



Introducing LEA® Process Technology





Sustainable Roads
...vision to reality

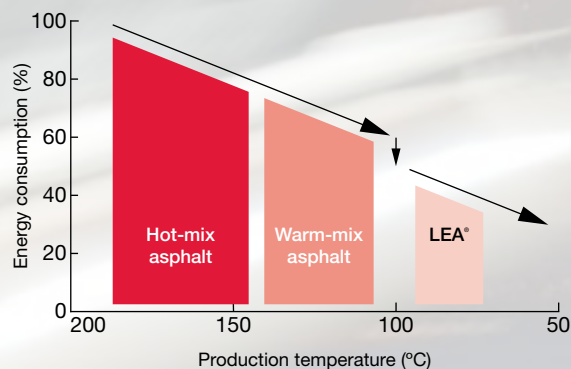


LEA

Process
Technology



Dramatically reduces energy consumption and green house gases by up to 50%



Proven Process

- Proven LEA® low energy process technology.
- Over 0.5 million tonnes laid since 2005 on major contracts across Europe and USA including motorways e.g.



- A41 in Chambéry, France (1,000 tonnes including PMB surface course)



- RD612 in Montpellier, France. (33,000 tonnes including EME base and binder course)



- Route 96B, New York State DoT, USA (17,500 tonnes).

Benefits

- Dramatically reduces energy consumption and green house gases by up to 50%
- Reduced application temperatures mean improved health and safety for laying crew and general public
- Material properties that are equivalent to those of hot-mix asphalt
- Reduced binder ageing compared to hot-mix asphalt
- Majority of standard and proprietary materials can be made using LEA process technology
- Can be used in all road layers from base to surface course and on all categories of highway including motorways
- Laid through standard paving equipment and rolled using conventional rollers
- Rapid stability of laid and compacted pavement for early trafficking
- LEA process technology enables asphalt to be available at no extra cost.

Proven award winning technology for innovation.



Low Energy Asphalt delivering green innovation



LEA® process technology is already enabling more sustainable road construction around the world and now also in the UK. For clients and asphalt producers it means delivering on carbon and energy reduction targets without having to increase costs.

Over 0.5 million tonnes of LEA mixtures laid across Europe and USA in all road layers including EME Base, Binder Course and PMB Surface Course from motorways to non-trunk roads under different climatic conditions and in areas that experience both extremes of hot and cold weather conditions e.g. French Alpine region and NY State, USA.

Products manufactured by the process are not proprietary and can be marketed and procured competitively as a direct replacement for standard asphalts meeting existing asphalt specifications.

Nevertheless, proprietary branded asphalts can also be produced as well as standard asphalts and in both cases the producer uses the existing binder type.

A key advantage is the ability to switch between LEA mixtures and conventional hot asphalts using existing plant without incurring production downtime. This is essential for producers whilst the market for conventional hot asphalt transitions to more sustainable materials.

Significantly, recycling of up to 50% asphalt planings (RAP) is also enabled without the need to superheat the aggregate thus providing further energy efficiency.

In the UK, Local Authority clients are beginning to switch to materials using the LEA process. Enterprise Staffordshire contracting staff commented: ***“It’s just like using our conventional material but with improved visibility and without the smell”.***

Technical Data

Typical properties of AC 20 dense bin materials tested to the Specification for Highway Works clause 929

Property	Units	Method	LEA	Spec.
Air Voids	%	EN12697-8	3.7	0.5 - 7.0
Indirect Tensile Stiffness Modulus	GPa	EN12697-26	3.0	>1.8
Deformation Resistance at 60°C	mm/hr	BS598:110	3.6	<5.0
	mm	BS598:110	3.9	<7.0

“Using LEA presents no engineering risk to Enterprise Staffordshire Highways, so we see no reason why we shouldn’t use it across our network”.

Phil Cartmail, Laboratory Testing Manager for Enterprise Staffordshire Highways.

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