HAPAS

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HAPAS Certificate
02/H074
Product Sheet 8 Issue 2

DURAFALT THIN SURFACING SYSTEMS FOR HIGHWAYS

ERA 140 DURAFALT PMB 10 MM THIN SURFACING SYSTEM

This Product Sheet(1) is issued by the British Board of Agrément (BBA). The Highways Authorities Product Approval Scheme (HAPAS) is supported by National Highways (NH) (acting on behalf of the Overseeing Organisations of the Department for Transport; Transport Scotland; the Welsh Government; and the Department for Infrastructure, Northern Ireland), the Association of Directors of Environment, Economy, Planning and Transport (ADEPT), the Local Government Technical Advisers Group and industry bodies.

(1) Hereinafter referred to as 'Certificate'.

This Certificate relates to the ERA(1) 140 Durafalt PMB 10 mm Thin Surfacing System, a stone mastic asphalt for use as a surface course on new and maintenance road construction, in accordance with the *Manual of Contract Documents for Highway Works* (MCHW), Volume 1 *Specification for Highway Works* (SHW), Series 900, Clauses 908 and 942.

(1) ERA is a registered trademark.

The BBA has awarded this Certificate to the company named above for the system described herein. This system has been assessed by the BBA as complying with the requirements of the BBA HAPAS Certification Scheme according to the assessments set out in this Certificate.

On behalf of the British Board of Agrément

Date of Second issue: 24 September 2025

Originally certified on 13 October 2022

Hardy Giesler
Chief Executive Officer

This BBA HAPAS Certificate is issued under the BBA's accreditation to ISO/IEC 17065 (UKAS accredited Certification Body Number 0113).

Clauses marked † are additional information outside the scope of accreditation.

Readers MUST check the validity and latest issue number of this BBA HAPAS Certificate by referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation.

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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1 Product Description

1.1 The Certificate holder specifies the system under assessment, the ERA 140 Durafalt PMB 10 mm Thin Surfacing System, as a stone mastic asphalt in accordance with BS EN 13108-5 : 2006, consisting of a polymer-modified bitumen to BS EN 14023 : 2010, cellulose fibres, limestone, reclaimed asphalt, fine and coarse aggregates to BS EN 13043 : 2002, and an approved warm mix additive. The system is for use as a thin surface course system in accordance with the requirements of the MCHW, Volume 1 SHW, Series 900, Clause 942, for high-speed roads and roundabouts on high-speed roads and the requirements of Clause 908 for warm mix asphalt.

1.2 The system is used in conjunction with a spray-applied bitumen emulsion bond coat conforming to BS EN 13808 : 2013.

1.3 The system includes a binder additive that allows for manufacture and installation at lower temperatures according to the MCHW, Volume 1, Series 900, Clause 908, Tables 9/1A and 9/1C respectively.

1.4 The Certificate holder recommends paving grade bitumen for use on all cold joints and vertical faces for use with the system, but this material has not been assessed by the BBA and is outside the scope of this Certificate.

2 Requirements

Requirements for the system are outlined in the BBA HAPAS Certification Scheme and Technical Specifications Documents, and have been established from the following specification documents:

- the MCHW(1), Volume 1, Series 900, Clauses 908 and 942
- the *Design Manual for Roads and Bridges*(2) (DMRB)
  - CD 227 *Design for Pavement Maintenance*
  - CD 236 *Surface Course Materials for Construction*
- PD 6691 : 2022.

(1) The MCHW is operated by National Highways (NH) (acting on behalf of the Overseeing Organisations of the Department for Transport; Transport Scotland; the Welsh Government; and the Department for Infrastructure, Northern Ireland).

(2) The DMRB is operated by the Overseeing Organisations: National Highways (NH), Transport Scotland, the Welsh Government and the Department for Infrastructure (Northern Ireland).

3 Summary of Product Assessment

The system was assessed on the basis of the following characteristics in accordance with HAPAS requirements.

