

BREEDONOnecoat Footway IS A SINGLE LAYER ASPHALT CONCRETE SURFACING SOLUTION TO HALVE CONSTRUCTION TIME OF FOOTPATHS AND CYCLEWAYS.

APPLICATIONS

- Footpaths
- Cycle tracks
- Bridleways

OVERVIEW

Traditional construction of asphalt footways has normally involved a binder course and surface course, laid at different times onto one another. Closing pedestrian walkways is not only an inconvenience, but also an added health and safety risk to the public. Using EME (Enrobé à Module Élevé) design concepts, BREEDONOnecoat Footway is a single layer Asphalt Concrete surfacing solution to halve construction time of footpaths and cycleways. This limits exposure to claims from the public, whilst also saving considerable costs.

With increased traffic levels, vehicles are parking more and more on footpaths, which often results in damage to asphalt materials designed for pedestrian traffic. BREEDONOnecoat Footway is more durable to vehicle trafficking, reducing the risk of rutting, fretting and raveling, saving expensive maintenance costs. A single layer application also reduces the risk of delamination and potholing by eliminating the possibility of trapping moisture and/or detritus which may occur with a two course treatment.



TECHNICAL DATA

BREEDONOnecoat Footway is a 10mm EME2 based proprietary surfacing utilising a modified binder in order to improve workability and compactability, whilst also significantly improving durability when compared against the traditional two layer installation. For demarcation purposes, or to improve aesthetics, BREEDONOnecoat Footway can also be supplied as a coloured product.

To assess stiffness (strength) and resistance to permanent deformation, a comparative study was conducted between BREEDONOnecoat Footway (laid between 40 and 100mm) and traditional two-layer construction tested together (30mm layer of AC 6 dense surf 100/150 and 50mm of AC 20 dense bin 100/150). The results can be summarised as follows:

| Test Method | AC 6 dense surf 100/150 and AC 20 dense bin 100/150 | BREEDONOnecoat Footway |
|---|---|--|
| Resistance to Permanent Deformation (BS EN 12697-22 in air at 45°C) | Not determined | Mean wheel track slope of 0.2mm/1,000 cycles |
| Resistance to Permanent Deformation (BS EN 12697-22 in air at 60°C) | All specimens exceeded 20mm rut depth | Mean wheel track slope of 0.3mm/1,000 cycles |
| Indirect Tensile Stiffness Modulus (BS EN 12697-26: Annex C) | Mean value = 859 MPa | Mean value = 1912 MPa |
| Water Sensitivity (BS EN 12697-12) | Not determined | Indirect Tensile Strength Ratio (ITSR) ≥70% |

The information confirms BREEDONOnecoat Footway as a stiffer, more robust, rut resistant material when compared to a dual layer installation. An Indirect Tensile Strength Ratio (ITSR) of >70% confirms strength retention and durability after saturating and conditioning in water.

CONSTRUCTION

BREEDONOnecoat Footway is available in one size, and the nominal and minimum compacted layer thicknesses and typical initial macrotexture depths are as follows:

| Largest Nominal Aggregate Size (mm) | Nominal Layer Thickness (mm) | Minimum Thickness at Any Point (mm) | Typical Initial Texture Depth (mm) |
|-------------------------------------|------------------------------|-------------------------------------|------------------------------------|
| 10 | 50 - 100 | 40 | ≥0.8 |

New constructions require good quality, non-plastic, well compacted sub-base (i.e. Type 1). Installation should be carried out in accordance with the general requirements of BS 594987, using as large a tandem roller as possible for the site. Pedestrian single-drum rollers and wacker plates should only be used in areas of restricted access, and to remove any marks left by the lead roller. The material shall be substantially compacted before reaching 110°C.

