





planning requirements.

ULTIDRIVE POROUS is available as a 6mm or a 10mm surface course and a 20mm and 32mm binder course providing effective drainage, whilst maintaining long term durability.

# SOLUTIONS

# **ULTIMATE RESULTS**

#### **Proven performance**

Using the latest Porous Asphalt technology and a modified binder, the open aggregate structure allows effective drainage and ensures no surface water ponding.

#### **Faster completion**

When used with a porous receiving course, ULTIDRIVE POROUS avoids the need for expensive additional drainage, thereby allowing quicker project delivery and reduced disruption to clients and end users.

#### **Enhanced compliance**

The porous structure acts as a short term reservoir for rainwater and reduces direct surface water run-off to meet the requirements of planning regulations and the Code for Sustainable Homes.

#### **Ultimate solutions**

Available as a porous surface and binder course for driveways and car parks. When combined with the Tarmac ULTIFLOW range of drainage aggregates, ULTIDRIVE POROUS offers a complete sustainable drainage solution.

#### Improved safety

Excellent drainage characteristics eliminate the problem of both standing water and ice patches that can typically occur in cold weather conditions.

## **HOW IT WORKS**

ULTIDRIVE POROUS is an engineered asphalt that has been designed for excellent drainage and a long lasting finish.

#### **Exceptional drainage**

Traditional paved surfaces are laid to shed water. Unfortunately this can mean that drains are quickly overwhelmed after heavy rainfall. As a result, planning rules increasingly require proposals for large paved areas to include measures to reduce the risk of localised flooding.

Supplied to accredited contractors as a surface course and porous binder course, ULTIDRIVE POROUS offers a complete drainage solution for driveways and parking areas. The open structure means that rainwater quickly flows into the asphalt structure and is then slowly released into the ground, helping to avoid standing water and flooding.

#### Longer lasting finish

The modified binder in ULTIDRIVE POROUS improves workability and delivers a tough, durable finish with enhanced resistance to the stresses associated with power steering and oil spills. Effective aggregate interlock from the design and installation process means that ULTIDRIVE POROUS has a more open aggregate structure and excellent drainage characteristics



#### Private driveway -Oldham

#### CHALLENGE

With a steep gradient and stringent planning requirements, this private driveway presented the architect with a number of problems. The local planning department specified that measures were needed to control surface water run-off in order to help mitigate local flood risk.

#### SOLUTION

The contractor recommended ULTIDRIVE POROUS citing proven long term durability, ease of handling and impressive drainage characteristics.

#### RESULT

ULTIDRIVE POROUS was delivered and laid within the specified time frame, avoiding delays to the client's schedule. Its smooth, even finish complemented the design of the client's property and the permeable surface eliminated the need for additional ironwork.

#### Car parking area - Crewe

#### CHALLENGE

The parking area for this sheltered housing complex needed to be well drained and, maintain safety for vulnerable residents. Conventional approaches would have required additional excavation to install soak-aways.

#### SOLUTION

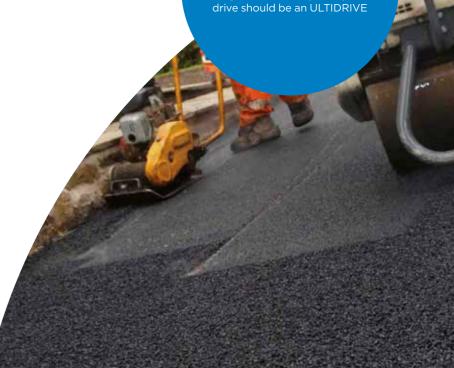
ULTIDRIVE POROUS was recommended as offering a safe, well drained surface that could be installed quickly using standard paving methods.

#### RESULT

ULTIDRIVE POROUS was laid as a binder and surface course over a free draining sub-base layer. The smooth, even surface is now safe for residents and visitors to walk on and drains quickly, even after heavy rain.

#### **ULTIMATE FINISH**

With improved drainage and long term durability, every



# **EXPERT ADVICE AND SUPPORT**

## **TYPICAL APPLICATIONS**

Where site conditions or planning requirements make drainage a priority, ULTIDRIVE POROUS offers the solution. It requires less groundwork and excavation than alternative rainwater management systems, helping to save time on site and reduce disruption for clients.

