

XAIS-PTS Product Assessment Certificate

Product Acceptance Scheme in accordance with Manual for Contract Documents for Highway Works, Specification for Highway Works (MCHW SHW) Volume 1 Sub-Clause 104.15 and 104.16

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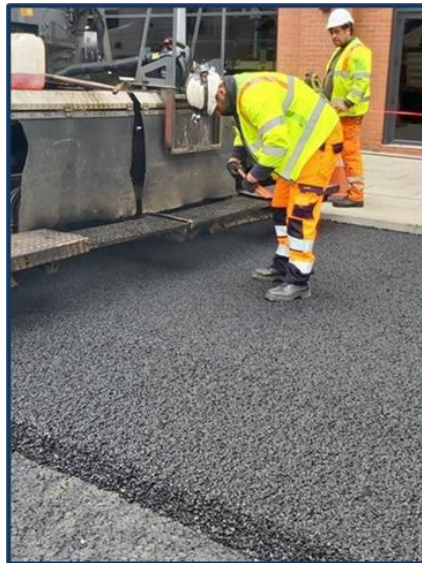
UK Approved Body (UKAB)

Product Area 23 Road Construction Products

Product Name: Armaflex 10 mm SURF 40/60 MR6 65PSV Thin Surface Course System

Product Family: Thin Surface Course Systems for Highways

Certificate Reference: PA942 0003



XAIS-PTS Ltd has awarded this **Product Assessment Certificate** to the Company named above for the products described herein. These products have been assessed by XAIS-PTS Ltd as being fit for their intended use provided, they are manufactured, installed, and used as set out in this Certificate.

The issue of this Certificate under Specialist Group XAIS-PTSSG 942 - Thin Surface Course Systems, which sets out Guidelines and Criteria for the assessment, has been authorised by the XAIS-PTS Technical Supervisory Panel.

On behalf of XAIS-PTS Ltd

Signature

R Edwards Managing Director

Date First Issued: 01.11.20

Date of Second issue: 17.11.23

Certificate Valid until: 31.10.26

Product Name: Armaflex 10 mm SURF 40/60 MR6 65PSV Thin Surface Course System

Product Family: Thin Surface Course Systems for Highways

This Product Assessment Certificate is issued by XAIS-PTS Ltd under XAIS-PTS Product Acceptance Scheme (XAIS-PTSPAS), in accordance with MCHW SHW Sub-Clause 104.15 and 104.16, supported by XAIS-PTS Technical Supervisory Panel (XAIS-PTSTSP) which includes representation from National Highways (NH), Association of Directors of Environment, Economy Planning and Transport (ADEPT), Road Surface Treatments Association (RSTA), Mineral Products Association (MPA), HAUC (UK) SROH Working Group, HAUC (UK) SROH Innovations Working Group and Transport Scotland.

Sub-clause 104.16 (e) requires that *“The scheme must have a technical supervisory panel that provides technical oversight on the operation of the scheme and formally consents to the issue of assessment and certification requirements of the specialist groups developing the assessment and certification requirements. This panel must include a balanced representation of key end users, recognized industry experts and those responsible for the highways on which such products will be used or installed”*.

XAIS-PTSPAS Product Assessment Certificates are each subject to a review every three years, with annual interim surveillance.

PRODUCT APPLICATIONS

Armaflex 10 mm SURF 40/60 MR6 65 PSV is a Stone Mastic Asphalt intended for use as a surface course for new and maintenance road construction on a sound underlying structure, provided they are stable and have adequate strength to bear the equipment and compaction stresses generated during construction.

Material installed in accordance with this certificate provides a surface course for new and maintenance road construction in accordance with MCHW SHW Sub-Clause 942