3.1 Physical properties

3.1.1 The system has the physical properties given in Table 1.

Table 1 Physical properties

System assessed	Assessment method	Requirement	Outcome
ERA 140 Durafalt PMB 10 mm	Visual inspection (SiPT)	Good or Excellent at opening to traffic Good or Excellent 12 months after opening to traffic Good or Excellent 24 months after opening to traffic	Pass
	Bond to substrate to MCHW, Volume 1, Series 900, Clause 951 and Table 9/15	≥ 400 kPa	Pass
	Resistance to permanent deformation (WTS_{AIR}) to BS EN 12697-22 : 2020	PD 6691 : 2022, Table D.2	Class 2
	Sensitivity to water ($ITSR_{MIN}$) to BS EN 12697-12 : 2018 (Method A)	MCHW, Volume 1, Series 900, Clause 908 Table 9/1B and Clause 942.9 ≥ 80	Pass
	Initial Surface macrotexture depth – Upper *(D)* aggregate size of 10 mm to BS EN 13036-1 : 2010	MCHW, Volume 1, Series 900, Clause 942, Table 9/12 1.1 to 1.6 mm	Pass
	Surface macrotexture depth – trafficked – Upper *(D)* aggregate size of 10 mm to BS EN 13036-1 : 2010	MCHW, Volume 1, Series 900, Clause 942, Table 9/14 > 0.8 mm	Pass

3.1.2 The assessment showed that the system complies with HAPAS requirements for these characteristics.

3.2 Durability

When installed in accordance with this Certificate, the system will provide a durable surface course for new and maintenance road construction, in accordance with the MCHW, Volume 1 SHW, Series 900, Clauses 942.19 and 942.20, and Table 9/12 for high-speed roads and roundabouts on high-speed roads with a 10 mm upper (D) aggregate size and the requirements of Clause 908 for warm mix asphalt.

4 Summary of Process Assessment

Manufacturing process and quality control	Complies with HAPAS requirements
Delivery and site handling	Complies with HAPAS requirements
Installation	Complies with HAPAS requirements

4.1 Manufacture

4.1.1 The BBA has undertaken the following tasks for the assessment of system manufacture and has established that the manufacture complies with BBA HAPAS Certification Scheme requirements:

- the BBA has recorded and evaluated the manufacturer's documentation of the methods adopted for quality control procedures and product testing against HAPAS requirements
- the BBA has assessed the quality control operated over batches of incoming materials and formulations against HAPAS Requirements
- the BBA has evaluated the process for management of non-conforming work
- the BBA has audited the production process and verified that it is in accordance with the documented process
- the BBA has checked that equipment has been properly tested and calibrated.

4.1.2 The BBA has undertaken to review the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

†4.1.3 The management system of the manufacturer has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015, BS EN ISO 14001: 2015 and BS ISO 45001: 2018 by Construction Products Certification (Certificates CP 00189, CP E 00022 and CP OHS 00004 respectively).

†4.2 Delivery and site handling

4.2.1 The Certificate holder stated that the system is delivered to site in bulk in insulated vehicles. The bond coat may be delivered to site either in bulk by tanker or in 205-litre drums.

4.3 Design

4.3.1 The ERA 140 Durafalt PMB 10 mm Thin Surfacing System can be designed to satisfy or contribute to satisfying the relevant requirements of the MCHW, Volume 1 SHW, Series 900, Clause 942, for high-speed roads and the requirements of Clause 908 for warm mix asphalt.

4.3.2 The system is satisfactory for use on bituminous or concrete substrates, provided they are stable and have sufficient loadbearing strength to support the loads imposed during installation and service.

4.3.3 Guidance on evaluating the condition of an existing surface is provided in the DMRB, CD 227, Revision 0 (03/20). Local Authorities may have different criteria, which should be taken into consideration.

4.3.4 Guidance on appropriate surfacing selection is provided in the DMRB, CD 236, Revision 4.1.0 (12/22).

4.4 Installation

4.4.1 The Certificate holder's instructions for installation of the system were confirmed as meeting the BBA HAPAS Certification Scheme requirements.

4.4.2 To achieve the performance described in this Certificate, the system must be installed in accordance with the Certificate holder's installation procedures, BS 594987 : 2024 and this Certificate.

4.4.3 To achieve the performance described in this Certificate, the system must be applied to bituminous or concrete substrates at a nominal layer thickness of between 35 and 50 mm in depth on roads installed in accordance with the MCHW, Volume 1, SHW, Series 900, Clause 942, Table 9/11.

4.4.4 The substrate must be prepared in accordance with BS 594987 : 2024, section 5.

4.4.5 The asphalt must not be laid on any surface which is frozen or covered with ice or snow. Laying must cease when the air temperature reaches 0 °C on a falling thermometer, except in calm dry conditions, when laying must cease if the air temperature reaches −3 °C on a falling thermometer. Laying may proceed at air temperatures at or above −1 °C on a rising thermometer when the surface on which the asphalt is to be laid is dry and free from ice.

4.4.6 A bitumen emulsion bond coat is spray-applied to achieve a minimum residual bitumen content of 0.35 $kg \cdot m^{-2}$.