#### FOR DRIVEWAYS:

- 6mm porous surface course (recommended at 30mm thickness) suitable for hand lay.
- 20mm porous binder course.

#### FOR CAR PARKS:

- 10mm porous surface course (recommended at 35mm thickness).
- 32mm porous base/binder course for larger car parks.

#### **SPECIALIST BASE AGGREGATE:**

Tarmac's ULTIFLOW sub-base aggregate is recommended, for a complete permeable pavement solution.

#### TECHNICAL DATA

ULTIDRIVE POROUS	Typical Air Voids	Typical Stiffness (ITSM)	Typical Water Sensitivity (ITSR)	Typical Hydraulic Conductivity
Relevant standard	BS EN 12697-8	BS EN 12697-26	BS EN 12697-12	DD229
ULTIDRIVE POROUS 6mm	16.0%	3300MPa	85%	8100mm/hr (min 5000)
ULTICOLOUR POROUS 6mm	16.0%	1700MPa	83%	8100mm/hr (min 5000)
ULTIDRIVE POROUS 10mm	16.5%	1100MPa	89%	9700mm/hr (min 6000)
ULTICOLOUR POROUS 10mm	16.5%	2500MPa	92%	9700mm/hr (min 6000)
ULTIDRIVE POROUS 20mm	23.0%	1200MPa	N/R	13000mm/hr (min 6000)
ULTIDRIVE POROUS 32mm	25.0%	1200MPa	N/R	25000mm/hr (min 7000)

#### **COMPARATIVE RAINFALL**

- Worst recorded UK rainfall: 341mm in one day (averaging 15mm/hr for 22 hrs) in Cumbria in December 2015.
- A Hydraulic Conductivity of 5300mm/ hr (above the 5000mm/hr min.

requirement for 6mm) would take ≈94 seconds to drain 15mm of water.

 A Hydraulic Conductivity of 11000mm/ hr would take ≈44 seconds to drain 15mm of water.

# SCOTLAND Bellshill Satellite 01698 575 500

## **OUR SUPPORT**

#### **FAQs**

# How does ULTIDRIVE POROUS improve drainage?

Available as a surface and binder course, the open structure of ULTIDRIVE POROUS allows surface water to flow quickly into the structure and thereafter slowly released into the ground.

# What other driveway and parking surfaces are available?

In addition to ULTIDRIVE and ULTIDRIVE POROUS, Tarmac supply ULTIFASTPAVE for fast, single pass resurfacing of high traffic sites. For historic buildings and heritage sites we also supply Ultifinish, a specialist asphalt with the classic appearance of a loose gravel.

#### How does ULTIDRIVE POROUS achieve a long lasting finish?

ULTIDRIVE POROUS uses high grade aggregates and each design is engineered to ensure that the optimum binder content for the specific aggregate is selected. Together with the advanced binder technology, this ensures the long term durability of the completed surface.

# What other drainage solutions do Tarmac supply?

ULTIFLOW is a range of drainage aggregates with a proven history of effective performance. Our contracting division can also design and install ULTISuDS, a complete sustainable drainage system.

# Why is ULTIDRIVE POROUS a safer solution?

ULTIDRIVE POROUS eliminates the problem of surface water and reduces the rate of formation of ice during winter months. It also avoids the tripping hazards associated with uneven block paving.

# Is ULTIDRIVE POROUS available in other colours?

ULTIDRIVE POROUS is available in black or red as standard. However the Tarmac ULTICOLOUR range also offers porous asphalt in various other colours, for driveways and a wide range of other applications.

# Does ULTIDRIVE POROUS offer improved oil resistance?

The modified binder in ULTIDRIVE POROUS provides improved resistance to oil spillage compared to conventional asphalts. Tarmac ULTISHIELD is also

Tarmac ULTISHIELD is also available for areas where regular oil spillage is anticipated and the impact of such is the key concern.

#### How can I be sure that ULTIDRIVE POROUS is laid correctly?

ULTIDRIVE POROUS is only available for installation by accredited contractors who have full access to our expert training, advice and technical support.

# 0191 492 4000

**NORTH EAST**Birtley Regional

### **MORE ANSWERS**

For more information about Tarmac ULTIDRIVE POROUS contact your local regional office or visit tarmac.com

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