



ECLIPS Newsletter - December 2016

Enhancing Concrete Life in Infrastructure through Phase Change Systems (ECLIPS)

ECLIPS' second technote and workshop

ECLIPS is a multi-national project carried out by Arizona State University and University of California Los Angeles (in the US), Swiss Federal Laboratories for Materials Science (Empa) in Switzerland, Technical University-Delft in Netherlands, and TECNALIA in Spain.

The project is funded through the Infravation grant, an initiative of the Conference of European Directors of Roads (CEDR) and coordinated by the Dutch Ministry of Infrastructure and the Environment.

Infravation brings together funding from the Netherlands, Denmark, France, Germany, Iceland, Israel, Italy, Norway, Spain, Sweden, USA and the EU into one common transnational Call framework, in order to fund joint research projects in road infrastructure innovation.

EUPAVE (European Concrete Paving Association) and ACPA (American Concrete Pavement Association) are in charge of the dissemination of the ECLIPS project and main outcomes.

ECLIPS is working on the incorporation of phase change materials with a suitable phase transition temperature, enthalpy of phase change and degree of dispersion in the concrete.



Click on the image to visit ECLIPS webpage

After the release of **ECLIPS' first technote** "Characterizing Cementitious Materials Containing Microencapsulated Phase Change Materials", the project wishes to focus on theoretical considerations of the **use of phase change materials (PCMs) to mitigate early age thermal cracking in concrete**.

This second technote deals with the use of microencapsulated PCMs in thermal crack mitigation.

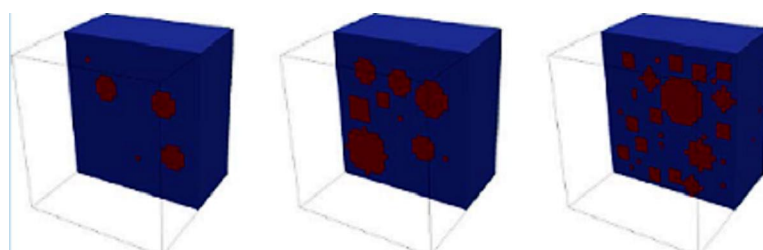


Figure 1: Cementitious material structures comprising PCM microcapsules (count in the middle to show PCM microcapsules) and cement paste with (PCM left to right) 10%, 20%, 30% microcapsules (shown in red) per volume. Blue represents the cement paste matrix.

The technical note also treats of the influence of PCM microcapsule addition and their thermal properties on hydration temperature rise in cement paste as well as the influence of PCM additions on the risk of early-age cracking.



Click on the image and read the technote online

Download the technote [here](#)



ECLIPS Workshop: Innovative Sustainable Concrete Pavements

Date: 23 March 2017 between **9.30 and 16.30**

Location: EUPAVE premises (Boulevard du Souverain, 68 1170 Brussels)

[Register here](#)

Find more information about the workshop and the project itself
on our special **ECLIPS webpage!**

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