



## ECLIPS Newsletter - November 2016

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

ECLIPS is a multi-national project 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.

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.



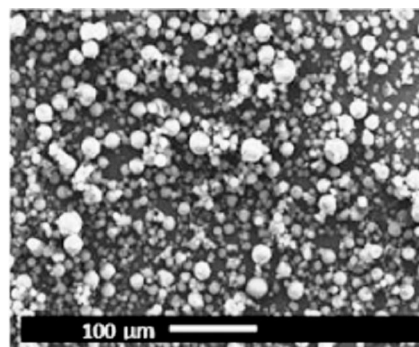
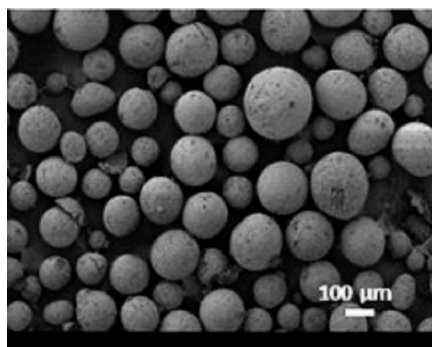
## ECLIPS

Enhancing Concrete Life in Infrastructure  
through Phase Change Systems

*Click on the image and find more details about the project and its main goals in our previous newsletter*

ECLIPS' **first technote**, "*Characterizing Cementitious Materials Containing Microencapsulated Phase Change Materials*", concerns microstructural and thermal characterization of cementitious systems containing Phase Change Materials (PCMs).

The technical note contains various type of information such as what PCMs are, methods to incorporate them in concrete and its benefits on concrete.



*Scanning electron micrograph of (a) PCM-E and (b) PCM-M*

PCMs have not only benefits in enhancing building energy efficiency, they also restrict the magnitude of thermal fatigue damage, and help limit the number and/or intensity of freeze-thaw cycles experienced by exposed concrete structures.

It also provides information concerning its dispersion in cement paste and its influence on cement hydration.



*Click on the image and read the technote online*

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Download the technote 1 [here](#)

For more information, visit <https://eclips.asu.edu/> or contact [eclips@asu.edu](mailto:eclips@asu.edu)