

# **ULTIPAVE**

## *SINGLE LAYER*

The ultimate solution for faster completion  
and carbon footprint reduction

AVAILABLE WITH  
**ULTILOW**  
TECHNOLOGY



With **ULTIPAVE SINGLE LAYER** both the surface and binder courses can be replaced in a single pass, halving construction time.

When busy roads need to be resurfaced, time is critical. Dual layer reconstruction can mean prolonged road closures, while unexpected sub surface conditions can lead to further delays and mounting costs.

In recognition of this, Tarmac has developed a versatile 20mm SMA based asphalt, designed to replace surface and regulating or binder courses in a single pass. This can reduce overall project costs, as well as project delivery times and also minimise disruption for road users.

Tarmac **ULTIPAVE SINGLE LAYER** is a versatile road resurfacing solution that allows deeper reconstruction in a single pass.

**ULTIPAVE SINGLE LAYER** has excellent load bearing capability and maintains its surface texture even on heavily trafficked routes. This makes it suitable for resurfacing all types of roads, from motorways and trunk roads to rural roads and residential streets.

**ULTIMATE  
SOLUTIONS**

# ULTIMATE RESULTS

## Faster completion

Single pass construction significantly reduces construction times, minimising costs and disruption for clients and end users.

## Improved sustainability

Improves sustainability and helps conserve scarce resources by spreading demand from the commonly used 14mm and 10mm SMAs and reducing waste from processing.

## Ultimate versatility

BBA approved for use between 50-75mm, however, frequently used at depths up to 100mm, to resurface a wide range of roads from motorways and trunk roads to rural roads and residential streets.

## Improved finish

Better heat retention within a deeper single course improves joints and allows better compaction.

## Excellent durability

Using a 20mm nominal size high PSV aggregate, ULTIPAVE SINGLE LAYER offers comparable surface texture and deformation resistance to a 14mm SMA surface course whilst providing the additional benefits of lower voids and higher stiffness.

## Proven performance

BBA / HAPAS approved since 2005, ULTIPAVE SINGLE LAYER has been proven to deliver lasting performance on heavily trafficked routes.

## HOW IT WORKS

*Using Tarmac's unrivalled experience in developing high performance asphalts, ULTIPAVE SINGLE LAYER has been designed to allow fast, effective resurfacing of roads and deliver outstanding long term durability.*

### Faster construction and improved finish

As well as saving time, single layer resurfacing has a number of advantages that help to improve the quality of the finished surface.

The thicker layer improves heat retention during surfacing, which helps to maintain workability over a longer period which leads to better compaction and lower voids in the completed asphalt structure. It also provides greater resilience to adverse weather conditions during construction. In addition a single layer approach eliminates the need for bond coat application between layers, thereby saving time and associated bond coat costs, as well as removing potential issues with later life delamination between layers.

Use on the UK's Strategic Road Network has proven that ULTIPAVE SINGLE LAYER can match the long term performance of conventional multi layer resurfacing, while delivering impressive savings in time and cost.

### Ultimate versatility

As urban road networks evolve to meet the growing demands of higher traffic volumes, existing sub-layers often prove to be inadequate. Where dual-layer reconstruction is required, it can be time consuming and expensive, leading to significant delays and rising costs.

ULTIPAVE SINGLE LAYER allows reconstruction to be completed within a similar timescale to simple replacement of the surface course. It also saves time when carrying out carriageway repairs by replacing a conventional regulating layer and thin surface course in a single pass. This means that where time constraints are a key issue, programmes can remain on schedule or be reduced.

# PROVEN PERFORMANCE



## *M65, Junction 7 to 8*

### CHALLENGE

The existing surface was suffering from deformation and required remedial action. Like any other major highway project, this would involve significant costs and significant delays to motorists.

### SOLUTION

Originally the client had considered conventional dual-layer reconstruction of the carriageway with a 30mm surface course over a 30mm regulating layer. ULTIPAVE SINGLE LAYER was chosen as a single 60mm course, offering the required performance characteristics as well as a reduction in programme length.

### RESULT

The selection of ULTIPAVE SINGLE LAYER saved an estimated ten days on the project time and around £155k in both direct and associated costs.

