

EUPAVE Newsletter - June 2017

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

ECLIPS' third technote on "Encapsulation of phase change materials in silica microcapsules"

ECLIPS' third technote, "Encapsulation of phase change materials in silica microcapsules" concerns the use of phase change materials (PCMs) to reduce the thermal fluctuations.

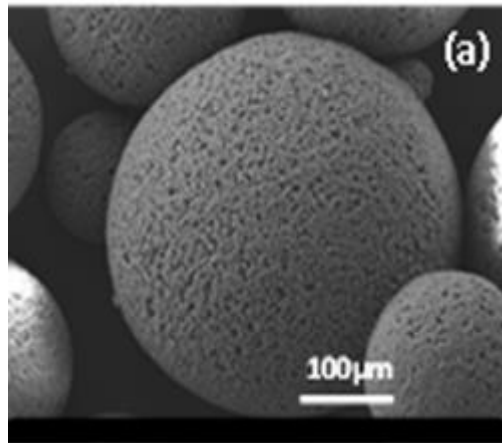


Figure 1: organic PCM encapsulated in a polymeric shell

The technote provides information concerning the selection of PCMs of suitable phase transition temperature. In this project, three PCMs have been chosen whose phase transition temperature is around the temperature at which the different damage occurs.

The document also deals with the sol-gel reaction combined with emulsion technique used in order to encapsulate the PCMs.



Click on the image to read the technote

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.



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