SOS-ASPHALT

Second chance sustainable. Asphalt containing tyre rubber manufactured at lower temperatures, reducing energy consumption, greenhouse gas emissions and fumes that are harmful to operators.

Contact information

Address: ETSI Caminos, Canales y Puertos -UPM, c/ Profesor Aranguren, 3, 28040, Madrid
Phone number: 910674024
Website: caminos.upm.es
Email: anamaria.rodriguezalloza@upm.es

Technological Offers type

Technological solutions

Research and innovation areas

- Climate, Energy and Mobility
- Industry, Materials and Circular Economy

ODS

Available from: 2020

Where?

Road Engineering R&D (RERD)

Keywords: | asphalt | Rubber

Brief description of the solution and the added value it delivers

End-of-life tyres pose a serious environmental, social and economic problem. For that reason, the Spanish Ministry of Development is currently drafting new regulations to give renewed impetus to the use of rubber in asphalt products for road building and repair. The new legislation states that mixtures including some technological innovation that succeeds in lowering the usual manufacturing temperature of such mixtures will be preferable. SOS-ASPHALT is a technological innovation involving rubber mixtures manufactured at around 25 to 30°C less than a conventional rubber mixture. SOS-ASPHALT mixtures offer good mechanical performance, consume less energy from fossil fuels and reduce greenhouse gas emissions. Furthermore, less fumes that could be harmful to the operators are given off, improving occupational risk prevention.

Description of the technological basis

By adding organic waxes to the rubber mixture, it is possible to reduce the manufacturing temperature in the asphalt plant, as well as the asphalt laying temperature. This results in reduced energy consumption and greenhouse gas emissions, without affecting the mechanical properties of these mixtures. SOS-ASPHALT is a breakthrough because it improves existing rubber mixtures by adapting them to the new recommendations of the forthcoming regulations to be published by the Ministry of Development. By making use of waste products (circular economy) and saving energy, mixtures of this kind will be chosen in tender processes over conventional solutions, and their integrated nature makes them easy to use in any setting.