KEY FACTORS ASSESSED

- Quality Management System (QMS) has been assessed by SGS and is registered as meeting accreditation requirements to BS EN ISO 9001:2015
- SGS Certificate Number GB93/2644.00 and recent audit
- Manufacture of asphalt products are assessed in line with Factory Production Control (FPC) and Quality Management System (QMS) Audits
- SGS Certificate of Conformity of the Factory Production Control (FPC) GB13/89098.00
- Quality Plan for the production of Armaflex 10 mm SURF 40/60 MR6 65 PSV
- Transport and Installation Method Statement for Armaflex 10 mm SURF 40/60 MR6 65 PSV ACSQP-C/5/22b
- Compliance with Clause 942 material, installation
- Declaration of Performance in accordance with BS EN 13108-5:2006
- CE Marking in accordance with harmonised European Standard BS EN 13108-5:2006
- Approved installers, Jobling Purser are manufacturers of the product and utilise external installers who undergo their approval and audit process to gain acceptance for installation of material in accordance with Armaflex 10mm SURF 40/60 MR6 65 PSV Installation Method and BS 594987:2015+A1:2017. Installers are registered under National Highway Sector Scheme 16 (NHSS16) Laying of Asphalt Mixes,
- Laboratory Test data

1. TECHNICAL SPECIFICATION

- 1.1 The Armaflex 10mm SURF 40/60 MR6 65 PSV Thin Surface Course System is a Stone Mastic Asphalt surface course, consisting of a proprietary polymer modified bitumen to BS EN 14023:2010, fine and coarse aggregates to BS EN 13043:2002 limestone filler, cellulose fibres, and MR6.
- 1.2 The system is applied in accordance with SHW Clause 903 and in conjunction with a cationic polymer modified bituminous emulsion bond coat in compliance with BS EN 13808:2013, SHW Clause 920 and BS 594987:2015+A1:2017.
- 1.3 Joint preparation - vertical faces are painted or sprayed with a cationic polymer modified bituminous emulsion bond coat in accordance with Sections 6.8.1 and 6.8.2. of BS 594987:2015+A1:2017.

2. MANUFACTURE

- 2.1 The Armaflex 10mm SURF 40/60 MR6 65 PSV is manufactured in accordance with the *Quality Plan for the Manufacture of Thin Surface Course System—SMA*, which adopts conventional asphalt manufacturing process and FPC Certificate GB13/89098.00 in respect of EN 13108-5:2006—Bituminous Mixtures — Material Specifications—Part 5: Stone Mastic Asphalt.
- 2.2 The Quality Management System of Jobling Purser has been assessed and certified as meeting the Requirements of BS EN ISO 9001:2015 by SGS (Certificate GB93/2644.00).

3. DELIVERY AND SITE HANDLING

- 3.1 The product is delivered to site in bulk, in insulated and sheeted trucks.
- 3.2 Bond coats are generally delivered to site in bulk by tanker.
- 3.3 Users must refer to the Transport & Installation ACSQP-C/5/22b and Material Safety Data sheets available on request from Jobling Purser.

4. INSTALLATION METHOD STATEMENT (IMS)

- 4.1 4.1 Installation of Armaflex 10mm SURF 40/60 MR6 65 PSV is carried out only by installers approved by the Certificate holder, who undergo approval and audit process to gain acceptance for installation of material in accordance with Armaflex 10mm SURF 40/60 MR6 65 PSV Installation Method and BS 594987:2015+A1:2017.

Installers are registered under National Highway Sector Scheme 16 (NHSS16) Laying of Asphalt Mixes.

- 4.2 The system can be applied to bituminous or concrete substrates at a nominal layer thickness of between 25 mm and 50 mm on roads installed in accordance with the MCHW, SHW, Volume 1, Series 900, Clause 942. The minimum compacted thickness at any point shall not fall below 20 mm.
- 4.3 Laying may proceed provided the substrate is free from standing water, snow or ice with air temperatures at or above -1°C on a rising thermometer, providing that compaction can be substantially completed before the asphalt cools below the temperatures indicated in Annex A, Table A.1 of BS 594987:2015+A1:2017.
- 4.4 Substrate preparation shall be carried out in accordance with Section 5 of BS 594987:2015+A1:2017.
- 4.5 Cationic polymer modified bituminous emulsion bond coat is machine applied at a uniform rate, to achieve 0.20 kg/m^2 residual bitumen on newly laid and 0.35 kg/m^2 residual bitumen on planed (milled) or existing asphalt substrate, in accordance with SHW 920.
- 4.6 The system installation should only be carried out once the emulsion has been allowed to break (i.e. change from brown to black).

