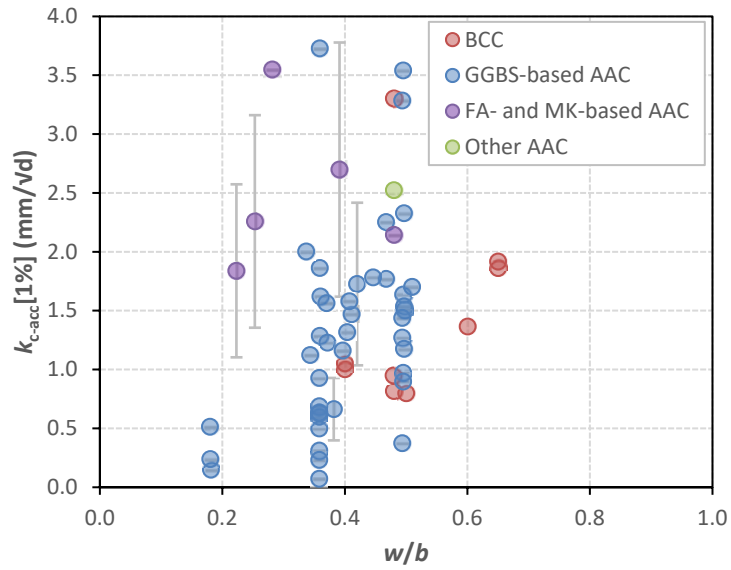
**Supplementary Figure S16.** Carbonation coefficients obtained with a  $CO_2$  concentration of 1 % (accelerated conditions) versus  $w/(CaO + MgO_{eq})$  ratio. Error bars represent the estimated standard deviations of the results obtained in the round robin testing programme by RILEM TC 247-DTA.



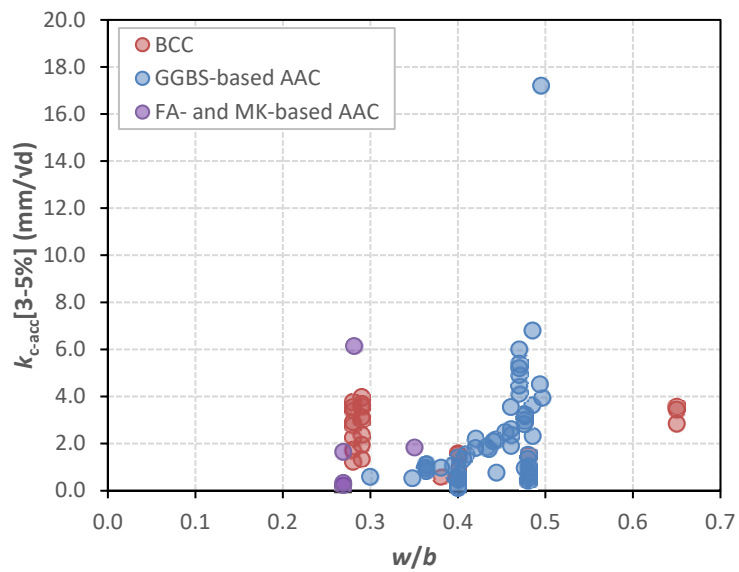
**Supplementary Figure S17.** Carbonation coefficients obtained with a CO<sub>2</sub> concentration in the range 3–5 % (accelerated conditions) *versus*  $w/(CaO + MgO_{eq})$  ratio.



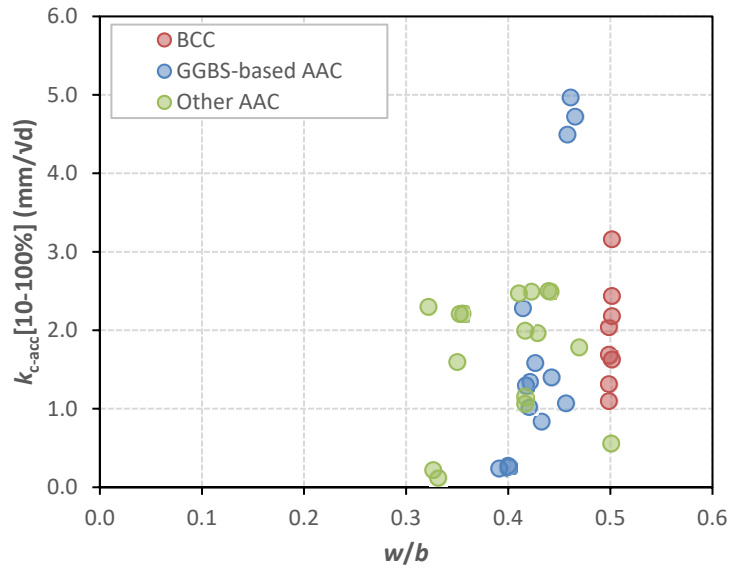
**Supplementary Figure S18.** Carbonation coefficients obtained with a CO<sub>2</sub> concentration in the range 10–100 % (accelerated conditions) *versus*  $w/(CaO + MgO_{eq})$  ratio.



