OBJECTIVE

REcircularPAV project aims to tailor for the first time engineered circular asphalt mixtures for road pavement materials

MAIN PILLARS

Going beyond bituminous asphalt mixtures: recycling, bio-based materials and end-of-life products;

Evaluating predicted performances: mechanical properties, ageing and sustainability.

WHAT IS?

"REngineering circular asphalt PAVements"

REcircular**PAV** is a training-through-research project aiming at engineering cost-effective circular asphalt mixtures for road pavement in a fossil fuel-free society, incorporating very high-content of reclaimed asphalt together with end-of-life tyres and bio-based materials.

REcircularPAV is a project developed at UNIPA that has received funding from the European Union's Horizon 2020 Programme under the Marie Skłodowska-Curie actions "Individual Fellowship" for research, technological development and demonstration, under grant n. 101033561.

In collaboration with EIFFAGE, UGR, TRS and RUB-LAB

REcircularPAV

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Towards circular asphalt mixtures - investigating road materials for a post fossil fuel society

ENGINEERING CIRCULAR ASPHALT MIXTURE

1 | Laboratory level

Reclaimed asphalt
+ Low-cost bio-binder
+ Crumb rubber

Binder and mixture design

2 | Plant and site level

Operational issues (manufacturing and laying)

End-user manual

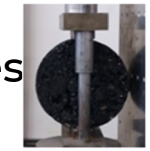
PREDICTED PERFORMANCE

3 | Ageing

Surface morphology and chemical investigation

Ageing through microstructural studies

4 | Bio-binder and mixture properties



Mechanical properties

5 | Environmental and economical sustainability

Sustainability assessment

HOW TO CONSTRUCT PAVEMENTS WITHOUT FOSSIL FUELS ?

The combined use of sustainable materials such as waste and bio-products along with reclaimed asphalt will allow the construction of pavements without the use of fossil fuels.

A joint effort between UNIPA, EIFFAGE and UGR and supporters will allow the development of a material that meets the requirements of the circular economy and the sustainability criteria for the road infrastructure construction.

DEVELOPED BY

UNIVERSITÀ DEGLI STUDI DI PALERMO

UNIVERSIDAD DE GRANADA

EIFFAGE

WITH THE SUPPORT

RUB-LAB circular asphalt & materials

trs TYRE RECYCLING SOLUTIONS

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