4. INSTALLATION METHOD STATEMENT (IMS) cont..

- 4.7 4.6 The temperature of the material delivered to site must fall within the 160°C - 185°C range. Compaction must commence as soon as rolling can be performed without causing excessive displacement or surface
- 4.8 Rolling and compaction must follow the requirements of Sections 9.1 to 9.3 of BS 594987:2015+A1:2017.
- 4.9 Machine and hand installation must follow the requirements of sections 6.3 and 6.4 of BS594987:2015+A1:2017.
- 4.10 Rolling and compaction must follow the requirements of Sections 9.1 to 9.3 of BS 594987:2015+A1:2017.
- 4.11 All joints must be prepared in accordance with Sections 6.8.1 and 6.8.2 of BS 594987:2015+A1:2017. Any joint cuts must be saw cut to a full depth of the vertical face, cleaned and painted with a uniform coating of joint preparation.

5. MAINTENANCE / REPAIR

Routine maintenance is not a requirement, however, should damage occur, areas must be cut back to sound material by planning or other suitable means and replaced with an appropriate material for the site materials to be agreed with the purchaser.

6. TECHNICAL DATA

The certification process comprised aspects related to:

- Technical information for the system components and test data to BS EN13108-20 as required in BS EN 13108-5:2006, MCHW SHW 942 and PTS Guidelines Document
- Transportation and installation procedures
- Declaration of Performance 5101-2/01
- Quality Assurance BS EN 9001:2015 GB93/2644.00 and Factory Production Control (FPC) GB13/89098.00
- Laboratory Data — The following tests were carried out, in accordance with Product Specification Code 5101-2 and the product met the declared values (bracketed)
 - EN12697-22 Wheel tracking (resistance to permanent deformation) Class 2, WTS_{AIR1}
 - EN12697-12 Water Sensitivity ($ITSR_{90}$)
 - EN12697-8 Air Voids ($V_{min1.5}$; : $V_{max.5.0}$)
 - EN12697-18 Binder Drainage ($BD_{max0.3}$)
- System Methodology Installation (SIPT) was carried out to assess the installation and on site quality control of installation procedures - IMS audit carried out at *Feethams, Darlington on the 24th May 2020 (PTS Stage 3 Report dated 24.05.20) concluded that the installation was carried out in accordance with the method statement and contractual requirements.
 - Visual inspection
 - Macrotexture depth
 - Installed performance characteristics (in accordance with Clause 942, Table 9/15)
 - Visual inspection (in accordance with Clause 942, Table 9/16)

The data gathered from the System Installation Performance Trial (SIPT) show that the system meets the initial texture depth requirements of Clause 942 for Trunk Roads including Motorways (Table 9/12) and for roads other than Trunk Roads and Motorways (Table 9/13)

- Review of installed performance characteristics and technical data from existing sites that were at least two years old was carried out to confirm the materials performance in use — case studies (PTS Stage 4 Report dated 02.09.20)
 - Visual inspection
 - Retained macrotexture depth

7. REQUIREMENTS

- 7.1 Product to be manufactured only by the Certificate Holder. Product to only be transported as specified in its Quality Plan for the Transport and Laying and referenced standards and specifications.
- 7.2 Product to be manufactured using conventional asphalt production methods and using only the raw materials and the mix design authorised by the Certificate Holder.

8. BS EN ISO 9001: 2015 SECTION 8.3 PLANNING PROCESS

- 8.1 8.1 Investigation work was carried out for the continuous development of Jobling Purser products and services. The objective was to offer a polymer modified product in accordance with Clause 942, Table 9/12 and 9/13)
- 8.2 The Armaflex 10 mm SURF 40/60 MR6 65 PSV is manufactured in accordance with the controls defined in the Company's Operating Procedures for the manufacture of asphalt which form part of the Quality Management System Declaration of Performance, SGS Certificate and recent audit.