4.4.7 For small areas and detailing, the bitumen emulsion can be applied, ensuring that a uniform coat is achieved, with appropriate hand-held equipment.

4.4.8 The emulsion must be allowed to break (change from brown to black) prior to the application of the system.

4.4.9 Machine and hand installation must follow the requirements of BS 594987 : 2024, sections 6.4, 6.5 and 6.8.

4.4.10 Compaction must follow the requirements of BS 594987 : 2024, sections 9.2 and 9.3, and the Certificate holder's installation method statement.

4.4.11 Rolling and compaction must be undertaken immediately after the material has emerged from the paving machine. The minimum rolling temperature must not fall below 120°C.

4.4.12 All joints must be prepared in accordance with the requirements of the MCHW, Volume 1 (SHW), Series 900, Clauses 903.21 to 903.25 (05/18), BS 594987 : 2024, sections 6.9.1 and 6.9.2, and the Certificate holder's installation method statement.

4.4.13 To achieve the performance described in this Certificate, installation of the system must be carried out by operatives approved by the Certificate holder.

4.5 Maintenance and repair

4.5.1 The Certificate holder advises that the system is not subject to any routine maintenance requirements. However, any damage must be repaired.

4.5.2 Any damaged areas must be cut back to sound material by planing or other suitable means and replaced by a material appropriate to the location, traffic levels and the area of reinstatement. Materials must be selected in agreement with the Certificate holder and the purchaser.

5 Fulfilment of Requirements

5.1 The conclusion of this BBA assessment is that the ERA 140 Durafalt PMB 10 mm Thin Surfacing System, when used in accordance with the provisions of this Certificate, complies with the BBA HAPAS Certification Scheme requirements.

5.2 In order for the system to continue to meet Scheme requirements, it must be installed, used and maintained as per the Certificate holder's instructions and as detailed in the Certificate.

6 Validity of Certificate

Continuing validity of this Certificate is dependent on the following factors:

- continuing compliance with product or process requirements, as described in the HAPAS Scheme document, and the specification documents referred to therein
- ongoing BBA surveillance of factory production control, to verify that the specifications and quality control being operated by the manufacturer are being maintained
- formal triennial Review of the Certificate, and Reissue for required technical or non-technical updates
- compliance with ongoing Certificate obligations by the Certificate holder and manufacturer(s).

†7 Additional Regulations

Construction (Design and Management) Regulations 2015
Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

CLP Regulations

The Certificate holder has taken the responsibility for classifying and labelling the system under the *GB CLP Regulations* and the *CLP Regulation (EC) No 1272/2008 - Classification and Labelling and Packaging of Substances and Mixtures.* Users must refer to the relevant Safety Data Sheet(s).

UKCA marking

The Certificate holder has taken the responsibility of UKCA marking the system in accordance with Designated Standard EN 13108-5 : 2006.

8 Bibliography

BS 594987 : 2024 *Asphalt for roads and other trafficked areas — Transport, laying, compaction and product type testing protocols — Specification*

BS EN 12697-12 : 2018 *Bituminous mixtures — Test methods for hot mix asphalt — Determination of the water sensitivity of bituminous specimens*
BS EN 12697-22 : 2020 *Bituminous mixtures — Test methods — Wheel tracking*

BS EN 13036-1 : 2010 *Road and airfield surface characteristics — Test methods — Measurement of pavement surface macrotexture depth using a volumetric patch technique*

BS EN 13043 : 2002 *Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas*

BS EN 13108-5 : 2006 *Bituminous mixtures — Material specifications — Stone mastic asphalt*

BS EN 13808 : 2013 *Bitumen and bituminous binders — Framework for specifying cationic bituminous emulsions*

BS EN 14023 : 2010 *Bitumen and bituminous binders — Specification framework for polymer modified bitumens*

BS EN ISO 9001 : 2015 *Quality management systems — Requirements*

CD 227 *Design Manual for Roads and Bridges : Design for pavement maintenance, Revision 0, (03/20)*

CD 236 *Design Manual for Roads and Bridges : Surface course materials for construction, Revision 4.1.0, (12/22)*

Manual of Contract Documents for Highway Works, Volume 1 *Specification for Highway Works,* Series 900 *Road pavements — bituminous bound materials* (07/21)

PD 6691 : 2022 *Guidance on the use of BS EN 13108, Bituminous mixtures — Material specifications*

9 Conditions of Certification

9.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document – it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

9.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

9.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

9.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

9.5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to UKCA marking and CE marking.

9.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.

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