BENEFITS

- Time and cost saving single course application.
- Less disruption to residents and pedestrians.
- Improved workability and compactability allowing multiple site visits if necessary.
- Less risk of delamination and pot holing compared to a two layer installation.
- Single layer improves heat retention, increasing the compaction period, helping to lower in situ air voids and achieve impermeability.
- Higher strength, durability and rut resistance when compared with traditional dual layer installations.
- Very good climate (water and ageing) resistance.
- Good rate of spread.
- Smooth, uniform finish.
- Minimal maintenance required.
- Area can be opened to traffic once the centre of the layer has reached $\leq 40^{\circ}\text{C}$.
- Available as a coloured material.

MAINTENANCE AND REPAIR

BREEDON Onecoat Footway is not subject to any specialised routine maintenance processes, although the following procedures should be followed:

- If used for vehicle parking, the vehicles shall be moving when the wheels are turned and shall be parked in different positions.
- Any heavy vehicles, trailers, caravans and ladders with small footprints parked on the material should use wooden boards to disperse the loading.
- Fuel spillages should be removed immediately (sand, sorbents such as cat litter, oil absorbent pads and spill kits can be useful for this task).
- Any loose aggregate particles should be brushed and removed from the surface to prevent abrasion.

Major repairs

If possible, any damaged areas are to be removed by planing to the appropriate depth to provide a minimum length of 15m for paver resurfacing. Alternatively, the section to be replaced can be removed and re-laid by hand. The sections will be resurfaced using material to the same specification.

Minor repairs

- Minor repairs can be carried out by cutting out the damaged section and replacing it with a material of suitable specification.
- Wherever possible, a diamond

patch reinstatement shall be used, extending a minimum of 0.25m beyond the damaged section.

- Joints must be saw cut vertical, cleaned and painted with a thick uniform coating of hot bitumen, hot elastomeric polymer modified bituminous binder, or cold applied thixotropic bituminous compound prior to laying.

WHY CHOOSE BREEDON PROPRIETARY MATERIALS?

The Proprietary Materials offered by Breedon are extensively designed and rigorously tested to exceed the performances of traditionally used asphalts in specific applications. Our Proprietary Materials often include additives to achieve these high levels of operation.

PRECAUTIONS AND LIMITATIONS

Asphalt remains relatively soft for up to one year after laying; until it has time to oxidise and harden (i.e. elasticity is reduced). It is recommended that the surface is not trafficked for at least 24 hours (longer in hot weather) following installation, when it is most susceptible to damage. When trafficked by vehicles, it is recommended that they are moving when the wheels are turned.

If a vehicle is stationary when tyres are turned (particularly with modern power steering), the asphalt can be displaced and marked by stresses applied at that particular point. It is also recommended that (wherever possible) vehicles are parked in different positions to avoid marking the asphalt, and heavy vehicles, trailers, plant, machinery and ladders with small footprints are parked on wooden boards to disperse the loading. Fuel spillages should also be contained and cleaned up as soon as possible as these will compromise durability. Recommended procedure for removing diesel spillages is as follows:

- Stem the leak.
- If necessary, contain the spillage by deploying booms around the source and block any drains.
- Apply absorbent granules (e.g. cat litter) or sand to the spillage area.
- Sweep up the absorbent granules and dispose of in accordance with environmental regulations.
- Scrub the surface using a mild detergent. Any effluent resulting from the clean-up activity must not be washed into surface water drains as it is an offence under the Water Resources Act 1991.

**QUANTITY REQUIRED**

As a guide, please refer to the Material Calculator on our website (www.breedongroup.com).

AVAILABILITY

BREEDON Onecoat Footway can be laid all year round due to its improved workability (depending on climatic conditions), and may be installed by Breedon or experienced Contractors.

TO DISCUSS YOUR PROJECT REQUIREMENTS, AND FOR MORE INFORMATION ABOUT OUR PRODUCTS CONTACT:

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The information given in this technical datasheet is based on our current knowledge and is intended to provide general notes on our products and their uses. Breedon Group plc endeavours to ensure that the information given is accurate but accept no liability for its use or its suitability for a particular application because of the product being used by the third party without our supervision.

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