9. BS EN ISO 9001: 2015 SECTION 8.3 DESIGN INPUTS

The essential requirements determined and covered under:

- ISO 9001:2015 SGS Certificate GB93/2644.00
- Quality Plan for the Manufacture of Thin Surface Course SMA
- Declaration of Performance for SMA Thin Surface Course
- Armaflex 10 mm SURF 40/60 MR6 65 PSV Manufacturing Quality Plan
- Technical data as required in BS EN 13108-5, 13108-20 and Appendix 1 of PTS SG942 Guidelines Document (extracted from MCHW SHW Clause 942)
- Durability, defined and assessed as an ITSR requirement within Performance Product Specification for Armaflex 10 mm Surf 40/60 MR6
- Certificate of Conformity of the Factory Production Control (FPC), SGS Certificate GB13/89098.00

Mixture properties and performance parameters assessed under Type Testing procedure in accordance with BS EN 13108-20 are detailed in Jobling Purser Product Specification for Armaflex 10mm SURF PMB 65 PSV, available on request.

10. BS EN ISO 9001: 2015 SECTION 8.3 VERIFICATION PROCESS

Installed performance characteristics were assessed in relation to:

- Visual Inspection (in accordance with SHW Clause 942, Table 9/16
- Retained Macrottexture Depth at qualified intervals, after opening to traffic on case study sites

11. BS EN ISO 9001: 2015 SECTION 8.3 VALIDATION PROCESS

QMS third party audit review.

FPC approval by the Certificate holder, SGS Certificate GB13/89098.00

12. BS EN ISO 9001: 2015 SECTION 8.3 CHANGES PROCESS

Processes integrated in the Certificate Holder's QMS:

- Identification of authorised competent person
- Identification and assessment of change generated adverse impact.

13. TEST RESULTS

Available on request of the Overseeing Organisation from the Certificate Holder, comprising the verification and ongoing validation processes.

14. BIBLIOGRAPHY (correct at time of initial certificate issue):

BS EN ISO/IEC 17065:2012 Conformity assessment – Requirements for bodies certifying products, processes and services

BS EN ISO/IEC 17067:2013 Conformity assessment – Fundamentals of product certification and guidelines for product certification schemes

BS EN ISO 17025:2005 General requirements for the competence of testing and calibration laboratories BS EN ISO 17025:2017 General requirements for the competence of testing and calibration laboratories

BS EN ISO/IEC 9001:2015 Quality Management System Requirements

Manual of Contract Documents for Highways Works Volume 1 Specification for Highway Works, July 2019 TRL Report 674 - Durability of thin asphalt surfacing systems.

BS EN 12591:2009 Bitumen and bituminous binders – Specifications for paving grade bitumens

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

BS 594987:2015+A1:2017 Asphalt for roads and other paved areas—Specification for transport, laying, compaction and product-type testing protocols

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

BS EN 13108-5:2016 Bituminous mixtures - Materials Specifications - Stone mastic asphalt

BS EN 13808:2013 Bitumen and bituminous binders - Framework for specifying cationic bituminous emulsions DMRB

CS230 Pavement Maintenance assessment Procedure, Rev 0, March 2020

DMRB CD236 Surface Course Materials for Construction, Rev 4, March 2020

PTS SG942 Guidelines and Criteria Document for the Assessment and Certification of Thin Surface Course Systems, Issue 4, November 2018

CONDITIONS OF CERTIFICATION

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
 - valid only in 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 XAIS-PTS Ltd.
 - XAIS-PTS Product Assessment forms part of the Product Acceptance Scheme as described in MCHW SHW Volume 1 Clause 104.16 and shall be submitted by the Contractor/Certificate Holder to the Overseeing Organisation for Approval.
2. Publications, documents, specifications, legislation, regulations, standards, and the like referenced in this Certificate are those that were current and/or deemed relevant by XAIS-PTS Ltd at the date of issue or reissue of this Certificate.
3. This Certificate will remain valid for an unlimited period, subject to 3 year review to revalidate 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 XAIS-PTS Ltd
 - continue to be checked as and when deemed appropriate by XAIS-PTS Ltd under arrangements that it will determine
 - are reviewed by XAIS-PTS Ltd as and when it considers appropriate.
 - remain in accordance with the requirements of XAIS-PTSPAS. Additional review shall be carried out as necessary should Specification's / Standard's change to ensure compliance.
 - remain in accordance with XAIS-PTS Terms of Business.
4. XAIS-PTS Ltd has used due skill, care, and diligence in preparing this Certificate, but no warranty is provided.
5. In issuing this Certificate, XAIS-PTS Ltd 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
 - individual 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
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.