

BREEDON Polymer Plus IS AN AWARD WINNING THIN SURFACING PRODUCT DEVELOPED FROM LOCAL RESOURCES, DEMONSTRATING INNOVATION, TO PROVIDE EXTENDED PAVEMENT LIFE WHERE USED.

### APPLICATIONS

- Major routes
- Urban areas
- High stress regions
- Problematic sites (e.g. with poor drainage)
- Car parks

### OVERVIEW

A forerunner to Transport Scotland's TS2010 specification (initiated to improve quality and in situ performance), BREEDON Polymer Plus impressed the judges to win the prestigious Highway Industry Product of the Year in the Highways Magazine Excellence Awards. This much coveted award is given to an organisation whose vision, belief and determination have brought a product to market which has initiated a 'change of thought' approach or technique and has thereby influenced the sustainability agenda and/or generated efficiency savings. The judges described BREEDON Polymer Plus as: "a product developed from local resources, demonstrating innovation, to provide extended pavement life where used."

### TECHNICAL DATA

BREEDON Polymer Plus is classed as a 'hybrid' Stone Mastic Asphalt, utilising both polymer modified binder and cellulose fibres. Designed on German Stone Mastic Asphalt, BREEDON Polymer Plus is an extremely robust thin surfacing, which was first developed for a problematic roundabout in Scotland. The 6mm version was installed to provide superior durability and skid resistance in this high stress area where other products were insufficiently hard-wearing.



### CONSTRUCTION

Installation of the system is carried out by Breedon using conventional paving equipment and is available in three sizes, with the nominal and minimum compacted layer thicknesses as follows:

Largest Nominal Aggregate Size (mm)	Nominal Layer Thickness (mm)	Minimum Thickness at Any Point (mm)
6	20 - 40	15
10	25 - 50	20
14	35 - 50	30

Wherever possible, tanker applied bond coats are used beneath BREEDON Polymer Plus and allowed to fully 'break' (i.e. turn from brown to black). Installation is completed in accordance with the general requirements of BS 594987.

**BENEFITS**

- Outstanding durability.
- Excellent deformation, fretting and raveling resistance.
- Good skid resistance, including early-life when treated with grit.
- Smooth, homogenous surface ensuring first-rate rideability.
- Reduced whole life costing (WLC).
- Good surface textures.
- Reduces the need for High Friction Surfacing (HFS).
- Superb climate (water and ageing) resistance.
- Extremely low traffic noise levels.
- Resistance to reflective cracking from underlying joints or metalwork.
- May be customised to specific site requirements.
- High softening point, reducing risk of damage.
- May be trafficked sooner than conventional bituminous materials.

**MAINTENANCE AND REPAIR**

BREEDON Polymer Plus is not subject to any specialised routine maintenance processes, and should be maintained in accordance with the Design Manual for Roads and Bridges HD 31/94 "Maintenance of Bituminous Roads".

**Motorways, trunk roads and other major repairs**

Any damaged areas shall be removed by planing to the appropriate depth to provide a minimum length of 15m for paver resurfacing. The planed area will be resurfaced using material to the same specification by Breedon.

**Minor repairs**

- Minor repairs can be carried out by cutting out the damaged section and replacing it with a material of suitable specification agreed between Breedon and the Client.
- A K1-40 (C40 B 4) or K1-60 (C60 B 4) tack coat, or an acceptable proprietary bond coat, will be used on the receiving substrate.
- 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 2 hours 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](http://www.breedongroup.com)).

**AVAILABILITY**

BREEDON Polymer Plus may be laid all year round (depending on climatic conditions), and is supplied and installed by Breedon using conventional paving equipment.

**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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