



# EME2



In a New Zealand first Road Science can now manufacture EME2 structural asphalt mixes.

EME2 is a high modulus asphalt developed in France over 30 years ago. It was created to build stronger, longer lasting pavements. In France, EME is typically used in heavy duty pavements for high traffic roads and in complex stress scenarios - such as roundabouts.

A standard asphalt mix relies on good aggregate interlock to ensure it possesses sufficient rut resistance. This is adequate for moderately stressed pavements, however the stiffness of the bitumen (typically 60/70) is not sufficient for heavy duty pavements. EME technology employs a very hard bitumen grade, typically 15/25 pen, which gives EME superior performance in heavy duty pavements.

Properties:



HOT

Helps to resolve these problems:



RUTTING

## Benefits:

Can reduce structural asphalt thicknesses by 30% to 50% (for more information see pavement design document)

Greatly increases the service life of the pavement

Increased fatigue resistance, by increased binder content, which counter-acts the high bitumen stiffness

Superior rut resistance, achieved by the high binder stiffness

Performance based mix design, (as opposed to volumetric Marshall mix design) has set requirements for:

Workability

Durability (moisture sensitivity)

Stiffness

## Habitat



Roundabouts Interactions



Port



Airport



Industrial

## Application of EME2

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EME technology is designed to provide highly rut resistance pavements. EME has been successful in the following situations:

In airport pavements it has been shown to withstand the increased loading of the new A380 Airbus wide bodied jet aircraft.

It has allowed the increase in maximum axle loadings to 13 tonnes in France, as compared with 8 tonnes in NZ.

## Where would you use EME2?

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RS EME2 can be used for the following:

- Heavy duty asphalt pavements
- Airports, ports and industrial yards
- Bus stops and bus lanes
- Places where high rut resistance and shear resistance is required - roundabouts, approaches

RS EME2 is not applicable as a wearing course.

For more information see the EME pavement design document.

## Innovation is at the heart of everything we do...

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Road Science asphalt products utilise Road Science bituminous binders. Road Science is New Zealand's leading designer and supplier of advanced bituminous products, manufactured and supplied from state-of-the-art facilities throughout New Zealand.

Road Science's commitment to research and development means that asphalt products are designed using the most up to date testing equipment available in New Zealand.

The Road Science Pavement Design Team provide innovative, specialised pavement design solutions for all civil projects. This group of specialist people are committed to providing cost effective solutions for whole-of-life project value.

## Te Rapa Wairere Drive EME2 site

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Before



After



Images show SMA surface on top of EME2 structural asphalt.

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