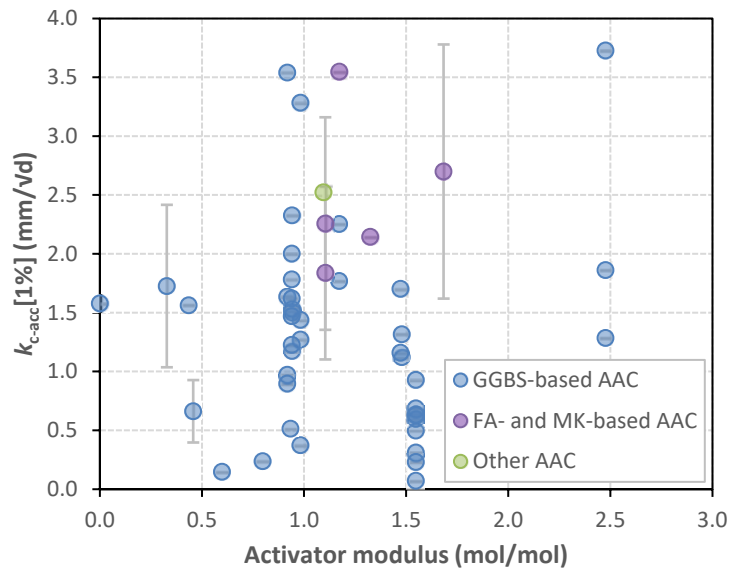
**Supplementary Figure S19.** Carbonation coefficients obtained with a  $\text{CO}_2$  concentration of 1 % (accelerated conditions) versus  $w/b$  ratio. Error bars represent the estimated standard deviations of the results obtained in the round robin testing programme by RILEM TC 247-DTA.



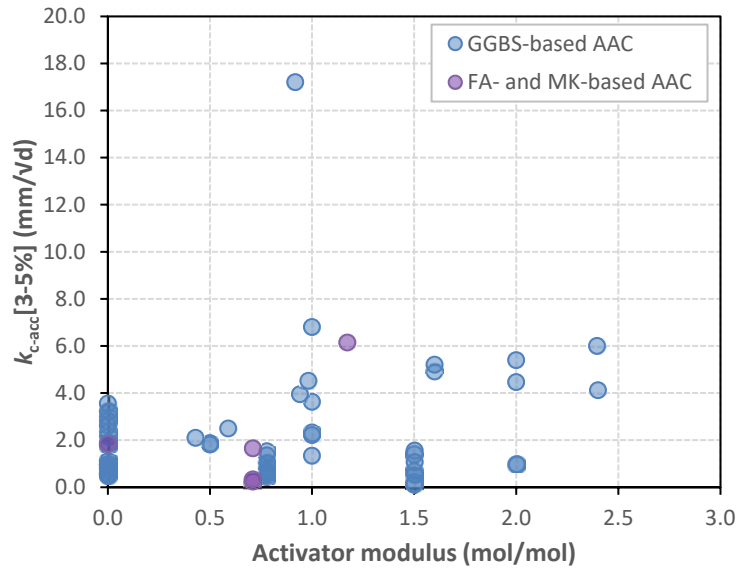
**Supplementary Figure S20.** Carbonation coefficients obtained with a  $\text{CO}_2$  concentration in the range 3–5 % (accelerated conditions) versus  $w/b$  ratio.



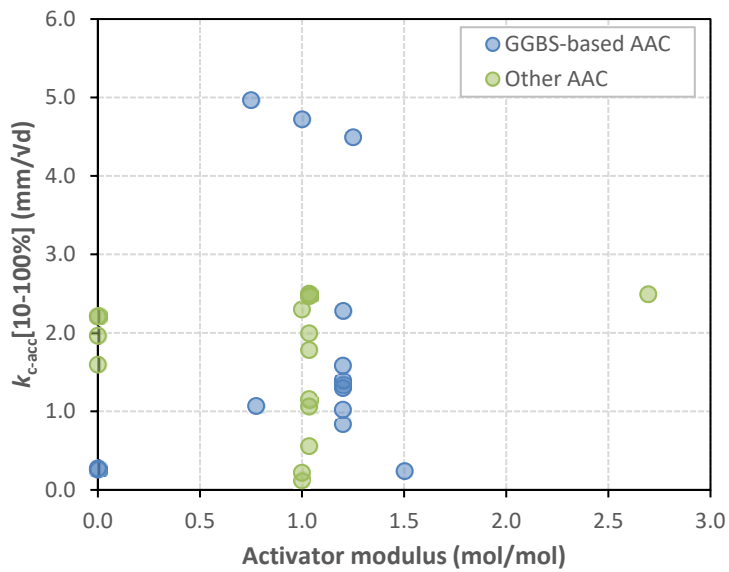
**Supplementary Figure S21.** Carbonation coefficients obtained with a CO<sub>2</sub> concentration in the range 10–100 % (accelerated conditions) versus w/b ratio.



**Supplementary Figure S22.** Carbonation coefficients obtained with a CO<sub>2</sub> concentration of 1 % (accelerated conditions) versus activator modulus (molar SiO<sub>2</sub>/M<sub>2</sub>O ratio). Error bars represent the estimated standard deviations of the results obtained in the round robin testing programme by RILEM TC 247-DTA.



**Supplementary Figure S23.** Carbonation coefficients obtained with a CO<sub>2</sub> concentration in the range 3–5 % (accelerated conditions) *versus* activator modulus (molar SiO<sub>2</sub>/M<sub>2</sub>O ratio).



**Supplementary Figure S24.** Carbonation coefficients obtained with a CO<sub>2</sub> concentration in the range 10–100 % (accelerated conditions) *versus* activator modulus (molar SiO<sub>2</sub>/M<sub>2</sub>O ratio).