## *Derbyshire County Council Housing estate*

### CHALLENGE

What was originally planned as a 40mm plane out and resurfacing, soon escalated into a more costly and time consuming project, when planing revealed old sandstone just beneath the existing worn surface course

### SOLUTION

Normally the solution would have been to plane down to 100mm and inform the local residents that they would be inconvenienced for 6 days instead of the previously indicated 3 days. However, instead of this unbudgeted expensive option and the obvious negative PR impact, Derbyshire opted for the ULTIPAVE SINGLE LAYER solution which was applied in one 75mm layer.

### RESULT

Single layer construction meant that the client was able to keep to their original schedule and avoid spiralling reconstruction costs. As a result the project was completed on time, with minimal disruption to local residents.

#### **ULTIMATE SPEED**

Single pass construction significantly reduces construction time.

#### **ULTIMATE STRENGTH**

Lower voids and higher stiffness, provide greater durability.



## EXPERT ADVICE AND SUPPORT

## TYPICAL APPLICATIONS

ULTIPAVE SINGLE LAYER is a versatile 20mm SMA based asphalt with 40/60 pen binder designed for deeper single layer road reconstruction. It is BBA approved for use between 50-75mm, but can be used at depths of up to 100mm while maintaining workability and achieving high density and compaction in the finished course.

The enhanced stiffness of this product compared to a conventional binder course / thin surface course approach, provides excellent load bearing capability and deformation resistance even on heavily trafficked routes.

These characteristics make it a highly versatile solution, suitable for resurfacing a wide range of roads from motorways and trunk roads to rural roads and residential streets.

ULTIPAVE SINGLE LAYER is also available with ULTILOW binder technology, for improved sustainability, better on-site visibility, shorter programme times and earlier reopening to traffic. Ask your local Tarmac representative for details.

### TECHNICAL DATA

ULTIPAVE SINGLE LAYER	Typical Air Voids	Typical Stiffness (ITSM)	Typical Wheel Tracking	
			WTS <sub>AIR</sub>	PRD <sub>AIR</sub>
Relevant standard	BS EN 12697-8	BS EN 12697-26	BS EN 12697-22 Proc. B at 60°C	
ULTIPAVE SINGLE LAYER	3.0%	4300MPa	0.15mm/10 <sup>3</sup> load cycles	8.8%
10mm ULTIPAVE	4.0%	3400MPa	0.19mm/10 <sup>3</sup> load cycles	10.0%
14mm ULTIPAVE	3.5%	3500MPa	0.16mm/10 <sup>3</sup> load cycles	8.8%
AC 20 Dense Bin 40/60	4.5%	4500MPa	0.40mm/10 <sup>3</sup> load cycles	8.0%

## OUR SUPPORT

### FAQs

#### *Where can I use ULTIPAVE SINGLE LAYER?*

ULTIPAVE SINGLE LAYER has been used with excellent results on all types of roads from large motorways and trunk roads to rural and local estate roads.

#### *What are the skid resistance properties of ULTIPAVE SINGLE LAYER?*

ULTIPAVE SINGLE LAYER utilises the required high PSV aggregate and matches the performance characteristics of the frequently used 14mm SMAs. For braking areas around junctions we would recommend ULTIGRIP our specialist skid resisting surface.

#### *How does ULTIPAVE SINGLE LAYER save time?*

Because ULTIPAVE SINGLE LAYER is constructed in a single course, it can be laid quickly in one pass, reducing construction time and disruption to road users.

#### *Why is ULTIPAVE SINGLE LAYER more sustainable?*

Using larger nominal aggregate sizes reduces time on site and aggregate production processing which in turn reduces energy consumption and waste. It also helps conserve scarce resources.

#### *How does ULTIPAVE SINGLE LAYER save money?*

Shorter construction times mean significant cost savings relating to plant and labour on site, but also indirect costs like traffic management.

#### *Can I use ULTIPAVE SINGLE LAYER for car parks?*

For single pass surfacing of car parks we would recommend Tarmac ULTIFASTPAVE. For smaller car parks and driveways ULTIDRIVE or ULTIDRIVE POROUS offer potential alternative options.

#### *How is the quality of the finish improved?*

Increased thickness of layer improves heat retention which allows more time to match or avoid joints.

#### *Who can install ULTIPAVE SINGLE LAYER?*

At Tarmac, technical excellence comes as standard. ULTIPAVE SINGLE LAYER is only available for installation by accredited contractors who have full access to our expert training, advice and technical support or by our own expert Contracting division. This ensures it is laid to the highest industry standards.



## MORE ANSWERS

For more information about Tarmac ULTIPAVE SINGLE LAYER contact your local regional office or visit [tarmac.com](http://tarmac.com)

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