

CoolAsphalt – Total Recycling of Bituminous Mixtures with Waste Cooking Oil as a Rejuvenator

Summary

The CoolAsphalt project aims to develop an innovative concept of bituminous material for transport infrastructure pavements (road and rail), creating a differentiated product produced by a new process. The concept uses the recovery and reuse, as raw materials, of waste from end-of-life bituminous pavements and used cooking oil (OAU) to create a more economical and eco-efficient paving material compared to conventional solutions for bituminous pavement layers, ensuring adequate durability in most road and rail infrastructures. It is also intended to reduce energy consumption with the addition of organic waxes.

The innovative concept intends to establish a commercial and environmentally competitive technology (new product and new process)

that values, reuses and reduces the growing generation of bituminous waste coming from the demolition of layers of existing pavements, using the OAU, waste from the industry, as a rejuvenator of these materials. food and household.

The solution includes the total recycling of bituminous mixtures, not usual in the transport infrastructure market. Economic activity is very dependent on the good performance of those infrastructures, so it is crucial to implement adequate policies for the conservation and rehabilitation of transport infrastructures, using new solutions, in line with the principles of the circular economy and the efficient use of resources, reducing costs for the society and environmental impacts.

Project Reference

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Leading Institution

Instituto Politécnico de Coimbra (Portugal)

Partners

Construções JJR & Filhos, S.A. (Portugal), IST – Instituto Superior Técnico (Portugal), Centro Tecnológico da Cerâmica e do Vidro (Portugal)

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1 002 386.40€

CERIS

119 938.37€

Project Website

https://www.ipc.pt/ipc/wp-content/uploads/2022/03/Mod-409_Ficha-Projeto_CoolAsphalt-1.pdf